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Implications of agri-food standards for Sri Lanka: Case studies of tea and fisheries export industries

by

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Introduction

During the past two decades, public awareness and concern regarding food safety in developed countries have increased as a result of a series of highly-publicized food scares and scandals (Henson and Caswell, 1999). In response to these events, regulations governing food production in those countries have been tightened. This has been accompanied by significant institutional changes and intensified border control of food imports in the industrialized countries. Separate and independent regulatory bodies that focus on public health and consumer protection have been set up in Australia, Europe, Japan, New Zealand and the United States of America. In parallel with this development, a number of concerted private initiatives have been undertaken that address consumer confidence regarding food safety together with the tightening of regulations. This has resulted in the proliferation of private standards that are more stringent than public ones. Private standards have been established by major food retailers, food manufacturers and restaurant chains in developed countries, largely to mitigate any reputational or commercial risks arising out of supplier failure. Moreover, private food safety standards are increasingly being used as a means of product differentiation. While public standards can be both mandatory in a legal sense as well as voluntary, private standards are voluntary in kind and are not legally required.

The proliferation of public and private standards, and the increase in their stringency has been accompanied by an expansion of their coverage. More emphasis is now given to how a good is produced along the supply chain (“process standard”) than ever before, whereas previously the emphasis was on meeting the standard of the end product (“product standard”). Several private standards combine food safety with quality, social and environment issues, and go beyond what is generally required by regulations. These developments are largely responding to consumer and civil society concerns over the conditions under which goods are produced.

The increasing complexity of the standard environment has made compliance a difficult task for many developing countries, which depend on lucrative markets in industrialized countries. Understandably, the proliferation of standards is a cause for concern for many developing countries as standards can be a potential “behind-the-border” barrier to trade when tariffs have been lowered through successive multilateral trade negotiations. In a recent interview with the *Financial Times*, World Trade Organization (WTO) Director-General Pascal Lamy noted that the increase in standards was likely to cause a clash between developed and developing countries, as the latter feared the introduction of new barriers to their exports. He underlined this concern when he stated that “developing countries are certainly beginning to have a real problem, and the question of standards is becoming a real issue” (International Institute of Environment and Development, 2010).

While the emergence of standards poses a challenge for developing countries, it also provides a number of potential opportunities in the short term, such as greater market access and higher prices for the certified products. Some countries/industries have managed to gain access to markets in the industrialized nations despite the existence of stringent standards. In fact, some have even used standards to successfully reposition themselves in competitive global markets. Thus, the situation for developing countries is not problematic and is less

pessimistic than the “standards as barriers” perspective that is usually presented (Jaffee and Henson, 2004). But how well a country, industry or business responds to evolving standards depends on the strategies pursued, with some achieving more success than others in the past.

In the context of the growing importance of standards in international trade and production, this study examines the implications of standards on two agricultural and food exporting sectors in Sri Lanka – tea and fisheries – and their strategic response. These two export industries were chosen as they make a significant contribution to the country in terms of foreign exchange earnings and employment generation. In addition, both the tea and fisheries industries are increasingly confronted with challenges in meeting various standards when accessing markets abroad, especially in industrialized countries. Given that there are hardly any studies on this issue in Sri Lanka, this study attempts to fill this gap in the literature by examining the following questions:

- (a) What are the different types and forms of standards required for exporting tea and fish from Sri Lanka? International trade in agriculture and food is increasingly governed by a range of standards (covering quality, safety, social and environmental issues) that are set and enforced by both the public and the private sectors. The study provides a typology of standards governing the two industries.
- (b) What are the costs and benefits in meeting these standards? Have standards acted as non-tariff barriers (NTBs) to trade by imposing additional production costs or have they helped to expand export opportunities by improving their competitive advantage?
- (c) What are the implications of standards for tea and fish exporters, especially small and the medium-size enterprises (SMEs)? Does the implementation of standards lead to marginalization of SMEs?
- (d) What strategic responses have been made by the tea and fish exporters to meeting the standards demanded by markets abroad? How did the tea and fisheries exporters respond to this emerging challenge and how successful was their response? It is typically assumed that developing countries are “standard takers” with few, if any, alternatives available to them, but this far from truth. In fact, developing countries frequently have room to manoeuvre when confronted with standards. They can choose to comply with the standard, challenge it or even exit from supplying a particular market.

This study is organized as follows. Section A highlights major trends in the standards of agri-food business. Section B examines the implications of the proliferation of standards for developing countries, in terms of the costs and benefits of compliance, distributional impact and strategic options available for responding to the challenges of conforming. Section C outlines the methodology used to answer the above research questions. Section D provides brief background information on the tea and fisheries industries in Sri Lanka while section E discusses the findings from the interviews. Section F summarizes the main findings with reference to the research questions, and provides broad directions for policymakers in terms of assisting exporters to meet emerging standards.

A. Trends in standards in agriculture and food business

The standards environment has transformed in recent years (Humphrey and Memodovic, 2006). Standards now encompass much more than product standards and include standards related to production, handling and processing, in order to ensure that products meet certain desired physical characteristics. “Standards are agreed criteria, or as Hawkins stated, ‘external points of reference’, by which a product or service’s performance, its technical and physical characteristics, and/or the process and conditions under which it has been produced or delivered can be assessed” (Hawkins as cited in Nadvi and Waltring, 2004). Labour and environmental standards are two examples of process standards where the objective lies not in the product but in the process itself. According to Humphrey and Memedovic (2006), the standard environment of agribusiness shows four main trends: (a) increasing stringency of public mandatory standards; (b) a shift from product standards to process standards; (c) increasing importance of private standards; and (d) increasing scope of standards.

1. Increasing stringency of mandatory public standards

Food safety standards have increased in scope and stringency during recent years as a result of increasing consumer concern over food safety, following highly publicized food scares.¹ This increasing public awareness has led to the tightening of standards. In the European Union, for example, controls on pesticide residues as well as colouring and purity have been tightened. Similar tightening can be seen in other countries such as in the United States. In agribusiness, standards have been tightened in other areas; for example, certain veterinary drugs have been banned in meat and seafood while the tolerance levels of other goods have been lowered. Shipments of seafood have been regularly rejected in Europe, North America and Japan due to the presence of veterinary drugs as well as microbiological contamination.

2. Shift from product standards to process standards

Traditionally, standards have focused on product characteristics. Product standards as opposed to process standards specify characteristics of the final product. These characteristics can include shape, size, weight, safety, texture etc. One example of a product standard is the maximum amount of pesticide residue permitted in a food product. In general, product standards are unambiguous and require single-point verification at the end of the production process (Kaplinksy, 2010).

Since the 1980s, there has been shift in emphasis from product to process standards (Nadvi, 2004). While product standards define particular outcomes to be achieved, process

¹ For example, the beef hormone scare in Italy/European Union in 1987/1988, the poultry salmonella outbreak/scandal in the United Kingdom in 1988, the E. coli outbreak in fast-food hamburgers in the United States in 1993, BSE in the United Kingdom in 1996, microbiological contamination of berries in the United States and Canada during 1996/1997, avian flu in Hong Kong, China and Taiwan Province of China during 1995/1997, dioxins in animal feed in Belgium in 1999, large-scale food poisoning in Japan in 2000, and, contaminated olive oil in Spain in 2001 (Jaffee, 2005).

standards indicate particular procedures that need to be put into place.² A notable example of a process standard is the Hazard Analysis and Critical Control Points (HACCP),³ which has been adopted by food processing industries in many countries. The United States has made it mandatory in plants that process meats, poultry, fish and fruit juices, while the European Union requires HACCP from suppliers of dairy, meat and fish products.

HACCP is just one example of the increasing trend towards the broader application of systematic approaches to food safety that emphasis risk identification and management along the food value chain (from farm to fork). The shift towards process control in food safety is clearly established by the European Food Safety Authority. In the European Union's approach, food safety is seen as a product of the value chain and, as such, risks have to be managed at all points of the chain together with traceability of the product.⁴ The European Union's approach places the responsibility of food safety on the food operators and builds upon the United Kingdom's Food Safety Act, which requires retailers to demonstrate that they have taken the necessary steps to ensure the product safety during manufacturing, transportation, storage and preparation.

3. Increasing importance of private standards

Standards can be classified broadly into private and public standards, but the line separating them is not always well defined or clear. In many instances, standards adopted by governments have their origins in the private sector (OECD, 2006). Public standards often specify minimum safety requirements, leaving the private sector to fill the gap beyond the minimum (Henson and Reardon, 2005).⁵ While public standards can be either mandatory or voluntary, private standards are, by definition, voluntary. Nevertheless, some private standards can become de facto standards if they gain a significant share of the market, and adhering to them becomes critical to gaining access to the supply chains. The role of private standards has been growing in importance since the 1990s (Garcia-Martinez and Poole, 2004). Private standards refer to particular labels used by private companies to differentiate their products and to indicate their superior quality. For example, the Nature's Choice label developed by the

² Although they are conceptually distinct, it is not always possible to separate product or process standards from one another. In most cases, a particular product standard requires the application of a particular process standard. Conversely, a process standard does not necessarily produce the required product standard. For example, the ISO quality and environment standard (ISO900 and ISO1400) series require that relevant information is systematically collected. However, it is possible that producers can meet the required process standards without actually improving the quality and environmental performance (Kaplinksy, 2010).

³ HACCP is a systematic preventive approach to food safety that addresses physical, chemical and biological hazards as opposed to finished product inspections. HACCP is used in the food industry to identify potential food safety hazards, so that measures can be put in place to reduce or eliminate the risk of the hazards occurring. The system is used at all stages of food production and preparation processes including packing, distribution etc.

⁴ If problems are detected in the food chain, traceability systems allow these products to be traced back to the source of the problem. European Union traceability requirements only extend as far as the importer, who must be able to identify the exporter supplying the product but not beyond that point except in the case of particular products (i.e., meat).

⁵ This also holds true for international standards. Governments tend to under-invest in international public standards. However, in limiting public standards to a minimum, they run the risk of being outmoded, prompting the private sector to create their own standards.

