Journal of International Trade Law and Policy
Overcoming the SPS concerns of the Bangladesh fisheries and aquaculture sector: From compliance to engagement
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Received 20 January 2017
Revised 9 May 2017
Accepted 9 May 2017

Overcoming the SPS concerns of the Bangladesh fisheries and aquaculture sector

From compliance to engagement

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Abstract

Purpose – The purpose of this paper is to address the challenges developing countries face in attempting to balance sanitary and phytosanitary measures (SPS) health and safety measures against concerns about protectionism, illustrated by the impact of trade barriers on the fisheries and aquaculture sector in Bangladesh. The paper then provides recommendations to overcome the effects of these trade barriers.

Design/methodology/approach – The author uses a close doctrinal approach for the first three parts of the paper by analysing the provisions of the World Trade Organisation (WTO) SPS Agreement and the effect of those provisions in creating domestic compliance gaps in the Bangladeshi fisheries and aquaculture sector. A qualitative approach is then adopted in suggesting potential reforms and future directions to assist the Bangladeshi fisheries and aquaculture sector overcome SPS trade barrier issues.

Findings – To overcome the market access issues created by SPS trade barriers, Bangladesh and other developing countries require multilateral assistance, accommodation by trading partners and internal reforms. This includes reforming internal governance structures, improving trade participation and negotiation, increasing infrastructure investment and learning from similar countries who have improved their supply chain management.

Research limitations/implications – This paper will have significant implications by contributing to law and policy reform debates involving international trade law and domestic compliance gaps. It will also assist other developing countries that experience SPS trade barriers to learn from the experience of the Bangladeshi fisheries and aquaculture sector.

Practical implications – This paper has practical implications by providing recommendations for how Bangladesh can overcome SPS trade barriers and improve its market access. This will help Bangladesh integrate into the global trading system by enhancing its participation in the SPS framework.

Social implications – By addressing and providing recommendations for the SPS trade barrier challenges faced by Bangladesh fishery and aquaculture sector, this paper provides a framework to improve the economic development and global competitiveness of the industry. This will contribute the gross domestic product growth and help increase the overall living standards of the people involved in the fisheries and aquaculture business in Bangladesh.

Originality/value – This paper is an original work that has not been published elsewhere. It is the first time a paper has dealt with the legal, policy and compliance challenges faced by the fisheries and aquaculture sector in Bangladesh.

Keywords Bangladesh, WTO, Trade, Fisheries, Compliance challenges, SPS agreement

Paper type Research paper

This paper is a result of research carried out in connection with the Australian Leadership Awards Fellowship Program, Rounds 12 and 14, administered by AusAID (now part of the Department of Foreign Affairs and Trade, Australian Government). The authors gratefully acknowledge the insights provided by the Fellows who participated in both programmes. All views and opinions expressed in this paper remain those of the authors.

Journal of International Trade Law and Policy
Vol. 16 No. 2, 2017
pp. 70-91

1477-0024
DOI 10.1108/JITLP-01-2017-0002

1. Introduction

Market access is vital for developing countries and least developed countries (LDCs) to stimulate economic development through trade. LDCs such as Bangladesh are in a vulnerable position, given their immediate need to address widespread poverty while responding to ever-growing social and environmental concerns that are reconciled under a principle of sustainable development. While emerging economies have recently experienced exponential economic growth in recent decades, developing economies and LDCs have often lagged behind. This is a result of, *inter alia*, numerous trade barriers that have often been imposed by developed countries in response to genuine concerns towards environmental, health and safety issues associated with global trade.

The international trade law regime, including the General Agreement on Trade and Tariffs (GATT) and the Agreement on sanitary and phytosanitary measures (SPS Agreement) allow countries to establish their own appropriate levels of protection (ALOP) in response to these concerns. However, international trade law, and the SPS Agreement in particular, presents certain challenges for developing countries and LDCs wishing to use their comparative advantages to trade their way towards sustainable development. As this article will consider, and using the experience of the Bangladeshi fisheries and aquaculture sector as a case study, a central issue concerning SPS challenges faced by Bangladesh is the lack of capacity that is required to achieve access to developed markets and effectively participate in trade negotiation. Without full cooperation by developed countries as well as efforts to reform Bangladeshi governance structures and infrastructure investment, SPS measures will continue to form a barrier for the Bangladeshi fisheries and aquaculture sector to the detriment of development aspirations.

Part 2 of this article will briefly outline the international trade and SPS regime and provide an overview of the challenges that developing countries and LDCs face in overcoming SPS measures established by developed country markets. Part 3 will then discuss the nature of the Bangladeshi fisheries and aquaculture sector. Part 4 will then examine how the SPS challenges, including capacity constraints, faced by LDCs are evidenced in the Bangladeshi fisheries and aquaculture sector and outline the measures which inhibit the growth of that sector. Part 5 proposes recommendations that address these challenges, drawing upon lessons from similar industries in developing and LDC markets. In keeping with the scope of this article of examining the Bangladeshi fisheries and aquaculture sector, this article identifies several opportunities to reform Bangladeshi governance structures, improve its trade participation and negotiation and increase infrastructure investment towards peak scientific institutions from various stakeholders.

2. World Trade Organisation agreement on the application of sanitary and phytosanitary measures

The WTO Agreement on the Application of SPS Agreement aims to regulate the application of food safety, animal and plant health regulations, which may directly or indirectly affect international trade[1]. This includes the use of packaging and labelling requirements that relate to food safety, which may strongly influence demand for a given product[2]. The SPS Agreement attempts to strike a balance between achieving adequate health and safety standards in food, animal and plant health while recognising that such standards could, if unregulated, become an unjustifiable barrier to trade. The SPS Agreement tries to achieve this balance, firstly, by affording members discretion to set an ALOP based on an assessment of acceptable risk (Spreij, 2007). The measures must not be protectionist, inconsistent, unilateral or discriminatory. The SPS Agreement encourages its members to use international standards and guidelines, if applicable, with Article 5.5, requiring

members to avoid any arbitrary or unjustifiable discrimination between members where the same conditions prevail[3]. If an importing country sets higher standards, then it must provide scientific evidence to justify any bias and restrictive trade policies. This condition is supported by two key provisions under the SPS Agreement, including Articles 2.1 and 2.3, which stipulate that measures must only be necessary for the protection of human, animal or plant life or health, and must be based on "sufficient scientific evidence"[4]. Nevertheless, the SPS Agreement raises a number of challenges for developing countries and LDCs.