United Kingdom supermarket chain, Tesco, guarantees superior safety, quality and environmental standards through monitoring and certification of its suppliers.

Private standards can also be collectively developed by groups of firms and business associations. In the food industry, these standards include EurepGAP (now known as the GlobalGAP standard developed by EUREP (an association of European fresh food producers and retailers⁶), the United Kingdom's British Retail Consortium (BRC)⁷ standard for food processing and the Franco-German International Food Standard (IFS).⁸ These vary according to the food products they cover, the points in the value chain on which they focus, and the extent to which they rely on certification and third-party verification (Humphrey and Memedovic, 2006).

The private sector is increasingly taking the lead in setting and enforcing standards due to several reasons. First, private standards can supplement missing or inadequate public standards.⁹ Second, firms can increase profits through product differentiation, using private standards. Third, food companies can reduce costs and risks in their supply chains by standardizing products across suppliers. These efforts have been most prominent in industrialized countries, where ownership is becoming increasingly concentrated among a handful of key players. The consolidation has given rise to "buyer-driven chains" and sourcing patterns extending well beyond national boundaries, facilitated by developments in communications and transportation, and a policy environment conducive to more liberal trade (Henson and Reardon, 2005; OECD, 2006; Fulponi 2005; and Nadvi and Waltring, 2004). Consequently, exporters from developing countries must not only meet regulations of importing countries but also satisfy a plethora of private standards (OECD, 2006; and Henson and Reardon, 2005).¹⁰

⁶ The name of the programme was changed in 2007 to GlobalGAP in order to reflect its expanding role as one of the major international private standards. GlobalGAP is a private-sector body that sets voluntary certification standards and procedures for good agricultural practices. It was originally created by a group of European supermarket chains. GlobalGAP aims to increase consumers' confidence in food safety by developing good agricultural practices that must be adopted by producers. The focus of GlobalGAP is on food safety and traceability, although it also includes some requirements on worker safety, health and welfare, and conservation of environment

⁷ The BRC standard is a private voluntary standard developed by the British Retail Consortium. The standard was set up in order to protect consumers and to enable British retailers to comply with the United Kingdom's Food Safety Act. The standard requires the adoption and implementation of HACCP principles, the setting up of a documented and effective quality management system as well as the control of the working environment, products, processes and personnel. It can be applied by any food supplier company.

⁸ International Food Standard (IFS) is a food safety management system developed by German and French retailers. The IFS standard has been designed as a uniform tool to ensure food safety and to monitor the quality level of producers of retailer-branded food products. The standard can apply to all steps of food production.. IFS certification is required by almost all German and French retailers and by retailers in a number of other European countries. At present, retailers demand IFS certification only from the suppliers of private-label food products.

⁹ In fact, public standards cannot keep up with rapidly changing trends in agro-food markets and private standards are therefore increasingly filling this gap.

¹⁰ Unlike public standards, private standards encompass both product and process standards, such as food safety/hygiene protocols (i.e., British Retail Consortium). Other private standards combine a mixture of food safety, environmental and social dimensions (i.e., EurepGAP).The remaining private standards are primarily concerned with social and environmental issues (i.e., Social Accountability 8000, the Ethical Trading Initiative and the Marine Stewardship Initiative).

Standards can also be set by non-government organizations (NGOs). Such organizations tend to be non-profit oriented and do not necessarily pursue the same objectives as those of governments or businesses. These standards are voluntary but this does not make them less important, especially if producers are seeking to sell into niche markets (Kaplinksy, 2010) Although still a small segment of the global market, pressure is leading to their adoption; for example, Starbucks has adopted the Rainforest Alliance¹¹ label, which focuses on environmental and sustainable issues. Table 1 provides a typology of food safety and quality standards as defined by who sets and enforces them.

Table 1. Examples of public and private food safety and quality standards

	Public – mandatory	Public – voluntary	Private – collective	Private – individual
National	- National legislation (pesticide use, sanitary inspections)	- Food safety enhancement programme - HACCP advantage - SQF - USDA National Organic Programme	- Dutch HACCP - BRC Global Standard - Assure Food Standard - Qualitat und Sciherhei - Intergrate Keten - Beheersing - United States Pork Quality Assurance Programme	- Nature’s Choice - Field-to-Fork (Marks and Spencer, United Kingdom) - Filiere Agriculture Raisonnee (Auchan, France) - Filiere Qualite (Carrefour, France)
International	- EU regulations - WTO regulations	- ISO9000 - ISO22000	- International Food Standard - SQF - GlobalGAP	- Same as above for multinational companies

Source: Henson, 2006.

4. Increasing scope of standards

Food safety standards are not only becoming more stringent but are also widening in coverage and include a range of issues, i.e., quality, social and environmental concerns (table 2). For example, while the EurepGAP’s main objective is safety of fresh fruit and vegetables, it also focuses on environmental and social standards. It addresses issues of sustainability and working conditions. Similar concerns are addressed by Tesco’s Nature Choice label. Some of the characteristics required by standards are not intrinsic to the product; for example, consumers cannot, just by looking at the product, verify whether production adhered to social and environmental standards. The broadening of the scope of standards is aimed at differentiating products and responding to pressures on retailers from civil society groups. The emphasis on labour standards in EurepGAP could be seen as a defensive mechanism to reduce

¹¹ The Rainforest Alliance is a non-governmental organization with the published aims of working to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behaviour.

the risks of damage to companies' reputation from possible violation of labour conditions, etc. The result of the rapid development of public and private standards is that producers in developing countries face multiple and stringent standards developed by different agencies addressing similar issues.

Table 2. Food safety, product quality and social/environmental standards

Food safety	Product quality	Social/environmental
Pesticide use and residue limits	Grading	Recycling requirements
Food additives	Freshness	Organic production requirements
Hygiene requirements	Product composition	Labour standards
HACCP	Product cleanliness	Fair trade standards
Traceability requirements	Labelling requirements	CSR

Source: World Bank, 2005.

B. Standards and agri-food production and exports from developing countries

Access to markets in the developed countries remains one of the main demands by developing countries in the negotiations for agricultural liberalization. For many exporters this means access to lucrative markets in the developed countries, something that is becoming more difficult rather than less. While tariffs can be important for market access, attention is increasingly being focused on the possible adverse effects that standards can have on trade (OECD, 2007).

Proliferation and tightening of food safety standards in the industrialized countries is of concern among many developing countries that depend on exports of primary commodities. Food safety standards can affect trade through bans on imports or through high costs of compliance with stringent standards that can reduce competitiveness of a product. It is widely presumed that food safety measures can be used as a protectionist tool, thus providing justification for prohibiting, or discriminating against imports through the application of higher standards and more rigorous regulatory oversight than is the case with domestic suppliers (World Bank, 2005).

Even if standards are not intentionally used to discriminate against imports, there is concern that their growing complexity and lack of harmonization between countries could adversely affect exports from developing countries. Moreover, many developing countries do not have the adequate administrative, technical and scientific capacities to comply with these emerging requirements, which may act as potential barriers to trade. In addition, the investments involved in complying with standards could potentially undermine the competitive position of most developing countries and their exporters, hindering efforts towards export-led agricultural and rural development (Henson and Jaffee, 2008).¹² Together, these constraints

¹² While most of the constraints faced by producers on meeting standards are internal (costs of compliance etc), producers also face numerous external constraints. As stated by OECD (2007): "Fulfilling standards are an

could potentially marginalize the weaker players, including the small and poor economies as well as the small and medium-sized exporters and producers in developing countries.

Much of the earlier research viewed standards as barriers to trade that restricted market access of agricultural and food exports from developing countries, with no or little attention being given to their positive effects. However, more recent literature shows a more varied picture, and the situation might not be as “problematic” as it was generally perceived to be (Jaffee and Henson, 2004). In fact, some studies pointed out that, under certain circumstances, developing countries could use standards to their own competitive advantage in securing access to lucrative markets. Jaffee and Henson (2004) took a different stance in the debate and argued that rising standards tended to accentuate underlying strengths and weaknesses in the supply chain.

According to the more recent literature, standards may well provide a powerful incentive for modernization of export supply chains while compliance could stimulate capacity-building in the public sector. Furthermore, adopting standards could have spillover effects on the rest of the economy by raising domestic standards through the adoption of good agricultural and manufacturing practices, thereby benefiting consumers and the environment. In such a context, part of the costs of compliance could be considered necessary investments that would enhance the capacity to meet stricter standards. While the emergence of standards poses a serious challenge to many developing countries in accessing lucrative markets abroad, such standards also provide potential opportunities at the same time. Rather than reducing the competitiveness of developing countries, stricter food safety standards could potentially create new sources of competitive advantage.

1. Costs and benefits of standards compliance

The costs of standards are related to the incidence and level of compliance costs incurred by the private sector as well as governments. Costs of compliance for developing countries have been rarely estimated due to lack of data and difficulties in calculating. Likewise, there are also hardly any data on benefits from compliance. In fact, until recently it was not acknowledged that compliance could bring about any benefits. Even when they have been recognized, they have not been measured. As a result, compliance is almost always seen as a cost with few benefits.

Compliance costs are defined as “additional costs incurred by governments and the private sector in meeting requirements to comply with a given standard in a given market” (World Bank, 2005). In assessing costs (as well as benefits), an important distinction has to be made between recurring and non-recurring costs. Non-recurring costs are one-off or time-

essential and a necessary requirement but not a sufficient condition to access global value chains”. There are essentially two types of external constraints – those affecting the sector and those affecting the entire economy. Sector-specific constraints include failing to explore new market opportunities, a lack of research and development, an absence of extension services and insufficient testing facilities. National constraints relate to public infrastructure and services such as availability of reliable and efficient transportation, reliable and low-cost telecommunications, and reliable energy supplies (OECD, 2007). These shortcomings impede market access abroad and may be more of a constraint on SMEs that cannot resort to private resources to overcome these constraints.

limited investments that are made in order to achieve compliance. Usually, these investments may include upgrading laboratory infrastructure and processing facilities, establishing new procedures, training of personnel or designing new management systems. Some are “lumpy” investments for which there are significant economies of scale. On the other hand, recurring costs are borne over time and include maintaining laboratory testing programmes and other production costs associated with enhanced food safety controls etc.

A further distinction in costs can be made between “tangible” and “intangible” costs of compliance. While tangible costs are easy to identify (i.e., the cost of establishing laboratory facilities), intangible costs are more difficult to identify, let alone quantify. In many cases, they are indirectly related to compliance (i.e., forgone opportunities, cost of investments etc.). Most attempts to assess costs of compliance with new standards ignore these intangible costs, even though they may be more significant than tangible costs (World Bank, 2005).

Compliance costs vary across countries, industries and individual producers/exporters. Important factors that affect compliance costs include: the prevailing structure and conditions of the supply chain; the range and extent of administrative and scientific capacities; the level of effective intra-industry and public-private cooperation; the strength of existing technical service industries etc. In addition, countries and industries have different starting points. For a mature and reasonably well-developed export industry, new standards may require incremental changes by producers/exporters and modest adjustments by the public sector. Where a supply chain is underdeveloped, new standards may require upgrades; some producers/exporters might need to re-direct their products to less demanding markets while others would have to undertake significant investments at the company level.

In assessing costs of compliance, the costs of not complying with standards must also be considered. The most obvious direct cost is loss of market sales due to temporary or permanent restrictions on exports or the loss of buyers. These costs can be significant if the industry is highly export-oriented and dependent on a particular export market. In extreme cases, a supplier might be forced out of the market altogether for failing to meet the required standard(s). More generally, the market base may be diversified, which would involve associated costs.

While the costs of compliance may be significant in absolute terms, they are often small relative to the value of exports. Although the overall compliance costs may not be large at the national/industry level, particular firms may well face substantial costs. This is especially likely where commodities and producers/exporters have low trading margins and high operating costs etc. It is difficult to generalise compliance costs – countries and firms with a higher capacity will face lower compliance costs if they have been proactive in the past in anticipating new standards. Furthermore, they are likely to achieve compliance in a shorter period of time.

To date, most studies have failed to even recognize the benefits and have tended to overstate the net costs of compliance as a result. The most significant benefit from compliance is continued and better market access. As with costs, benefits can be both recurring/non-recurring and tangible/intangible. Many of these benefits are only indirectly associated with the process of complying with a standard and thus are largely intangible. Intangible benefits

include opportunities to reassess the efficiency of existing systems of production widely and to study the impact of stricter standards on product quality more broadly. These may improve reputations and customer demand over the short to long term.

Potential tangible benefits of food safety standards include less wastage, greater productivity etc., which would, in turn, reduce production costs and promote competitiveness. Another important tangible benefit is better access to markets or particular market segments. There may also be spillover effects with improvements in domestic productivity, consumer health in the domestic market etc.

Given that costs of compliance with new standards are more tangible and visible than the benefits, compliance is widely thought to be a costly exercise. While there are problems associated with identifying and quantifying costs and benefits of compliance with new standards, there are also problems with attributing these benefits and costs solely to standards. In many cases, efforts to achieve compliance with standards are undertaken within the prevailing competitive environment. Therefore, the costs faced by firms may be different according to their competitive position and previous efforts to improve food safety; this makes it difficult to attribute costs and benefits to particular standards alone.

2. Proliferation of standards

The overall picture for food safety requirements in trade is becoming increasingly complex as standards are set in multiple spheres – at both the public and private levels as well as the national and international levels. While transparency has improved since the Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures entered into force with the establishment of the World Trade Organization on 1 January 1995,¹³ there remains considerable variation in standards between countries¹⁴ and widespread uncertainty over how certain countries are implementing/enforcing their standards, given that there is lack of established international standards for many agro-food exports. While there are some common trends in food safety regulations in developed countries, those countries are still not adopting identical product standards or aligning processes and inspection requirements. For example, Henson and Mitullah (2004) contrast the varied standards that developing countries have to meet in order to gain and maintain access to the markets in the United States, European Union and Japan (for fish products). Not only is there a lack of harmonization in standards but also conformity assessment procedures; this can result in increased production costs for developing country suppliers due to duplicative testing, thereby reducing their ability to achieve economies of scale.

¹³ During the Uruguay Round of multilateral trade negotiations, agricultural exporters voiced concerns with regard to food safety and agricultural health standards being used to restrict imports and that such protectionist measures would likely to increase as traditional barriers to trade declined. The SPS Agreement was negotiated in order to provide a set of multilateral rules that would both recognize the legitimate needs of countries to adopt such measures and create a framework to reduce their trade distorting effects. The SPS agreement set broad ground rules for the legitimate application of food safety and agricultural health measures. Important underlying objectives of the SPS agreement are minimisation of protectionism and discriminatory use of standards and promotion of greater transparency and harmonisation.

¹⁴ Where exports have several destinations, they must frequently comply with several standards simultaneously (OECD, 2007). This often means that multiple certificates have to be obtained and this is costly both in terms of time and money. .

3. Distributional implications of standards

The introduction of new or stricter standards for agricultural and food products in international trade can have wide-ranging implications at various levels. At the international level, there are concerns that rising standards could marginalize lower income countries. However, the overall evidence from the existing literature is mixed, with examples of low- and middle-income countries experiencing significant trade problems while, in other cases, both types of countries are experiencing success in using standards (World Bank 2005).

At the industry level, a number of studies have highlighted distributional impacts of standards within established export supply chains. Those studies explored the impact on the participation of smallholders. There is general concern that rising standards can marginalize the position of smaller players, especially producers, and manufacturers. For small producers who cannot benefit from economies of scale, fixed costs associated with equipment and buildings required to meet standards may be too large and economically unviable.¹⁵ For example, laboratory equipment and cold storage facilities are only economically viable for large-scale operations. Similarly, hiring certain skilled personnel is less problematic for large-scale firms than it is for smaller ones. Generally speaking, smaller firms find complying with new/stricter food safety requirements overwhelming, even though the actual investments required may not be substantial.¹⁶ Nevertheless, there are examples of small-scale producers who have been able to conform to standards (Reardon and others, 2001).

There are also broader spillover effects of standards at the country level; for example, consumers can be affected by rising standards. However, the available evidence on this issue in developing countries remains “fragmentary” and there are significant methodological challenges in attributing distributional effects on standards per se.¹⁷ Nevertheless, the following broad conclusions can be drawn from existing research:

- (a) Developing countries as a group are not suffering from the tightening of standards, but the benefits tend to favour existing large suppliers who are able to reap

¹⁵ In fact, evidence from studies of compliance with labour and environmental standards in the United States suggests that costs are proportionately higher for smaller firms (Crain and Johnson, cited in Jaffe and Henson, 2004).

¹⁶ This is due to: (a) their low levels of literacy that prohibit many from easily understanding and adopting requirements of national legislation, GAPs and other private standards; (b) low agronomic knowledge and technical skills, which requires advisors and extension services to improve quality, safety and productivity; (c) a lack of record keeping; (d) a lack of management skills; (e) poor personal hygiene; (f) the high cost of farm upgrading and certification; and (g) limited participation in associations. These problems, in turn, can generate pressure for rationalization of supply chains, marginalizing small producers from global markets for high-value products, which are dominated by retailers who are strict with regard to quality and safety requirements. This is a cause for concern, given that a very large segment of producers in many developing countries are either small or medium-sized producers with limited technical, financial and managerial resources. For large producers, on the other hand, upgrading is generally not a problem since they have access to credit.

¹⁷ There is currently little empirical evidence to attribute the exclusion of smallholders from global value chains to public/private standards alone (OECD, 2007). In part, this is because it is difficult to separate the effect of standards compliance from other factors that would have contributed towards their marginalization. In many cases, compliance with food safety and agricultural health standards exacerbates an already dire situation.

economies of scale and have better access to information, and who benefit from well-established reputations with overseas buyers. Nevertheless, there are examples of well-organized industries in low-income countries that have not only maintained but also increased their competitiveness and market shares after more stringent standards were adopted;

- (b) While compliance with standards can harm the livelihoods of some, those who are able to participate in the supply chains could benefit. This applies to smallholders who are operating in locations with adequate infrastructure and belong to an effective producer organization that has long-term relationships with buyers. Smallholders can frequently adopt necessary technical measures and investment to comply with emerging standards. A key challenge is to reduce transaction costs associated with monitoring and certifying through collective action;
- (c) The distribution of compliance costs will depend on strategic decisions on compliance that are taken by the public and private sectors. For example, governments can reduce the detrimental effects on the supply chains by investing in laboratories and/or by providing financial and technical support for compliance by the private sector;
- (d) Compliance with standards is only one of many factors affecting competitiveness, and only one of the many variables affecting incomes, employment opportunities and overall welfare of the poor in developing countries.

4. Strategic options for complying with standards

When faced with the need to conform to emerging standards, developing countries rarely face all-or-nothing situations (Henson and Jaffee, 2008). Suppliers weigh the costs and benefits associated with supplying different markets. In some cases, there may be large and profitable opportunities for supplying the domestic market, regional markets or market segments in developed countries that are less stringent or allow more time to implement standards. There are three types of strategies available to developing countries in the face of evolving food safety standards (World Bank, 2005):

- (a) Exit. Move away from certain markets, products or buyers towards others whose standards may be more cost-effective to meet. Going out of business altogether is also a possibility;
- (b) Voice. Developing country governments and exporters seek to influence the standard(s) that they find difficult to meet through negotiations or through formal complaints (i.e., the WTO Sanitary and Phytosanitary Committee);
- (c) Compliance. Taking legal, administrative, technical and organizational measures to conform to product/process requirements.

Table 3 presents a simple framework to characterise the above strategic responses to standards. This scheme draws on the concepts of “exit”, “compliance” and “voice” initially developed by Hirschman. The “pro-activity-reactivity” dimension was later developed by Henson and Jaffee (2008) and is related to the time when efforts to comply commence. This

framework was employed in this study to examine how the tea and fisheries industries in Sri Lanka responded to stringent food safety standards.