2.1 Scientific capacity to challenge sanitary and phytosanitary measures measures

Persistent concerns exist regarding the capacity of LDCs to determine whether restrictions on trading opportunities are based on sufficient scientific evidence and to challenge trade barriers imposed under the SPS Agreement. LDCs have limited resources to evaluate the scientific basis supporting proposed trade measures: they often lack the technical and financial capacity to establish advanced scientific laboratory facilities, or do not possess a sufficiently skilled workforce to test and enforce sanitary standards for agricultural produce, such as livestock (Desta and Hirsch, 2012, p. 167). Indeed, as Jensen argues, there is limited quality management capacity in most LDCs across both the public and the private sectors, which warrants increasing the priority for LDCs to address this gap (Jensen, 2016, p. 186).

An assessment into SPS notifications reveal that even small amounts of investment into scientific infrastructure can have a significant impact in creating and challenging SPS measures. Indeed, in a specific study on the determinants of the notification of SPS measures by Latin American countries, Boza found that a Latin American country with one per cent higher R&D expenditure to gross domestic product (GDP) will give eight times more notifications (Boza, 2016, p. 14). It was also found that "higher legal capacities and, in particular, scientific resources are positively related to the number of notifications presented by Latin American countries" (Boza, 2016, p. 14).

2.1.1 Scientific capacity and evolving health and safety requirements. It is important to note that investment into the necessary scientific and analytical infrastructure requires ongoing investment, especially in sectors that have continually changing best practices that is stimulated by changes in technology. Seminal SPS cases, such as *Hormones I*, demonstrate that technological change in food production can continually shift what safety requirements are imposed by developed country markets, especially in instances where the alleged health and safety concern has not yet developed full scientific certainty[5]. Indeed Alavi suggests that the requirements of SPS measures have been evolving continuously in response to emerging problems, advances in scientific knowledge, consumer awareness and concerns and political pressures. As a consequence, developing countries often find it difficult to meet these moving targets of safety requirements imposed by industrial economies (Alavi, 2009, p. 52).

The changing interpretation of specificity requirements when SPS measures are being used presents a further challenge. In brief, specificity essentially requires a member employing an SPS measure to show sufficient connection or causation between the damage to human, animal or plant health and the substance being controlled. While this requirement was previously a direct correlation in *Japan – Apples*[6], following *US – Continued Suspensions*, the Appellate Body determined that an indirect specificity is sufficient to allow an SPS measure to continue[7]. Overall, a controlled substance may only form a contributory factor to adverse human, animal or plant life or health to justify an SPS measure. With advances in technology, many developed country members are able to establish SPS measures, as occurred in *US – Continued Suspensions*, given their higher scientific and

analytical capacity. For developing countries and LDCs, this increases the burden to ensure that their analytical and scientific capacity is sufficient to assess any indirect causes that may result in the use of their exports, or to adapt process and production methods to comply with the higher levels of standards imposed by developed countries who already have the capacity to determine indirect adverse health impacts. This will remain a continuing problem for LDCs as developed countries improve their technological capacity and ability to discover new ways in which substances may have adverse health impacts in humans, animals and plants.

2.2 Legal and economic capacity to challenge sanitary and phytosanitary measures measures

In addition to scientific capacity, LDCs often do not have the economic or legal capacity to effectively challenge SPS measures in dispute resolution procedures within the WTO. Challenging SPS measures can take significant amount of time, legal expertise and costs, especially where SPS measures lend itself for the need to bring expert evidence during dispute resolution procedures.

The EU ban against Ugandan fish demonstrates the intrinsic connection between legal and financial capacity, which can translate into SPS measures effectively being immune to challenge. Uganda and other East African countries did not challenge the ban at the WTO (on the basis that it violated the SPS Agreement) as these African nations lacked the economic capacity to file a complaint against the economic giant of the EU (Aginam, 2007, p. 1112). The fact that the poor performance of Uganda's regulatory and monitoring system was used as a justification for the EU's SPS measures, rather than any scientific proof that the fish was actually unsafe for human consumption (Ponte, 2005, p. 2), indicates that such measures may be based on developed states' institutional prejudice and distrust of the governance framework of LDCs, coupled with an inability by developing countries and LDCs to present effective arguments supporting their governance frameworks or outlining what policies are in place to improve governance.

2.3 Inability to effectively participate in developing standards

Soft laws based on the Codex Alimentarius [WTO(b), 2011] – established by the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) – OIE (animal health) and IPPC (plant protection) do not fall within the scope of WTO assessment on "potential health risks" (SPS-Article 5.1), but hold persuasive influence in trade disputes. Yet, despite the relative importance that the Codex has in trade disputes and establishing standards relating to food health and safety, LDCs have low participation rates in WTO and Codex Committees which form such standards.

This is reflected through the fact that none of the panels established to consider SPS measures were initiated by LDCs (Spreji, 2007, p. 1). A study by Boza and Fernandez found that high-income countries are the most active in SPS disputes, with 56.66, 50.25 and 42.19 per cent participation as "maintaining", "concerned" and "supporting" countries, respectively, from 1995 to 2012, as compared to only 3.39, 2.97 and 3.35 per cent participation by low-income countries (Boza and Fernandez, 2014, p. 16). These statistics support the proposition that LDCs fail to enforce the SPS Agreement by virtue of their lack of scientific and legal resources (Boza and Fernandez, 2014, p. 5). It is also important to note that Brazil, Russia, India and China are overrepresented as respondents in SPS and TBT disputes, given their level of development (Boza and Fernandez, 2014, p. 25).

As a result, the low participation rate by LDCs means they are not consulted on major decisions (French, 2007, p. 218). LDCs frequently act as "standard takes", rather than full

participants in the process of developing standards (Desta and Hirsch, 2012, p. 152). International institutions also often fail to recognise the importance of special and differential treatment for LDCs, requiring entry standards and processes, which can only be conducted by highly developed countries with the adequate scientific and analytical capacity. For some observers, this presents a form of "techno-imperialism" (Alam, 2006) for LDCs to actively participate in standard creation, or at the very least, to have their own standards that reflect economic and social realities recognised by the international trading community. Thus, it is a real concern that LDCs do not possess adequate governance structures, scientific capacity or political clout to effectively participate in standard creation.

2.4 The rise of private standards as a barrier to trade

Private standards, such as the Forest Stewardship Council (FSC) or FairTrade marks, are standards developed by non-government organisations (NGOs) which may stipulate the process and production methods of a product in order to receive accreditation or certification. As Liu notes, private standards are not a homogenous group, and may differ in objectives, including ethical objectives or wishing to create product differentiation in order to capture a price premium (Liu, 2009, p. 3).