It is usually assumed that developing countries will display “compliance” when faced with a new standard (whether public or private) that is imposed in major markets abroad. “Compliance” can be displayed in various forms, such as the adoption of legal/regulatory reforms, changes in production technologies, shifts in the structure of supply chains etc. Countries could comply at the time the standard comes into force (“reactively”) or ahead of time (“proactively”). The latter approach provides greater potential for compliance, which would be beneficial and minimizes detrimental economic and social implications. A “proactive” approach would provide the opportunity to choose among a variety of different technologies as well as organizational/administrative ways of meeting the standard.

Table 3. Strategic responses to standards

Response	Reactive	Proactive
Exit	Wait for standards and give up	Anticipate standards and leave particular markets
Compliance	Wait for standards and then comply	Anticipate standards and comply ahead of time
Voice	Complain when standards are applied	Participate in standard creation or negotiate before standards are applied

Source: Henson and Jaffee, 2008.

Strategic options open to developing countries are not limited to compliance. Countries or exporters can “exit”, choosing not to comply with a particular standard. This implies switching customers in the case of a private standard, or exiting export markets altogether. The exporter may choose to switch to different products for which compliance is less problematic and/or costly. Such a strategy may be employed when compliance would result in a loss of competitiveness or a very negative economic and social impact, if resources could be better spent elsewhere or if there are profitable, less-demanding alternative markets. Shifting product lines or market orientation can be a viable strategy for maintaining competitiveness.

Developing country governments and exporters can also adopt a strategy of “voice” – that is, attempt to change the prevailing rules or respond to new standards by negotiating or protesting, such as by raising complaints through the SPS Committee of WTO, or by engaging in bilateral negotiations with the trading partners. Individual exporters may question the requirements being imposed by their customers and attempt to come to a compromise. Being “proactive” across both “exit” and “voice” dimensions is more strategically advantageous than being “reactive” (Henson and Jaffee, 2008).

The ability to implement any of the above strategies depends on a range of factors at the country, market and firm levels as well as on the specific nature of the standards (World

Bank, 2005).¹⁸ In particular, they relate to the availability of technical and economic resources at various institutional levels, which will influence not only how countries respond to emerging standards but also who responds. More specifically, factors include the size of the enterprise/industry, the share of the market, the reputation for quality and safety, leadership within the private sector, private sector management/technical capacity, efficacy of the legal/regulatory framework, clarity of institutional responsibilities etc.

In the above framework, the most positive and advantageous strategy would be a combination of “voice” and “proactive” dimensions. This approach is most likely to turn the challenges associated with new food safety standards into advantages, and bring out positive social and economic outcomes. On the other hand, the most negative approach is a combination of “exit” and “reactivity”, which would involve considerable costs.

Strategic responses to food safety standards have varied across countries and exporters (Henson and Jaffee, 2008). Most have tended to take a reactive strategy, at both the governmental and the firm levels, due to capacity constraints and a tendency to wait until the last moment when the threat becomes real. Where there may be the capacity to implement the standard(s), the threat is less detrimental; however, such a strategy forgoes the benefits of being “proactive” if necessary action is not taken in advance. Nevertheless, at the firm level, there is evidence of “proactivity” among the leading exporters who tend to be larger or more diversified, and who have access to financial and technical resources. While there might be significant levels of market “exit”, especially among smaller firms, there are often cases that are more proactive and thus gain as a result.

C. Methodology

The current study adopted a qualitative research design towards answering the questions posed in the introduction. In this regard, the tea and fisheries export industries in Sri Lanka were used as case studies. A case study is the most appropriate method, given that there are enormous difficulties involved in empirically testing the impact of standards on trade (Jaffee and Henson, 2004).

The focus was on the export-oriented supply chains as well as the costs and benefits associated with compliance with external market standards. While food safety measures and requirements are at the centre of study, attention has also been given to compliance with basic quality standards. Limited attention has been given to emerging environmental and social standards, except where these have clearly taken on a major significance.

Secondary data were collected first as they provide useful background information that would be helpful in collecting necessary data from the field. Primary data collection was supported with analysis of published and unpublished secondary sources (i.e., industry reports/journals, newspaper articles etc).

¹⁸ A series of factors affect the viability of pursuing alternative strategies. These include: size of the firm/industry; share of the target market; reputation of quality/safety; suitability of legal/regulatory framework; leadership/coordination within the private sector; private sector management/technical capacity (World Bank, 2005). For individual exporters, enterprise size is a key determinant in the ability to be proactive.

To examine how standards have affected the tea and fisheries industries in Sri Lanka, interviews were conducted with a representative sample of exporters from the two industries. The sampling used for the study was a purposive one. Lists of all tea and fish exporters were acquired from the Export Development Board (EDB) in Sri Lanka. In order to capture how the imposition of standards has affected both large and SME exporters, both categories were selected from the lists of tea and fish exporters. The EDB classifies large-scale tea exporters as those whose export values are equal or greater than Rs.150 million annually. Those companies whose export values are less than Rs. 150 million are categorized as SMEs. Classification for fish exporters was also based on the EDB lists. Given the time and budget constraints, exporters from Colombo and the suburbs (i.e., Negombo, Wattala, Marawila and Ja-Ela) were chosen. The interviews formed the primary source of information for the study.

Face-to-face interviews were carried out, based on a standard semi-structured schedule. The questionnaire (see annex) comprised six main sections: (a) background information of the company; (b) export supply chain; (c) export requirements; (d) management capacity; (e) compliance strategy; and (f) costs and benefits of compliance.

D. Background to tea and fisheries industries in Sri Lanka

1. Tea industry

The tea industry in Sri Lanka has a long history, spanning nearly 150 years, during which it has witnessed rapid expansion and played an important role in the development of the country's economy. Today, the industry is the third-largest agricultural crop in Sri Lanka, generating a sizable proportion of the national income of the country. This industry not only provides employment directly and indirectly to more than 1 million people, it also generates a significant amount of valuable foreign exchange (Institute of Social Development, 2008) (figure 1). In fact, tea was Sri Lanka's main export product until the 1980s, when it was surpassed by the apparel sector, which is now the country's main source of export revenue. In 2008, Sri Lanka exported approximately 305 million kg of black tea, which earned US\$ 1,271 million (Central Bank of Sri Lanka, 2008). Sri Lanka produces tea throughout the year, and in 2008 set a new production record with some 319 million kg of tea.

The total land area under tea cultivation has been assessed at approximately 212,715 hectares, which is the third-largest tea-growing area in the world after China and India (Sri Lanka Tea Board, 2008). Sri Lanka mainly produces black tea.¹⁹ Black tea is further categorized on the basis of the production process – either cut, tear and curl (CTC) or orthodox tea.²⁰ While Sri Lanka produces both categories of tea, orthodox tea accounts for 93 per cent of the country's total tea production. Sri Lanka also produces a small quantity of CTC teas and

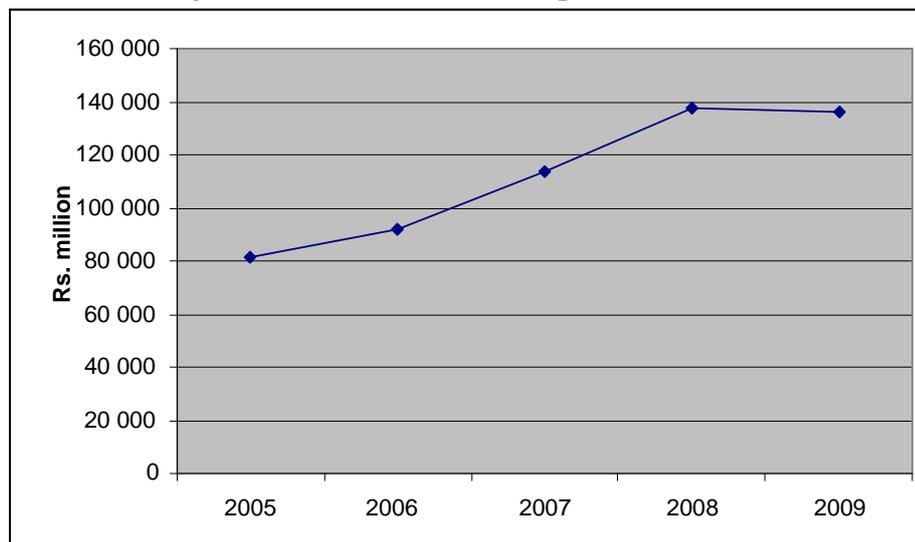
¹⁹ There are two main types of tea in the world market – black tea and green tea. Both black tea and green tea come from the same plant, *Camellia sinensis*. However, the manufacturing process for each product is different.

²⁰ In the orthodox process of production, semi-dried green shoots are crushed by a roller. When tea leaves are crushed, an oxidation process begins, which is followed by firing, thereby producing what is commonly known as black tea. Sri Lanka also produces tea by an unorthodox method, i.e., cut, tear and curl (CTC). In the case of CTC, tea is cut prior to rolling. This is now the most common type of tea sold on the international market.

green tea, instant tea and organic teas, but they account for less than 7 per cent of the total production (Ministry of Plantation Industries, 2009).