There are many benefits associated with private standards, including their ability to promote best practices and address emerging health and safety risks quickly, making it easier for international standards to be eventually adopted [WTO(a), 2011]. However, private standards are also not necessarily based on scientific evidence, are often not harmonised with existing standards, costly for producers to comply and may be established without any transparency or consultation with key stakeholders, including LDCs and small suppliers [WTO(a), 2011]. For developing countries and LDCs, the lack of an overarching policy strategy and poor institutional capacity (including fisheries management and scientific and technical capacity, as discussed in the creation of public standards from institutions such as the Codex) have resulted in developing countries from falling short in private standards compliance (Washington and Ababouch, 2011).

Private standards, although sometimes described as "voluntary standards", create significant market barriers for LDCs as they are often required in order for products to remain competitive and respond to changing consumer tastes and preferences in developed country markets. Critically, compliance with private standards is often necessary for producers, including producers in food and agricultural products, to participate in global value chains which provide an important source of revenue for LDCs (Mavrodis and Wolfe, 2016, p. 4). For instance, the Chinese information and communication technology (ICT) industry, although an emerging economy, remains in a structural competitive disadvantage for its lack of participation in voluntary standard creation and must absorb the costs for standards compliance (Kennedy, 2006, p. 62).

Arguably, private standards fall outside the SPS regime, including the requirements to ensure that any SPS measures are based on sufficient scientific evidence or risk assessment. In recent years, both the WTO and SPS Committee has been plagued in even establishing a working definition of what constitutes a private standard, with developed countries arguing that private standards fall outside the mandate of the SPS Agreement, and LDCs and developing countries insisting that any requirements that are *developed* or *applied by* any NGO should fall under the scope of the SPS Agreement (Mavrodis and Wolfe, 2016, p. 9). According to Mavrodis *et al.*, development on regulating private standards and meaningful conversation on their role in the international trade regime remains "stymied by the absence of agreement on what the quintessential element in this discussion, the definition of the term 'private standard'" (Mavrodis and Wolfe, 2016, p. 11).

There have been some attempts to address the criticisms levelled at private standards, especially in relation to a lack of consultation in standard creation with LDCs. Private certification schemes such as the Marine Stewardship Council's Developing World Fisheries Programme create certification methodologies for farmers who remain "data-poor" and allow group certification and affordable rates (Washington and Ababouch, 2011, p. 121). However, until private standards are harmonised and its interaction with both the SPS and TBT regime is clarified, including whether SPS obligations apply to the development and application of private standards, private standards will continue to form a significant trade barrier, whereby LDCs have limited opportunity to redress.

3. Bangladesh's aquaculture and fisheries sector

This section provides a brief overview of the fisheries and aquaculture sector in Bangladesh in order to explore the effect of the SPS Agreement on trade competitiveness. Within the context of Bangladesh's relationship to the international trading regime, it makes sense to devote particular scrutiny to this sector as it represents a sizeable proportion of its national economy. Contributing 4.43 per cent of the nation's GDP, employing 10 per cent of Bangladesh's working population and being the second largest export commodity behind garment and textiles, aquaculture is a vital industry for Bangladesh. Although fish and shrimp farming began in the late 1960s and 1970s, the volume of exports have grown 45 per cent between the period of 1985 to 2000 (FAO, 2014) and has doubled from 1997 to 2007 (Bangladesh Frozen Foods Exporters Association, 2010; Rahman and Hossian, 2009, p. 163). Engaging in international trade has helped Bangladesh gradually become a trade-dependent, as opposed to an aid-dependent, country (Rahman, 2002, p. 16).

Nevertheless, as one of the poorest countries within the region, Bangladesh has limited capacity to satisfy extensive sustainable development obligations and allay human health concerns. The aquaculture industry in Bangladesh is highly vulnerable to the adverse impact of SPS measures enacted by developed countries. To illustrate, in 1997, the EU banned imports of Bangladeshi shrimp on the basis of sanitary concerns (Alam and Pokrant, 2009, p. 54). Since then, Bangladeshi prawn consignments have regularly been rejected at international borders for not meeting food safety standards, resulting in returns, destruction and temporary bans. For Bangladesh and other LDCs dependent on export industries to provide employment and food security for poorer segments of its community, the fluctuations in export earnings occasioned by export bans have serious ramifications.

3.1 Fish

Bangladesh has benefited from a rich and diverse range of fish species, with the total value of fish exports amounting in 2010 to US$80m, of which frozen fish contributed almost US $35m or 44 per cent of fish exports. The most important markets for frozen fish are the UK, Saudi Arabia, the USA and, to some extent, Italy and China (The Fish Site, 2013).

Notwithstanding the volume and value of its fish exports, Bangladeshi exporters face a number of obstacles in accessing Western export markets wrought by a reliance on more affordable and accessible production methods for fish farmers. One such obstacle arises from the use by Bangladeshi fish farmers of static ponds. As its fisheries have experienced over-exploitation due to global demand, fish farming in static ponds has become both a necessity and a viable option for Bangladeshi farmers. As a result of using these ponds, fish meat appears off-white, yellowish or reddish in colour, and thus less appealing to Western consumers who favour white or pink fillets (Belton *et al.*, 2011, p. 296). This unconventional appearance also renders the product more vulnerable to the imposition of SPS measures by importing countries.

3.2 *Shrimp and prawn*

Food safety issues, rather than environmental objections, have featured more prominently in Bangladesh's shrimp sector. Questions concerning hygiene standards usually focus on the transportation and delivery stages from the farm to the processing plants where the quality of the ice, quick freezing techniques and cold storage facilities are lacking. Poor handling and inadequate facilities under tropical conditions are likely to cause spoilage and microbiological hazards, and fall short of the high expectations of markets in developed countries. As frozen shrimp constitutes 81 per cent of all fish exported in 2007-2008 (Bangladesh Export Promotion Bureau, 2013), it is important to ensure the freshness of these perishable products. A scientific study showed that the colour, smell and nutritional value shrimp significantly deteriorate by the fourth week, even when stored at minus 20 degrees centigrade (Azam *et al.*, 2013, p. 77). Another problem faced by shrimp farmers is the susceptibility to diseases, the most serious of which being the "white spot" virus.

4. Satisfying sanitary and phytosanitary measures measures in Bangladesh's aquaculture and fisheries sector

With the Bangladeshi Standards and Testing Institution (BSTI) already being pushed to its resource limits, the greatest issue facing Bangladesh's capacity to satisfy imposed SPS measures lies in establishing an adequate scientific and analytical framework for determining the safety standards of its fish and shrimp products. This is especially the case where over-exploitation of these resources has led to an increase in fish farming, or where climate factors and the lack of appropriate facilities impact on the safety standards adopted in shrimp processing. In addition, notification of SPS measures to foreign importers can be a difficult exercise for Bangladesh due to the weakness of the country's institutions and a lack of coordination between regulatory agencies.

In reality, developed countries have greater bargaining strength in determining "acceptable" standards, given their higher scientific and analytical capacity. Excessive stringency and selective application of SPS measures by developed countries has often surpassed what is necessary to protect human life and the environment (Rahman, 2002, p. 3). Bangladesh is no stranger to the impact of higher trade barriers justified under the SPS Agreement. In 1997, Bangladesh lost approximately US$65.1m in revenue as a result of the EU ban on Bangladeshi shrimp imports (Houssa and Verpoorten, 2015, p. 143). The EU ban was based, firstly, on concerns about the quality assurance processes applied by Bangladeshi producers, and, secondly, on the loss of confidence in efficiency measures aimed at reducing shrimp loss during transportation. Although the EU are free to determine their ALOP under the SPS Agreement against legitimate concerns towards the health and safety of its imports, the SPS measures proposed by the EU ban were not consistent with standards established by the Codex, despite any claim to equivalency.

The EU's SPS requirements for fisheries accord priority to competent official oversight of production and process methods, based on monitoring and inspection of private sector facilities by centralised government authorities applying national and internationally consistent hygiene and public health standards (Doherty, 2010, p. 7). In the case of fish products, there must be a control plan for monitoring and limiting the presence of heavy metals, contaminants, residues of pesticides and veterinary drugs in the products to be exported (Doherty, 2010, p. 4). Notwithstanding the argument that it is the appropriate role of the government to help producers meet quality standards with appropriate infrastructure (Jensen, 2016, pp. 155-6), and the fact that the EU has approved the Bangladeshi Department of Fisheries as a national Competent Authority to monitor the Bangladeshi industry and approve individual processing facilities for export to the European Union (Jensen, 2016,

p. 172), the central problems of capacity and consistency remain, which prevent Bangladesh from overcoming the barriers posed by SPS measures. Khatun suggests that Bangladesh's difficulty in meeting the required safety standards and quality compliance of developing members such as the EU derives from the fact that Bangladeshi processing plants do not have sufficient funds to invest in expensive mechanical equipment, fishing boats, quality control measures and the training of staff, as well as from the fact that Bangladeshi's governance capacity to implement and monitor quality and safety compliance is also very weak (Khatun, 2004, p. 51).

4.1 Certification and transparency

"Importer suspicion", whereby importers perceive Bangladeshi fisheries as having poor quality control may derive, in part, from the past detection of contamination by microbiological content in some batches of Bangladeshi shrimp (FAO Technical Cooperation Programme, 2012) or by more recent international standards favouring a ban on the importation of Bangladeshi shrimp containing the use of the antibiotic nitrofuran (Azam *et al.*, 2013, p. 77). This suspicion extends to reluctance on the part of importers to accept certification issued by the relevant local Bangladeshi authority. In such cases, the "equivalency" aspect of the technical barriers to trade (TBT) and SPS Agreements may be interpreted by importing countries as a requirement that certification systems for products be identical (FAO, 2000). This misconception of the SPS Agreement has led to instances of "trade harassment", whereby importers liberally interpret grey area provisions of the SPS Agreement in order to gain an economic advantage over the exporter and drive down prices (FAO, 2000).

With a view to overcoming importers' distrust in the public health standards of their produce, most shrimp exporters try to obtain the more universally accepted Hazard Analysis and Critical Control Points (HACCP) certification, which requires traceability monitoring of all points along the supply chain. However, the sheer number of small Bangladeshi farmers supplying shrimp to intermediaries makes traceability a daunting task. The cost of updating plant and equipment to the HACCP specifications required by the EU is, moreover, typically significant (Alavi, 2009, p. 79; Henson and Mitullah, 2004, p. 75; Rahman, 2002, p. 20). A further major cost of HACCP compliance in the developing world relates to the employment of foreign consultants for the basic design and implementation stages of HACCP systems (Doherty, 2010, p. 9). Despite this, Bangladesh has not participated in developing HACCP requirements or set an agenda to actively participate in international standard creation with the Codex.

4.2 Overcoming food safety issues

LDCs compete in the world market based mainly on price, but failure to meet minimum safety standards could close those markets. Since the 1980s, the FAO initiated projects to improve inspection and assisted in establishing a fish safety and quality control program based on 1996 HACCP approach (Cato, 2003). However, investment in upgrading safety standards requires time to take effect, a fact not recognised by the EU in its 1997 ban on Bangladeshi shrimp products. In that case, the actions of only a small number of exporters who chose to flout SPS regulations hurt the country's shrimp industry as a whole, resulting in a loss of US$25m in shrimp trade in the short term and US$5bn in the long term (Yunus, 2009, p. 56). At the time of the ban, the Bangladeshi fishery industry was just starting to invest in plant upgrades totalling US$17.6m, the Bangladeshi government had invested US $382,000 in laboratory and personnel upgrades and external partners had invested US $72,000 in training programmes (Cato, 2003). The total fixed investment of US$18m

exceeded the US$15m loss in revenue (Cato, 2003). HACCP compliance helped boost exports in subsequent years. Of the 65 plants licensed for exports by the Bangladesh government in 2002, 48 had EU approval (Cato, 2003). However, in 2000 to 2012, Bangladesh accounted for 159 (10.56 per cent) of EU notifications. Of these, 120 were identified for residue of veterinary medicinal products, 48 consignments were re-dispatched to Bangladesh, and 11 consignments were destroyed at the European border (Alam, 2006, p. 399).

Despite the fact that the BSTI serves as the contact point in Bangladesh and executes the mandatory certification scheme as per the Codex guideline (Rahman, 2002), Rahman suggests that Bangladesh faces difficulties in complying with its SPS and TBT obligations for three reasons. Firstly, the infrastructure for the testing of food quality is inadequate for satisfying compliance with the stringent quality control requirements that are established by developed countries. Secondly, a lack of scientific expertise to design a monitoring framework and to enforce compliance with regulations diminishes the country's ability to meet SPS measures. Thirdly, inadequate investment in health- and hygiene-related research and development (R&D) undermines Bangladesh's capacity to deal with complex and highly technical issues relating to food safety, including the formulation of appropriate rules and regulations (Rahman, 2002, p. 25).