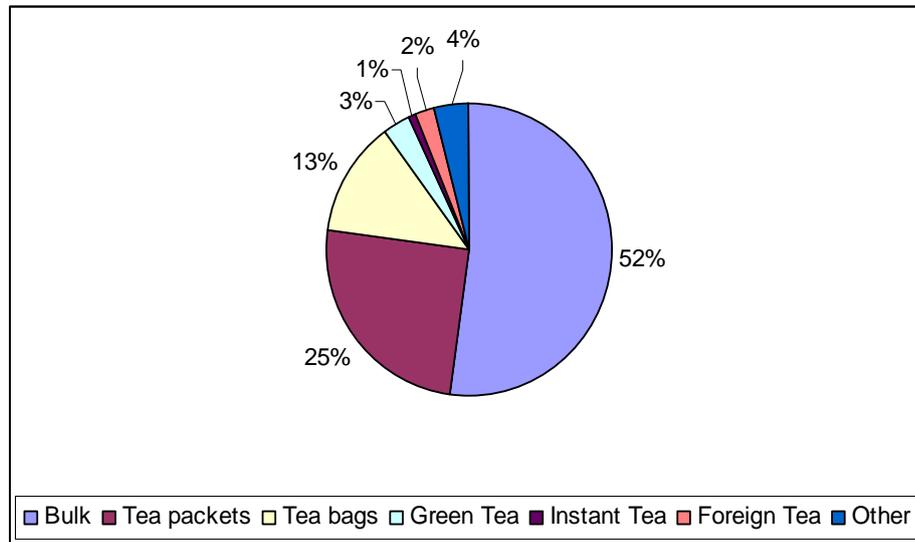
Sri Lanka accounts for a 9 per cent share of world tea production. Sri Lanka currently accounts for about 19 per cent of total global tea exports (SOMO, 2008), and is the second largest tea exporter after Kenya. Category-wise, Sri Lanka is still the market leader for orthodox tea, with a market share of 32 per cent, while Kenya produces mostly CTC teas. Sri Lanka exports tea to more than 125 countries, with the majority of shipments going to the Middle East, the Russian Federation, the European Union and Commonwealth of Independent States countries. However, the composition of export destinations varies according to the export categories (bulk, tea packets, tea bags etc.). Most of the tea produced by Sri Lanka is exported in bulk form, followed by value-added teas, i.e., tea packets, tea bags, instant tea, green tea and other teas (figure 2).

Figure 1. Total value of tea exports, 2005-2009



Source: Central Bank of Sri Lanka Annual Report (various issues).

Figure 2. Different compositions of tea exports, 2009

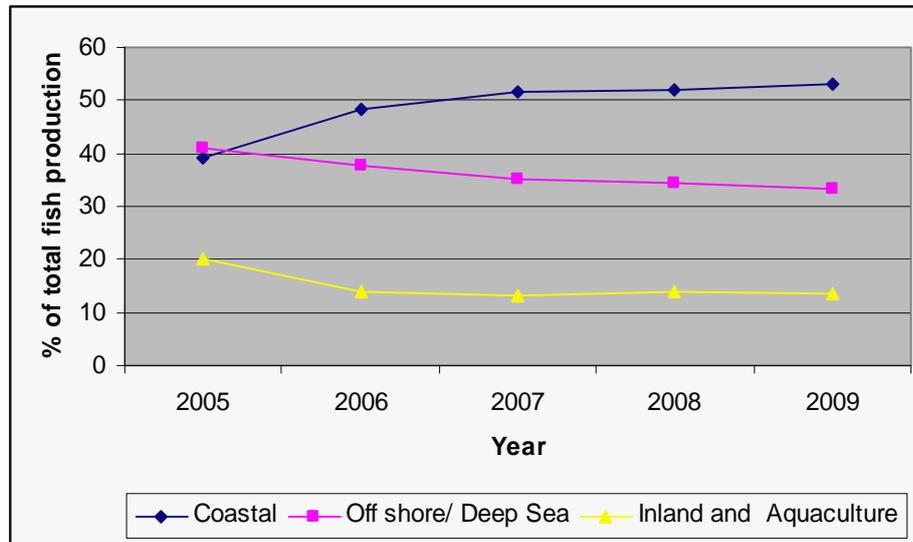


Source: Compiled from Central Bank of Sri Lanka, 2009

2. Fisheries industry

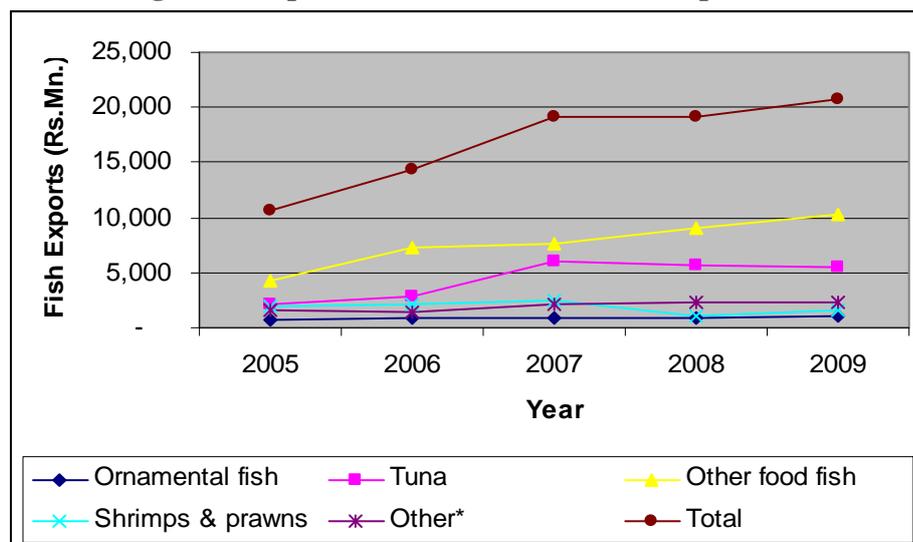
Equally, the fisheries industry plays a key role in Sri Lanka's socio-economic development by providing employment, ensuring food security and earning foreign exchange. Sri Lanka has a diverse resource base with a territorial sea of 21,500 km² and an Exclusive Economic Zone of 517, 000 km². It has a narrow continental shelf of about 300,000 km², and has both brackish water and freshwater resources scattered around the country. Based on the diversity of the resource base as well as the spatial and methodological differences in fishing, the sector is divided into three main subsectors: offshore/deep-sea fishing (33 per cent of total fish production in 2009), coastal (53 per cent) and inland fisheries (14 per cent) (figure 3).

Figure 3. National fish production by subsector, 2005-2009



Source: Institute of Policy Studies of Sri Lanka, 2010.

Figure 4. Export value of fish and fisheries products



Source: Institute of Policy Studies of Sri Lanka, 2010.

Sri Lanka's fisheries sector provides employment for about 650,000 people, of whom approximately 150,000 are directly engaged in fishing, 100,000 are involved in fishing-related services and 400,000 in the fisheries trade. The sector's contribution to the country's gross domestic product is less than 2 per cent, but it has emerged as an important source of foreign exchange from exports of fish and fishery products such as fresh, chilled or frozen fish (tuna, sword fish, sear etc), crustaceans (shrimp, prawn, lobsters, crabs etc), and sea cucumbers (figure 4). Export earnings have been increasing over the years with exports increasing by 10-15 per cent per annum (with the exception of 2004) during 2000-2007. In 2009, export earnings from the fisheries sector amounted to some US\$ 185 million. Tuna exports have

dominated Sri Lanka's fish exports. The main export markets for fish²¹ are European Union countries (such as France, Germany, Italy, the Netherlands and the United Kingdom), Japan, Singapore, Switzerland, the United States and Hong Kong, China. The main markets for prawn exports are Japan, the United Kingdom, Maldives, the United States and China.

E. Results from exporter interviews

1. Tea industry

In order to assess the implications of standards on tea exports from Sri Lanka, nine tea exporting companies were selected from a list of exporters maintained by EDB for in-depth interviews. The group comprised three large-scale tea exporting companies and six SME tea exporting companies, was selected on the basis of representing a cross-section of Sri Lankan tea exporters.

(a) Company profiles and export supply chain

From the information gathered on the background of each company, it was evident that the exporters interviewed had been exporting tea for a considerable time (20 to 150 years), with the medium to large-sized companies having been in the business for the longest period. Except for a few SMEs, most of these companies have diversified into other businesses such as rubber, palm oil, spices, herbal products, fibre products, and travel and tourism-related services. The number of employees in the companies ranged from six in the case of a small-scale exporter to as many as 1,500 in a large-scale tea exporter that had been able to establish an international brand. A few exporters also hire contract workers when required. While the majority of the exporters were only engaged in tea exports, some were also importing tea for blending and re-exporting purposes.

The companies interviewed export a wide variety of teas (e.g., black tea, green tea, white tea, herbal tea and flavoured tea) in various forms (from bulk to value-added tea bags, tea packets and gift packets). Although most of the tea is exported, some firms supply the domestic market with small quantities. Major markets for the exporters include the Russian Federation and CIS, the Middle East, the European Union, the United States, Canada, Australia, New Zealand and South-East Asia. Most of the exporters have been supplying those markets for a considerable period. Half of the companies have increased exports during the past five years due to improvements in their products and value addition, the establishment of brands, and better customer service, marketing strategies and personal relations. Other firms said exports had decreased because of the global financial crisis, domestic constraints (high charges as well as stringent checks on tea quality) and competition from other tea-producing countries.

The major customers of these export companies are wholesalers, distributors, retailers, and supermarkets. Almost all exporters purchase tea from the Colombo tea auctions, which are

²¹ Based on 2008 export values for lobsters, crabs, fish (fresh or chilled), frozen fish, preserved fish and fisheries products published by EDB.

the largest in the world, while some also source from private sales – i.e., directly from the tea estates. For example, one company gets organic tea from its own organic tea estate while another purchases tea from one of the largest tea-exporting companies in Sri Lanka, which is also an investor in that company. The exporters obtain samples of tea through brokers before the auctions to check the quality of the tea.

(b) *Standard requirements*

The standards to which exporters must adhere when exporting include HACCP, GMP, ISO 9000,²² ISO 22000,²³ SA 8000,²⁴ IFS, Halal, JAS, FDA, Fair Trade,²⁵ KOSHER and Organic (SKAL).²⁶ One large-scale exporter also supplies the McDonald's fast food chain, which has its own set of requirements (table 4). All three selected large-scale tea exporters have obtained HACCP, ISO 9000 and ISO 22000 certifications, which appear to have become industry standards for quality and safety, as well as other specific standards catering to niche markets (Fair Trade, KOSHER, Halal and SA 8000). Some SME exporters have HACCP and/or ISO 22000; only two of the companies were not following any standards. One has outsourced its production to a company that has the required quality and safety standards, while the other company exports to markets that do not require specific standards. When the exporters were asked which of the markets they exported to had the strictest requirements, most of them said Japan as it was more quality conscious and very exacting with regard to packaging used (i.e. tea bags). Other stringent markets mentioned were the European Union, the United States and Australia. All the companies received information about these requirements from their buyers abroad. Some also acquired information from the Sri Lanka Tea Board, Sri Lanka Standards Institute, Ceylon Chambers of Commerce, private certification bodies and the Internet.