4.3 Streamlining the supply chain to improve traceability and efficiency

The difficulty of ensuring quality and traceability of shrimp is mainly due to a fragmented supply chain and a diversity of sources. Many issues arise from small-scale farmers, including price manipulation by soaking the shrimp in water to produce higher weights (Rahman, 2002, p. 13). Donor projects have generated some innovations such as establishing common receiving centres, which vet the quality of the shrimp before they are sent to the factory for processing, and the United Nations Industrial Development Organization (UNIDO) sponsoring the "E-traceabilty" scheme (Rahman, 2002, p. 17). An internal control system accredited by the International Maritime Organization, an international third-party certifier, will ensure farmers are obliged to cooperate with inspections of their farms. Improvement in traceability necessitates meticulous records, improving information technology and accounting system by processors and exporters, and would, therefore, facilitate increased capacity for LDC exporters to respond successfully to any SPS measures calling for greater monitoring and transparency, especially in light of *US – Continued Suspensions* which allowed SPS measures that are based on indirect specificity.

4.4 Current responses to satisfy SPS measures

With investment in infrastructure, human resources and R&D pivotal to the capacity of an LDC to meet the safety standards upheld in SPS measures, multilateral efforts are needed to mobilise financial and technical assistance to LDCs (Jongwanich, 2009, p. 447). Admittedly, Bangladesh has transitioned from being aid reliant to increasing self-enabling through trade. Nevertheless, the international community could offer continued assistance in capacity building. In recent years, Bangladesh farmers and workers have benefited from external training in processing technology. However, international aid is typically insufficient and elusive, dependent on the charity of donors and importing countries. Programmes such as the Global Food Safety Partnership (GFSP), a public-private partnership established under the Asia Pacific Economic Cooperation (APEC's) Food Safety Cooperation Forum (FSCF) and the World Bank to improve food safety through capacity building in low and medium income countries, are attractive in terms of developing technical expertise, best practices and international standards implementation but are hamstrung by small budgets. The GFSP, for example, has received only $2.6m in donations

out of a target of $45-50m (Office of the US Trade Representative, 2014, p. 96). Compounding this problem is the fact that most capacity-building programmes have been "emergency driven", usually in the face of a trade disruption or dispute. As a result, much support has been geared towards correcting immediate issues, rather than strategically planning for the future (Poverty Reduction and Economic Management Trade Unit and Agriculture and Rural Development Department, 2005, p. 28).

4.4.1 External aid from United Nations – World Trade Organisation, Food and Agriculture Organisation, Standard Trade Development Facility. More recently, a Standard Trade Development Facility (STDF) project has been introduced to assist the Bangladesh Government to fill gaps in the existing SPS regime (FAO, 2014). It is implemented by FAO in cooperation with the Bangladesh Department of Fisheries and WorldFish. This project is funded by the WTO, targeting 1,000 shrimp and prawn farmers (about 3,000 people including their families) in Southwest Bangladesh to improve their livelihoods and secure market access (van der Piji, 2014, p. 13). These small-scale farmers are organised into clusters, implement risk-based "Better Management Practices" (BMP) and learn about compliance with international standards in the hope of improving market access. The project aims to align HACCP procedures with BMP (van der Piji, 2014, p. 44). The total cost of the two-year technical assistance project under the STDF is estimated at US$755,550 (van der Piji, 2014, p. 5). The STDF project also helps to transform a conventional supply chain into a premium one. This enables small-scale farmers and semi-intensive larger farmers to directly connect with processing factories without having to go through multiple intermediaries.

5. Future directions to overcome sanitary and phytosanitary measures concerns for Bangladesh

Throughout all industry sectors, it is commonplace for sectors not to possess adequate scientific knowledge or the infrastructure required to develop and comply with international standards under SPS and TBT obligations. Additionally, sectors often lack the scientific knowledge or infrastructure to participate in future agenda setting processes under these agreements. As such, recommendations which incorporate investment into building the capacity of standard setting bodies such as Bangladesh's BSTI, and which promote the extension of the work of such bodies, may go some way to enhancing LDCs' ability to create equivalence or to comply with technical specifications and standards. Such investment must and should be allocated across portfolio sectors, given the potential benefit shared throughout the economy for investing in such expenditure.

In recognising that the difficulties faced by Bangladesh concerning the SPS and TBT Agreements originate from failures on the domestic front, as well as failures on the global front, Rahman suggests a range of proposed measures to address SPS and TBT concerns for LDCs like Bangladesh (Rahman, 2002, p. 25). On the global front, these include making the SPS and the TBT more transparent, encouraging the conformity and harmonisation of SPS and TBT requirements, demonstrating greater sensitivity to LDC concerns, and the provision of trade-related legal assistance to LDCs. LDCs, Rahman continues, can contribute to improving their own prospects by reforming relevant systems and domestic institutions, collaborating with other LDC countries within their region to pool resources, and by cooperating to adopt a common LDC position in future WTO negotiations (Rahman, 2002, p. 26).

The STDF advocates for a proactive approach to SPS capacity building, rather than waiting to respond to crises (such as an EU ban on imports). They further suggest that the private and public sector must be fully committed to and engaged in efforts to strengthen SPS systems, and ready to share the costs of meeting the challenges faced. Finally, it is

important to strengthen the "software" for SPS compliance, including legal and regulatory frameworks, the institutional capacity for implementing and enforcing SPS measures and the development of SPS knowledge and skills among stakeholders all along the value chain. This must all be supported by ensuring that adequate financial resources are available to improve the hard infrastructure to ensure SPS compliance, including testing laboratories and equipment (Standards and Trade Development Facility, 2017).

The following recommendations draw upon the lessons learnt from past attempts to satisfy SPS requirements specific for the Bangladeshi aquaculture and fisheries sector.

5.1 Cold storage, processing and transport facilities

Bangladesh has to develop more cold storage facilities. Unlike large scale farmers who have their own storage and transport, small farmers in rural areas need to have easier access to an affordable, reliable supply of good-quality ice to keep their fish and shrimp fresh before products reach the local market and middlemen. During peak season of fresh water aquaculture, from October to March, there is insufficient capacity to store the harvest (Ahmed and Hossain, 2012, p. 2336). Spoilage creates waste and adds to cost or even creates losses. Further improvements have to be made to maintain product safety and extend useable date. Temperature control is also necessary for exports to minimise pathogen contamination.