According to the interviews, food safety and product quality are more important when exporting tea compared to environmental, social and other requirements. In fact, some exporters stated that these were not important as far as their buyers are concerned. Many of them had adopted these standards from the time they were introduced in the tea industry, while

²² ISO 9000 is a family of standards for quality management systems. Certification to an ISO 9001 standard does not guarantee any quality of end products and services; rather, it certifies that formalized business processes have been implemented.

²³ The ISO 22000 standard is a food safety management system and its adoption can demonstrate the ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It incorporates the HACCP principles as well as traceability measures. ISO 22000 harmonizes the requirements of national food safety management systems worldwide on a non-governmental, voluntary basis.

²⁴ SA 8000 is a voluntary private workplace certification programme that has been developed by the non-governmental organization, Social Accountability International (SAI), with the aim to create better working conditions. The SA 8000 standard is based on international workplace norms including those related to social justice, worker rights and working conditions.

²⁵ Buyers that commit to fair trade must pay a minimum price to producers as well as a premium called the fair-trade premium which is used to support producers and to invest in community development. In return, producers that commit to fair trade must comply with labour rights as well as environmental and social requirements.

²⁶ In addition, as the regulatory authority the Sri Lanka Tea Board stipulates that all tea produced in the country must meet the ISO 3720 standard, which is a basic standard for black tea. However, none of the respondents mentioned this particular standard. This could be due to the fact that it is a basic product standard that can be easily met.

others had acquired them over a period. Some exporters felt that these standards were justified to ensure that the product meets certain quality and safety parameters while others considered them to be unnecessary and catering to only industrialized markets. One large-scale exporter saw no relevance in having to meet a number of different standards, as the company had already obtained ISO 22000 certification. In that context, exporters had mixed reactions with regard to standards being a non-tariff barrier to trade or not.

Table 4. Standards met by interviewed tea exporters

Type of standards	SMEs	Large-scale firms	Total
GMP	1	2	3
IFS	-	2	2
HACCP	2	3	5
ISO 22000	2	3	5
ISO 9000	-	3	3
Fair Trade	-	2	2
SA 8000	-	1	1
Organic Standard	1	1	2
JAS	1	-	1
FDA	2	-	2
Halal	1	-	1
KOSHER	-	1	1
Private (McDonalds)	-	1	1

Source: Interviews.

The companies are inspected and audited with regard to the standards on a regular basis internally as well as externally by a number of public and private agencies, including the Sri Lanka Standards Institute as well as SGS Lanka, DNV and Moodys, which are the leading certification private bodies in Sri Lanka. Audits take place frequently, depending on the standard and buyer's requirements. Some of the exporters said that the different buyers required different certifications but they did not find this problematic apart from the high cost involved. Moreover, they said that they had little choice but to adhere to these standards if they wanted to continue exporting to their existing markets.

The main problem faced by the majority of the exporters is the cost involved in complying with the standards. One exporter stated that multiple standards – inspections and audits – were costly as well as time-consuming, as extensive documentation was required. When asked whether they would prefer to have one standard that covered food safety, quality, environment and social conditions, most of the exporters did not think it was possible given the different requirements of different buyers and countries. So far, no export consignments have been rejected due to non-compliance with food safety, product quality, environmental or social standards, underscoring the ability of the industry to respond to buyer's requirements.

(c) *Management capacity*

All the interviewed companies considered their capacity to meet standard requirements as being either “totally adequate” or “somewhat adequate”. When they compared themselves with their competitors in Sri Lanka, most large-scale companies said they had higher capacity for compliance, while the SMEs said that their capacity was the same as others in the industry. When asked what they thought about Sri Lanka’s capacity as a whole to meet standards, all the exporters said it was “somewhat adequate” but that there was still room for improvement.

A number of initiatives have been undertaken by the exporters with regard to complying with standards, including: (a) capital investments (for example, one SME was opening a new factory with all the necessary facilities required to meet standards, including machinery imported from India); (b) changing processes and procedures (by packing in a more hygienic environment); (c) establishing a Quality Assurance Department and a Food Technology Department; (d) outsourcing production; (e) and staff training and improving working conditions in the factories (by providing washrooms, lunch rooms, beds etc.).

From the interviews it is evident that exporters do not work with each other to meet standards, due to competition, nor do buyers work with exporters to assist them in meeting standards. None of the exporters provide any assistance to their suppliers in the supply chain to meet standards. Nevertheless, the exporters have received both financial and technical assistance from the Government and its agencies in conforming to some of the standards. For example, the Government has allocated Rs. 40 million for tea exporters, from which one of the exporters has received Rs. 23 million under the *Dahas diriya* programme. In addition, EDB has organized workshops and technical assistance has been provided by the Tea Research Institute (TRI). However, it appears that some of the SMEs have not received any form of assistance in complying with the standards. According to one interview, most of the assistance to the industry has been directed to tea plantation companies rather than the exporters.

All exporters stated that they required some form of assistance to help them comply with emerging standards, including financial assistance (loans with low interest rates, and longer pay back periods), technical assistance (more support from government research institutes such as TRI), and advocacy (convincing foreign buyers that compliance with international standards such as ISOs is adequate for ensuring the safety and quality of tea exported from Sri Lanka).

(d) *Compliance strategy*

Almost all of the exporters, which have complied with some kind of standard requirement, have challenged the imposition of standards at some point in time and have engaged in negotiations. In one instance, an exporter stopped exporting to one of the markets because the buyer required a stringent standard (low levels of air-borne fungal spores), which was not possible to achieve given the climatic (topical) conditions in the country. However, none of the exporters have shifted or diverted their supplies from a developed country to a developing country because of stringency of standards. Large-scale exporters have been able to

respond to the imposition of standards proactively and successfully, while some SMEs have responded both proactively and reactively to standards, depending on the standard in question.

Table 5. Compliance strategy: Tea exporters

	Yes	No	No response
Exit	1	9	
Compliance	8	2	
Voice	3	1	6

Source: Interviews.

Table 6. Response to standards by firm size: Tea exporters

	Proactive	Reactive	No response
Large	3	1	-
SMEs	1	2	3
Total	4	3	3

Source: Interviews.

(e) Costs and benefits of compliance

The costs involved in complying with standards include input costs, processing, packaging, storage and distribution costs, labelling cost, capital investment (mainly in the form of obtaining new machinery), staff time (dealing with various types of documentation related to standard compliance), external services (some exporters have hired consultants to advise on areas that need improvements) and certification fees (table 7).

All the companies said they had to bear various costs associated with compliance, which were considered to be significant. It was stated that costs were likely to be higher for SMEs and that there was a possibility of SMEs being excluded from the markets. In contrast, large-scale companies are more likely to be able to cover these costs, even though they have to comply with a more diverse set of standards, as they export a larger volume of tea.

Table 7. Costs associated with standards compliance: Tea exporters

Type of cost	SME	Large-scale	Total
Input costs	-	1	1
Processing costs	-	2	2
Packaging costs	-	2	2
Storage/distribution costs	-	1	1
Procurement costs	-	-	
Labelling costs	-	2	2
Certification costs	2	3	5
Capital investment	1	3	4
Staff time	1	3	4
External services	1	1	2
Loss of production	-	1	1
Accommodation and transportation costs for auditors	-	1	1

Source: Interviews.

In terms of benefits, most of the exporters identified continued and better market access as the most important benefit from complying with standards, followed by enhanced efficiency, reduction in wastage, and improvements in social and environment conditions (for example, one company stated that standards had helped to improve the morale of employees). Almost none of the exporters felt that obtaining standards improved the prices they obtained for their tea. In fact, one of the exporters stated that a higher price could not be charged, as the tea trade was highly competitive and some standards had become a necessity to remaining in business (table 8). Furthermore, most of the respondents said that the costs of compliance were not offset by the benefits.

Table 8. Benefits associated with standards compliance: Tea exporters.

Type of benefit	SMEs	Large-scale	Total
Continued and better market access	4	2	6
Enhanced efficiency	3	2	5
Reduction in wastage	1	2	3
Reduction in product inspection and detention	1	-	1
Higher price	-	2	2
Improved social and environmental conditions	3	1	4

Source: Interviews.

2. Fisheries industry

(a) Company profiles and export supply chain

In order to assess the implications of standards on the fisheries industry, 10 fish (fresh and frozen), crab, lobster and prawn exporters were interviewed. In order to identify any differences in the implications of standards based on firm size (in terms of the number of employees), five large-scale companies and five SMEs were interviewed.

All the exporters, with the exception of one, have been in the business for more than 15 years, having established their companies during 1981-1994. The majority of the large-scale exporters employ 200-300 people, while the smallest SME interviewed employs only 10 workers. The companies are predominantly export-oriented, producing only for the export market; the exception is one company that also directs 10 per cent of its production to the domestic market. The main varieties of fish exported include yellow fin tuna, mullet, sheer, prawn, crabs, cuttlefish, lobsters and shrimp, mostly in chilled/frozen form.

Major export markets for SMEs include China, Maldives, Taiwan Province of China, the Middle East, Canada and Switzerland. Only one of the SMEs interviewed exports to the European Union, which was identified by the majority of the respondents as the market with the strictest requirements in terms of standards and regulation. The large-scale companies have more diverse export markets that include the European Union, the United States, Japan, China, Switzerland, Hong Kong, China, to name a few. A majority of the respondents stated that their

exports had increased during the past five years due to the tariff concessions under the European Union GSP+ scheme as well as necessary action taken by both the Government of Sri Lanka and the private sector to meet the European Union standards. The Government has introduced necessary regulations and controls while the private sector has upgraded its facilities to conform to European Union requirements. This has enabled the industry to meet the standards required for fish exports to the European Union, which has become the minimum standard for many of the companies.