The significant outlay required to increase cold storage capacity needs to be measured against the cost to the economy of shrimp and fish products being rejected by importers due to their failure to satisfy SPS standards or ALOPs. Following the EU ban on Nile Perch imports, Kenya, for example, undertook a comprehensive programme to improve the landing beaches for Nile Perch (Henson and Mitullah, 2004, p. 66). Upgrading a small landing area for fish, including better road access, is estimated to have cost around €886,000, while the cost of upgrading laboratory facilities for chemical and microbiological analysis was estimated to be over €1,000,000 (Doherty, 2010, p. 10). In the Indian context, the World Bank estimated that the cost of bringing fish processors in an Indian-sub region to EU standards to be over US$2,497,203 in 2005 (Doherty, 2010, p. 11). Clearly, cost remains a substantial hurdle for LDCs seeking to satisfy SPS obligations with greater certainty.

5.2 Simplification and reduction of time lag

As discussed earlier, the long and complex supply chain of the Bangladeshi shrimp export industry needs to be shortened if it is to have a greater chance of satisfying SPS obligations. The process of sampling and examination is lengthy, taking, on average, 17.5 days as compared to Thailand's 14 days (Doherty, 2010, pp. 22-3). Lengthiness of the process is compounded by the fact that the industry, unlike light manufacturing industries, is contingent on supply deriving from small farms, via middlemen. Respect for international food safety regulations requires action from a large number of small operators, including shrimp fry hatcheries, small farmers, processors and input providers like the suppliers of feed and animal medicine. The uncoordinated nature of shrimp value chains coupled with import market regulations has created a strong demand for government involvement and private industry coordination (Jenson, 2016, p. 173). Government agencies may, therefore, assume a critical and effective role in expediting the inspection and approval process for frozen shrimp.

5.3 Traceability

One of the ways LDC exporters may meet EU legislative requirements, for example, is in improving transparency and traceability by registering producers. However, while it may be

feasible to register large and established farms, it would be difficult to track down sources of supplies from smaller farmers. Group certification has been suggested as a way of helping small farmers implement standards (Belton, 2011, p. 298). Unless there is strong motivation and available resources for these small farmers to be certified jointly, achieving the requisite traceability would be untenable.

Some factories need to upgrade both their machinery and the skills of workers. However, it is costly to mechanise fish processing soon after harvesting. Most necessary machinery must be imported from the US and Canada, which would increase costs of production and undermine the competitiveness of LDCs' exports in international markets. Again, cost remains a significant burden to be borne by developing countries.

5.4 Information and training

As many Bangladeshi farmers and workers possess a low level of education and are unskilled in hygienic practices, practical training would be both relevant and useful. Houssa and Verpoorten's study into the effects of the EU ban on shrimp from Benin illustrated that while most of the small-scale actors know about the ban, the awareness about the actual cause of the ban was relatively low. This may have been due to the fact that approximately 20 per cent of fisherman had received formal training on good practices in shrimp production before the ban (Houssa and Verpoorten, 2015, p. 143). More often than not, farmers in LDCs are self-taught, learning on the job and from the experiences of their acquaintances in the industry. So far, the STDF programme has benefitted only 800 shrimp farmers. The majority of farmers have little education and access to information on food-safety regulations (Hensler, 2012, p. 7).

As a supplement to practical, face-to-face training, developing a detailed database on SPS measures could enable access by developing country manufacturers and exporters to the information necessary for improving hygiene and farming practices. This will enable LDCs to satisfy SPS obligations (Yusuf *et al.*, 2013).

5.5 Low cost technology

Technical assistance from the FAO and INFOFISH would help to transfer low cost technologies to Bangladesh and would add value to the export sector (Cato and Subasinge, 2003, p. 1). Bangladesh still lacks the institutional capacity and resources needed to develop scientific facilities or challenge importers' allegations. To develop "equivalence" for recognition of inspection and testing, the country needs to train staff and develop facilities for the long term. In the last ten years, Bangladesh has established three more new laboratories which are currently seeking international accreditation for shrimp testing (Alam, 2006, p. 404). However, this remains a costly process. For example, a comparison of the costs incurred by Bangladesh in upgrading their processing facilities in 1997 with those borne by Nicaragua, who also had to upgrade to meet modified USA food safety regulations, shows that Bangladesh incurred an additional US$17.4m in initial costs and an additional US$2.11m in annual maintenance costs, primarily due to the relatively modern facilities already in operation in Nicaragua (Rahman and Hossain, 2009, p. 176). Ongoing investment in the upgrade of fish processing facilities in line with the growth of exports will help to minimise the huge expense of doing so on a less regular basis.

In the interim, Bangladesh and other LDCs may have to step up efforts to find low cost innovations. For instance, striped catfish farmers have improvised alternative tools to make up for inadequacies. Economical commercial test kits can substitute laboratory facilities. Such improvements can make a difference, as seen in the steady demand for an increase in the price of shrimp exports after 1999. To support increased innovation in low cost

technologies which can test for SPS risks, Alavi argues for the introduction of soft loans (or zero interest loans) for upgrading facilities, and subsidised electricity and tax exemptions to lower the cost of relevant technologies (Alavi, 2009, p. 79).

5.6 Reform of food legislation

The EU's demand for shrimp remains high because of shrimp's popularity and the EU's insufficient supply (Centre for the Promotion of Imports from Developing Countries, 2010). The high dependency on the EU market makes Bangladeshi fisheries vulnerable to unforeseen food scares and new variations or revisions to existing food safety standards. In order to secure its protection from these potential blows to the export market, Bangladesh will need to upgrade standards for external and local markets. This requires a review of food legislation in light of the Model Food Law to reflect the Codex Alimentarius standards and the JECFCA and JMPR reports (Rahman, 2002, p. 4). As the FAO highlights, special emphasis should be placed on improving the national inspection and certification systems to increase confidence and minimise importer suspicion (FAO, 2000). Reforming food legislation to first meet mandatory standards, such as HACCP compliance, should be the first step before considering compliance against private standards despite the potential to improved access to higher value, niche markets that private standards can offer. This is because, as Washington notes, large scale buyers will not engage in businesses and sectors which do not address minimum or mandatory requirements, including providing assurance of safety, quality, provenance and chain of custody (as well as minimum environmental impacts) (Washington and Ababouch, 2011, p. 122).