(b) Standard requirements

The majority of the fish exporters meet a number of food and safety standard requirements including HACCP, ISO 22000 and European Union Requirements (Standards).²⁷ In addition, some companies meet standards such as the British Retail Consortium (BRC), Food and Drug Administration (FDA), International Food Standard (IFS), private standards specified by supermarkets, and industry specific standards such as the Friend of the Sea Certificate (table 9). All companies that engage in fish processing require the HACCP certificate. It is noteworthy that the SMEs meet a lesser number of standards compared with the large-scale exporters and limit themselves to HACCP, whereas the larger companies adhere to a wider range of standards.

A Health Certificate (Food Safety Certificate), which is issued by the Department of Fisheries and Aquatic Resources, had been obtained by all exporters interviewed. However, the need for the Health Certificate depends on whether the importing country requires it or not. If it is a requirement, then it has to be obtained for every consignment of fish to the importing country.²⁸ Most of the exporters had obtained information about these standards from their buyers as well as the Department of Fisheries and Aquatic Resources, SLSI and SGS, which are involved in the certification and auditing process, and consultants.

²⁷ In the fish industry, HACCP Certification is issued by the Department of Fisheries and Aquatic Resources, which is also the competent authority appointed by the European Union to issue the approval/licence to export to the European Union.

²⁸ The Ministry of Fisheries and Aquatic Resources Development is the primary policy-making body of the fisheries sector in Sri Lanka while the Department of Fisheries and Aquatic Resources is the competent authority for exporting fishery products, with the Quality Control Division ensuring the quality and safety of the exported fishery products.

Table 9. Standards met by the interviewed fish exporters

Type of standards	SMEs	Large-scale	Total
GMP	-	1	1
IFS	-	1	1
BRC	-	3	3
ISO 22000	1	1	2
HACCP	4	5	9
European Union requirements (standards)	1	5	6
FDA	-	3	3
ISF	-	1	1
Friend of the Sea Certificate	-	1	1
Dolphin Safe Certificate	-	-	-
Private standards (Deutsche zee – Germany, Albert Hiejn – Netherlands, Tesco, J. Sainsbury, Marks and Spencer and Waitrose – United Kingdom)	-	1	1

Source: Interviews.

In order to adhere to standards such as HACCP, ISO 22000 and European Standard, information regarding fish supplies is important. The exporters that were interviewed source their fish mainly through fish collectors or through direct sales from boats/landing sites. In the latter case, the companies have their own officers to monitor the fish they buy. Whichever the source, the ability of suppliers to adhere to the required standards is an important factor in an exporter's decision on whether or not to buy. In the case of most exporters, especially those that export to the European Union, their suppliers are registered with the export company as well as with the Department of Fisheries and Aquatic Resources. The suppliers are required to maintain boat checklists that include specific sanitary requirements, traceability of catch etc. Details of the catch and the boats are necessary to obtain the 'Catch Certificate', a requirement for fish exports to the European Union since January 2010. During the interviews, one of Sri Lanka's largest fish-exporting companies stated that it sourced fish from the company's long-line fleet, which included company-owned boats as well as close to 100 foreign-owned boats leased by the company.

All the respondents identified food safety and product quality as very important requirements when exporting fish. However, only one large-scale exporter identified social and environment requirements as very important in exporting. In fact, two exporters rated these requirements as unimportant since their buyers did not check for their compliance with these

issues. Nevertheless, all the exporters have to comply with the local environmental regulations put in place by the Central Environment Authority.

All the respondents stated that the standards in place were justifiable. None of them considered the standards to be a form of NTB. In fact, one exporter mentioned that it was essential for Sri Lanka to comply with the required standards and thereby improve the quality of its fish exports to niche markets, given that its fish production was relatively small compared with other fish-exporting countries. Nevertheless, one SME exporter complained that the European Union requirements did not take into account individual cases and differences in terms of suppliers.

While the buyers provide written specifications on standards, inspections and audits are carried out very frequently in the fisheries industry. It is possible to identify three main types of audits: (a) first party (or internal) audits – carried out by the company’s staff members; (b) second party audits – carried out by buyers and private agencies such as SGS; and (c) third party audits – carried out by competent authorities such as the Department of Fisheries and Aquatic Resources and SLSI. The Department of Fishery and Aquatic Resources’ inspections are carried out every three months while buyer inspections are carried out once a year, with one large-scale exporter stating that about 10 retailer inspections are carried out a year.

Half of the exporters interviewed stated that each buyer required a different certificate/audit when exporting but this did not appear to be a significant constraint to market access. It was stated that meeting the required standards demanded by buyers was a necessity, not an option. One exporter said that they usually assessed the costs and benefits of complying with an additional standard if it is requested by a buyer. Only a few of the exporters thought it was necessary to have one standard that covered all the requirements of the different standards currently in place. In fact, many thought that this was not possible, given that standards differ from one market to another. Moreover, some buyers used standards as a marketing tool to differentiate their product and as such would continue to meet various standards.

Some of the difficulties faced by exporters in meeting standards include:

- (a) High costs associated with licensing, testing and auditing. One exporter estimated the cost of maintenance of these various documents as Rs. 75, 000 per month;
- (b) Certain requirements are difficult to meet, given the country’s infrastructure. For example, in order to issue a catch certificate, which is a declaration of the area in which fish are caught, a Vessel Monitoring System (VMS) must be in place. However, such a monitoring system is currently unavailable in Sri Lanka. The certificate guarantees that no illegal fishing from international seas has taken place. In this context, it has been negotiated and agreed on with the European Union to issue the catch certificate based on other related factors (for example, the engine capacity of the boat);
- (c) Each shipment requires a certificate from the Department of Fisheries and Aquatic Resources. These certificates are only issued during the office hours of 8.30 a.m. and 4.30 p.m. Therefore, if any problems arise outside these working hours, the exporters face difficulties in dispatching the order on time;

- (d) Practical difficulties related to physical space within the factories and skilled labour in abiding with standard requirements;
- (e) Low levels of education among fishermen. This makes it difficult to introduce new technology. Moreover, the exporters complain that it is difficult to get fishermen to adhere to standard requirements, with some being negligent and careless. Often, it is difficult to approach the fishermen directly and, as a result, they have to rely on middlemen; this makes it difficult to follow any formal procedure (for example, issuing receipts).

Food safety and product quality were identified as the most difficult requirements to meet, as exporters have little control over these aspects. It is only when the fish are caught and bought to the shore that the quality can be checked, and at this point the possibility of rejection is very high. Although the boat owners are well aware of the export requirements, they do not comply with them; as a result, the amount of fish that the companies can supply to the buyers is sometimes much lower than what is required. It was mentioned during the interviews that when it came to food safety, it was costly to maintain the standards.

Most of the exporters interviewed said they have had consignments rejected due to external factors such as flight delays; however, this was a rare and infrequent occurrence. They also stated that the European Union had the strictest requirements of all the export markets.

(c) *Management capacity*

In terms of a company's capacity to meet the standard requirements of the major markets, all the interviewed exporters – including the SMEs – stated that their capacities were either “totally adequate” or “somewhat adequate” with room for improvement. One exporter was of the view that all the companies had high management capacity due to the Department of Fisheries and Aquatic Resources enforcing stringent standards on fish exports. Nevertheless, it was mentioned that Sri Lanka has the capacity to improve since the industry was relatively new and had the advantage of adhering to standards from the very beginning.

In order to meet the standards, exporters have mainly undertaken investments and training. Investments have been made in upgrading facilities on boats and the development of infrastructure facilities (installed water purification systems, waste water treatment plants etc.). Companies have trained their staff according to the necessary requirements; for example, one company hires Japanese captains to work with the local workers to enhance the knowledge of local workers. In addition, exporters mentioned that they renewed machinery every four to five years, carried out the necessary testing and audits (chemical and microbiological tests of water, ice and finished products), and received assistance from consultants. From the interviews it was evident that exporters do not necessarily work together to develop their capacities for meeting standards which is seen as a competitive tool.

A majority of the respondents stated that they had received assistance from the Government in meeting the standard requirements. This has mainly been in terms of technical assistance. The exporters identified government agencies such as the Department of Fisheries, and Aquatic Resources, National Aquatic Resources Research and Development Agency

(NARA) and EDB as having extended assistance to the industry. The Department of Fisheries and Aquatic Resources, and NARA provide information, training and technical knowledge on fishing methods, food processing etc. to exporters as well as fisherman. It was mentioned that the Government had taken measures to put in place the necessary infrastructure and regulatory requirements such as the Fisheries Act, which incorporates the European Union standards, thereby supporting adherence by the industry to standards. Furthermore, the certifications and audits carried out by the Department of Fisheries and Aquatic Resources as well as other private agencies act as a form of training for exporters.

It was also mentioned that EDB organizes workshops and seminars on standards, thus providing technical knowledge to the companies. It was also stated that the high-level negotiations related to standards, carried out by the Government (for example, bilateral negotiations with the European Union), had assisted exporters in complying with standards of importing countries. However, a few exporters stated that the assistance they had received so far from the Government had been negligible.

Many fish exporters provide assistance to their suppliers in complying with standard requirements. However, only one of the respondents stated that they had provided financial assistance in the form of loans to the suppliers. The majority provide technical assistance by carrying out boat inspections and educating fishermen about the specific requirements.

In order to comply with standards, the exporters stated that the industry required:

- (a) Financial and advisory support for fishermen and exporters, since many fishermen lack fixed assets other than their boats, which cannot be used as collateral. Consequently, they do not have access to sufficient loans for upgrading their boats. However, upgrading boats with modern technology is essential to meeting emerging standards and it was stressed that banks should assist fishermen in this regard. The exporters stated that they also needed loans with low interest rates in order to enhance their own capacities to meet standards. In addition, one exporter requested advice on how to increase fish exports from the country;
 - (b) Development of infrastructure to meet the relevant standards. In this regard, the Government needs to invest in the required technology such as, for example, the Vessel Monitoring System for tracing boats at sea. Also, the conditions of landing as well as other ancillary industries that support the fisheries industry sites need to be improved. For example, one exporter mentioned that the industry is unable to obtain sufficient quantities of clean ice, which is a major requirement in exporting fish products. In this regard, it was suggested that the Government set up an ice factory;
 - (c) Legal-based assistance. It was mentioned that the legislation of the country should be updated to enable it to meet international standard requirements.
- (d) *Compliance strategy*

All the respondents stated that they had complied with the standards when they were imposed (tables 10 and 11). None of the interviewed companies had stopped supplying specific markets due to an inability to meet standards. Neither had they shifted exports to developing

countries where standard requirements were not very stringent. However, the majority of the respondents stated that there had been instances where certain requirements were challenged and negotiations were carried out to reach a settlement (for example, low cadmium level requirements, European Union restrictions on working overtime, and water quality). Some of these negotiations were carried out officially at the government level. While half of the respondents stated that they had reacted proactively to the imposition of standards, the rest stated that their response was reactive. They also believed that they had been successful in their responses. There was no significant difference between the large-scale enterprises and SMEs in terms of proactive-reactivity strategy.