A further strategy for LDCs seeking to survive SPS measure changes lies in increasing the diversification of exports. In the case of Malaysia, Alavi argues that Malaysia should seek to exploit the high-income Gulf States as new markets for its seafood to insure itself from the risk and expense posed by ever-escalating EU regulations (Alavi, 2009, p. 79). Henson and Mitullah argue that before the EU ban, the Kenyan Nile Perch supply chain was developed with a central focus on the EU market. However, today, in the wake of the ban, most exporters have diversified their export base and have major markets in, among others, Australia, Japan and the USA. Ironically, compliance with EU requirements has better enabled Kenyan exporters to access and maintain these markets. Indeed, a number of exporters highlight the fact that they are asked if they are approved for export to the EU when approaching new customers throughout the world (Henson and Mitullah, 2004, p. 78).

5.7 Improving governance

The Bangladesh Government has been credited with modernising and improving inspection and testing facilities. It has also cooperated with shrimp farm owners to invest in HACCP compliance programmes. The total cost of upgrading the facilities and equipment, and the provision of training on sanitary and technical standards, amounted to approximately US $18m (Cato and Subasinge, 2003, p. 1). However, critics lament that Bangladeshi bureaucrats are content with these achievements (Rahman and Hossain, 2009, p. 3) and perceive their resultant complacency in a reluctance to take initiatives for further improvements (Yusuf *et al.*, 2013). Such compliancy results in many of the capacity constraints experienced by LDCs as aforementioned in Section 2. The Government needs to take a proactive approach to implementing economic reforms to help the industry become more efficient. One of the urgent tasks is to streamline the value chain process and expedite lengthy testing processes to get fish and shrimp products to market in the shortest time possible. The World Bank suggests that making a clear distinction between the challenges associated with the health of the agricultural industry and those with food safety is necessary to properly implement

systemic reform, with such reform extending beyond individual firms or supply chains (Poverty Reduction and Economic Management Trade Unit and Agriculture and Rural Development Department, 2005, p. 19).

On the regulatory front, there is considerable work that needs to be done to rationalise, integrate and harmonise various domestic regulations. Following the EU ban on Nile Perch imports, Kenya, for example, undertook a comprehensive legislative reform programme to harmonise Kenyan hygiene laws and standards with EU standards (Henson and Mitullah, 2004, pp. 53-59). Partnerships between LDC governments and international organisations can help to harmonise and simplify codes and standards.

Moreover, LDCs by themselves could not effect harmonisation without the concurrent support of developed countries that continually raise the bar. Likewise, investment in the standardisation of documents and electronic data requirements along with increased levels of automation and electronic exchange of trade data has been shown to be vital in strengthening trade facilitation, and could help to accelerate the integration of national and international activities (Grainger, 2008, p. 24).

5.8 Private initiatives

Jensen argues that to develop an appropriate quality assessment system, the scarce resources and capacities of government institutions in LDCs must complement any existing private efforts rather than replace them (Jensen, 2016, p. 156). To achieve this, there must be a reconsideration of governance constraints. Modern practices allow for a significant diversification of funding sources for public projects. Extended stakeholders can be directly engaged not only through the use of schemes such as public-private partnerships, but also by shifting compliance and regulatory burdens to external stakeholders. This can reduce the load on the public service for service delivery.

The concept of corporate social responsibility helps to shift the regulatory burden by allowing the private sector to take responsibility for complex policy solutions. Voluntary incorporation of current and expected requirements related to SPS standards into business plans, including production technology, logistics and supply chain relationships by the private sector at large will assist the public sector in adjusting to international requirements (Jensen, 2016, pp. 171-4). This can be integrated as part of a suite of policy solutions. Indeed, over the last decade, the use of self- and peer-reporting has become increasingly widespread in policy service delivery. This is contingent upon the ability of stakeholders who are directly engaged in policy action who can monitor and report non-compliance. By adopting these approaches, LDCs, which already face considerable resource constraints, can effectuate their obligations and move towards sustainable development and trade.

Jensen argues that the Bangladesh Department of Fisheries should consider allowing a private market for seafood quality assessment. International best practice demonstrates that quality assessment services can be efficiently provided by the private sector. For example, current Bangladeshi law dictates that testing for nitrofurans, chloramphenicol and similar substances must be done at a government laboratory. Early indications from a leading private quality services provider in Bangladesh are that a change in the law would create a sufficiently large market to warrant investing in laboratory facilities to service the seafood export industry in that country (Jensen, 2016, p. 175).

5.9 Equitable involvement

Developing nations should make a concerted effort to negotiate for greater transparency of SPS measures (Rahman, 2002, p. 27). More importantly, LDCs should rally support of NGOs and consumer groups to urge foreign governments and importers to show more understanding,

patience, sensitivity and special consideration for the struggles faced by poorer countries in meeting tough importation demands. The precautionary measure of a blanket ban would have drastic effect on the export earnings of LDCs. Involvement of government agencies, such as the Bangladesh Department of Fisheries in aid projects, provides these agencies a stake in ensuring compliance and the success of these projects. Public-private partnerships (PPPs) would also help to strengthen the capacity of small farmers (FAO Technical Cooperation Programme, 2012, p. 21). Higher performing private companies would have a vested interest to ensure compliance and secure increased market access. By avoiding the current "fire-fighting" approach to capacity-building efforts, and instead focusing on preventative and progressive capacity building, public-private initiatives will help LDCs to both effectively manage the short and long term requirements from external markets and strengthen the currently weak notion that LDCs must be able to make their own strategic decisions with respect to emerging standards, particularly in challenging the legitimacy of standards (Rahman and Hossain, 2009).

Furthermore, pushing for acceptance in regional cooperation through groups such as APEC may be a vital component in strengthening Bangladesh's ability to implement SPS measures. Programs such as APEC's Partnership Training Institute Network (PTIN) are vital, with the PTIN providing over US$6m of public and private sector funds for increased technical competency and understanding of food safety management among stakeholders in the food supply chain (FAO Technical Cooperation Programme, 2012, p. 95). Being able to take advantage of such programmes would be a significant boon to the development of SPS measures across the board.

Finally, it is vital for Bangladesh and other LDCs to exercise the rights they possess under existing trade obligations. Increased trade participation and negotiation allows realisation of such rights, which may include demanding that developed countries implement technological and capacity building transfers pursuant to Article 9.2 of the SPS Agreement and Articles 11 or 12.4 of the TBT Agreement.

Doherty calls for the EU to engage in "targeted capacity building" to help overcome some of the SPS issues faced by LDCs in the trade of fish products. Particularly, he calls for action to identify and cost what countries need to comply with the EU SPS legislation, and to focus technical assistance on the needs of particular developing nations by developing customised solutions (Doherty, 2010, pp. 24-25).

The Better Work and Standards–Better Fisheries Quality (BEST-BFQ) programme is funded by the European Union, the Norwegian Agency for Development Cooperation and the Government of Bangladesh, and is implemented by UNIDO. The programme is a follow-up to the Bangladesh Quality Support Program implemented during 2006-10. BEST-BFQ applies a "farm to fork" approach that focuses on strengthening the national fisheries quality infrastructure of Bangladesh. BEST-BFQ supports the value chain by training farmers in good aquaculture practice and by training processors and other value chain participants on traceability and the HACCP approach (Jensen, 2016, p. 174).

Such internationally supported strategies go a significant way in addressing the problems of capacity and cost facing LDC exporters. Furthermore, several studies have shown that while SPS-style bans on imports entail huge compliance costs and thus negative short-term effects for exporting countries, they typically generate a revival in the export market when the ban is lifted, with the consequent upgrading of the sector leading ultimately to positive medium and long-term impacts (Houssa and Verpoorten, 2015, p. 138).

5.10 Lessons from other jurisdictions

Benin, in a similar fashion to Bangladesh, lost its export market to the EU from 2003 to 2005 due to concerns regarding deficiencies in Benin's compliance with EU sanitary requirements.

Critical to this ban was a finding of quality control weaknesses at the institutional level, including the absence of accredited laboratories for microbiological and biochemical analyses. Benin was able to overcome these issues and have the EU ban lifted as a result of a well-targeted and coordinated response involving the government, the private sector and international support. The response focused on several key strategies, which included strengthening the capacity of the fisheries authority, improving operating conditions for shrimp production on Lake Aheme, training quality managers and fishing communities in hygienic practices, and improving infrastructure such as testing laboratories, cold storage facilities, landing sites and roads (Standards and Trade Development Facility, 2017). With the help of donors, primarily Belgium, the government invested in compliance with EU standards by upgrading codes, providing sanitary training, upgrading laboratories and strengthening the competent authority. Despite these measures and the fact Benin was subsequently classed by the EU as a List 1 country with harmonised food safety standards, it is sobering to note that the industry never recovered from the ban. The three exporting food processors no longer operate and a fourth only exports shrimp to the EU infrequently.

The impacts on Beninese fishermen have included fisherman leaving the industry to find other work, pulling children out of school to cope with the downturn, and have, for those fishermen who have remained in the industry, resulted in an intensification of their shrimp fishing in order to attempt to compensate for lower shrimp prices. The effect of increased exploitation of fisheries ultimately, of course, compromises the future of the industry (Houssa and Verpoorten, 2015).

Similarly, Mozambique nearly lost the EU as a fish export market in 2006. A number of weaknesses were identified in Mozambique's ability to comply with relevant standards, such as legislative gaps, deficiencies in facility approval, inspection, sampling and certification procedures, and the overall weak capacity of the National Fish Inspection Institute. Pre-emptive action helped avert this crisis. The National Fish Inspection Institute was able to obtain funding to implement standards-related projects which ensured continuing EU market access. Attention focused on drafting fisheries legislation and regulations for approval by Parliament, upgrading laboratories, improving monitoring capacity, setting up a national data management system for export certification and training stakeholders in the fishing industry in food safety management (Standards and Trade Development Facility, 2017).

During the late 1990s, the EU banned Nile Perch imports from Lake Victoria in East Africa. This affected countries such as Tanzania, Uganda and Kenya. In Tanzania, actions were taken by the government and industry to address shortcomings in sanitary conditions on boats, at landing sites and in fish-processing facilities. Through technical cooperation, including from FAO, UNIDO, World Bank and bilateral donors, hygiene controls were enhanced, best practices promoted and overall fisheries management improved (Henson and Mitullah, 2004). Through support provided by FAO, UNIDO and others, the fishery sector in Uganda recovered well over the medium to long-term, with a smaller but better equipped processing sector, improved marketing strategy, and strengthened institutions. Awareness of the potential impact of non-compliance with SPS standards was heightened following the ban and government departments since then have sought to increase budgetary resources to carry out regulatory enforcement and to raise awareness of the importance of food safety and agricultural health issues (Henson and Mitullah, 2004). Kenya also upgraded compliance capacity in the lake fisheries sector and managed to reduce its dependence on the EU market by accessing new markets, including those of Israel, Singapore, Japan and Australia (Henson and Mitullah, 2004).

6. Conclusion

While Bangladesh and other LDCs reliant upon fishery exports have sought to improve transparency and environmental and safety requirements, largely through certification in the last two decades, more remains to be done. This will require multilateral assistance, accommodation by trade partners and internal reforms. LDCs like Bangladesh have no choice but to adapt to meet foreign buyers' standards and specifications. However, this over-reliance on meeting foreign standards and specifications can be overcome by learning from the lessons of similar Asian countries such as Thailand and Vietnam. These countries have had more success in market access due to shorter delivery, coordination of distribution, standards of processing, trade promotion and marketing strategies. Improvement has been slow, but there has been progress nevertheless. Investment by domestic governments, developed country donors and international organisations towards the capacity of LDCs to meet SPS measures not only assists greater equity across the global trading spectrum, but also contributes to the improvement of food safety standards across the board. The benefits are, therefore, immense, even if the costs continue to pose one of the greatest barriers to progress.

Notes

1. *Agreement on the Application of Sanitary and Phytosanitary Measures* (opened for signature 15 April 1994, entered into force 1 January 1995) 1867 UNTS 493, art 1.1 ('SPS Agreement').
2. Ibid, Annex A.
3. *SPS Agreement*, art 5.1.
4. Ibid, art 2.1, 2.3.
5. Appellate Body Report, *European Communities - Measures Concerning Meat and Meat Products (EC – Hormones)*, WTO Doc WT/DS26/AB/R (16 January 1998).
6. Appellate Body Report, *Japan – Measures Affecting the Importation of Apples,* WTO Doc WT/DS245/AB/R (26 November 2003).
7. Appellate Body Report, *United States — Continued Suspension of Obligations in the EC – Hormones Dispute*, WTO Doc WT/DS320/AB/R (16 October 2008) [562].

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