Table 10. Compliance strategy: Fish exporters

	Yes	No	Not response
Exit	-	8	2
Compliance	10	0	-
Voice	7	1	2

Source: Interviews

Table 11. Response to standards by firm size: Fish exporters

	Proactive	Reactive	No response
Large	3	1	1
SMEs	2	3	-
Total	5	4	1

Source: Interviews

(e) *Costs and benefits of compliance*

In terms of complying with standards, some of the major costs involved were identified as certification fees, capital investment costs, processing costs, input costs, packaging and storage/distribution costs, and external costs (table 12). With the exception of one exporter who exports only chilled fish, which does not require any form of certification except for the Health Certificate, all the respondents identified certification fees as a major cost. Another exporter mentioned that certification fees can amount to between Rs. 200 and Rs. 300 for each shipment. In addition to the initial cost of getting the certificate, there is also the biannual renewal cost of the certificate in many cases. The Health Certificate, which has to be obtained from the Department of Fisheries and Aquatic Resource for each export consignment, costs some Rs. 200 (US\$ 2). The operational licence as well as the annual licence renewal fee amounts to a nominal amount of Rs. 1,000 each (less than US\$ 10). However, other certification costs were identified as being very high. Most respondents also stated that there had been increases in:

- (a) Capital investments (for acquiring boats and necessary cold room facilities to comply with the standards). According to officials, the cost of putting up a minimum-sized factory that met European Union regulations was between Rs. 50 million and Rs. 80 million;
- (b) Input costs (high-quality fish are required, which is more expensive);

- (c) Storage/distribution costs, which include costs associated with wooden or plastic pallets, were identified as being very expensive;
- (d) External services and sampling tests;
- (e) Loss of production;
- (f) Procurement costs (as freezing leads to a loss of 2 per cent of the product);
- (g) Labelling costs, which include the costs of inserting bar codes etc.

Most of the respondents rated the above costs as “significant” in terms of their earnings, as all costs were borne by the exporter. One SME provided an estimate that the costs of complying with standards accounted for 15-25 per cent of its overall earnings. Half the respondents, including some SMEs, felt that the costs of compliance were higher for SMEs than for large-scale companies. However, one exporter thought that was not necessarily the case, as costs were proportionate to size; the bigger players have a higher number of boats to check and the SMEs a lower number, the cost of which varied accordingly. However, one large-scale exporter stated that the costs of compliance were relatively lower for SMEs. In that regard, it was mentioned that most certificates were issued for processors, not exporters, and that most SME exporters used the large-scale exporters to process their products, which could be done for a low fee. Therefore, the cost to SMEs was seen as being comparatively lower, as they had no overhead costs and could get the fish processed only when required by outsourcing it to larger exporters.

It was mentioned that, as a result, SMEs had become a major source of competition for the large-scale exporters as the former sold smaller quantities at low margins whereas the large-scale companies had to cover their overheads. There was a mixed response to the question as to whether SMEs were more likely to be excluded from export markets due to standards rather than large-scale exporters. In fact, one large-scale exporter stated that all fish exporters in Sri Lanka could be considered SMEs, as the country’s fish production was smaller relative to that of other fish-exporting countries. According to the Department of Fisheries and Aquatic Resources, many SMEs were affected negatively when the standard requirements were first put in place. Due to the high costs attached to complying with standards (for example, the costs of putting up processing facilities and certification) some SMEs were forced to close down.

Table 12. Costs associated with standards compliance: Fish exporters

Type of cost	SME	Large-scale	Total
Certification costs	4	5	9
Capital investment	3	5	8
Processing costs	2	5	7
Input costs	3	3	6
Staff time	3	3	6
Packaging costs	2	3	5
Storage/distribution costs	2	3	5
External services	2	3	5
Procurement costs	2	1	3
Labelling costs	1	2	3
Loss of production	1	2	3

Source: Interviews

In assessing the benefits involved in complying with changes in standards, continued and better market access was identified by all the exporters to be one of the greatest benefits. This was followed by: higher prices (certified products can command as much as 20 per cent above normal prices); improvements in social and environment conditions with companies undertaking conservation strategies to meet standard requirements; reductions in wastage; and reductions in product inspection and detention. One company stated that it had experienced a reduction in product inspection and detention at every stage of the production process. However, another exporter was of the view that wastage had increased rather than decreased, with more fish parts being disposed of, in order to meet export requirements. On balance, half of the respondents felt that the costs of compliance were offset by their benefits. Thus, the majority of the exporters did not consider standards to be a form of NTB.

Table 13. Benefits associated with standards compliance: Fish exporters

Type of benefit	SMEs	Large-scale	Total
Continued and better market access	5	5	10
Enhanced efficiency	2	3	5
Reduction in wastage	3	2	5
Reduction in product inspection and detention	3	2	5
Higher price	3	5	8
Improved social and environmental conditions	2	4	6

Source: Interviews.

F. Conclusion

Both the tea and fish industries in Sri Lanka are increasingly being governed by standards set and enforced by both the public and the private sectors. These include product and process standards covering quality, safety, social and environmental issues. In both industries, there has been a movement towards process standards, more specifically food management-based systems such as HACCP, and ISO 22000 in line with international developments. Safety and quality standards appear to be more important than social and environmental standards, at least for the time being. However, this is likely to change as brands and retailers in developed countries increasingly demand their compliance. For example, social and environmental process standards are gaining momentum in the tea industry, with Unilever – one of the world’s largest buyer of tea – teaming up with Rainforest Alliance to certify tea estates. According to one interviewee, after 2015 Unilever would only source from tea estates in Sri Lanka that have been certified by the Rainforest Alliance.

Across the export markets, there are significant differences in terms of export requirements, with some markets being more stringent when it comes to standards. According to the interviews, standards for tea and fish were stringent in the Japanese and European markets, respectively, which was to be expected due to their higher levels of income. Despite the proliferation of standards and the associated costs of inspections and audits/certifications, which can add up to a substantial amount, neither the tea nor the fisheries exporters believe it will be possible to come up with an overarching standard covering the different types and forms of standards currently confronting the two industries.

The interviewees associated a range of costs and benefits with complying with standards. The most important benefit to be identified was market access. However, it appears that these standards do not necessarily provide a competitive edge nor command a premium price in the case of tea. However, this is not the case for the fisheries industry, where adhering to set standards can fetch higher prices and cater to niche markets. The tea industry voiced mixed views regarding standards as NTBs to trade, while the fisheries industry saw them in a more positive light with benefits outweighing the costs associated with compliance. The cost of compliance with standards appears to be significant in both industries and seems to weigh heavily on SME exporters. Nevertheless, in both industries some SMEs have overcome this constraint by outsourcing the processing of tea and fish to large-scale exporters with factories that meet the standards required by buyers. Consequently, they have been able to successfully operate in an environment that is increasingly being subjected to standards, and to overcome the challenges of meeting those standards.

In terms of strategies for complying with standards, exporters in both the tea and fisheries industries were both proactive and reactive. Some exporters complied ahead of the imposition of standards, while others waited for the standards to be put in place before falling into line with the requirements. There were instances where the standards were challenged by the government in negotiations on behalf of the industry on relaxing stringent requirements in certain export markets. Almost none of the exporters had exited or reoriented their exports

away from developed countries to developing countries due to standards, and they appeared to have complied with the standard requirements in due course.

The tea and fish exporters in Sri Lanka have not received any assistance from their overseas buyers in complying with the standards, nor have the exporters cooperated with each other in their respective industries in meeting those standards. Cooperation within both export industries is lacking as each exporter sees others as competitors. While the exporters have assisted their suppliers in meeting standards in the case of the fisheries industry, this has not been the case in the tea-exporting industry. This is probably due to the fact that almost all the tea exporters source their tea from the auctions and, as such do not have direct links with the tea estates.

In contrast, there is a much closer relationship between the buyers and sellers in the fisheries supply chain, with the exporters providing assistance directly to fishermen and boat owners in terms of information and training on the standards required in the export markets. Both industries have received some support from the Government and industry-related departments/agencies in conforming to standards, but the interviews underlined the fact that there is still room for improvement. In this regard, further assistance has been requested by the tea and fisheries exporters interviewed in the form of financial support for upgrading their facilities, infrastructure development, technical and legal support, to conform to standards in the export markets.

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Annex

Questionnaire: Implication of standards on the tea and fish industries in Sri Lanka

Name of respondent and position: _____
Name of company: _____
Address: _____
Telephone: _____
Fax: _____
E-mail: _____
Date of response: _____

1. Background Information

1.1. How long have you been in business? _____

1.2. Is your company involved in any other activity in addition to exporting tea/fish?

Yes (specify): _____
 No

1.3. How large is your business in terms of annual sales? _____

1.4. How many employees do you have? _____

1.5. How many work on quality assurance? _____

1.6. What types and varieties of fish/tea do you export? _____

1.7. In what form do you export fish/tea? _____

2. Export Supply Chain

2.1. What are your major markets for tea/fish? Domestic Foreign

2.2. How much do these markets account for as a percentage of total sales?

Domestic: _____% Foreign: _____%

2.3. What are your major export markets?
1. _____
2. _____
3. _____
4. _____
5. _____

2.4. How long have you been supplying these markets? _____

2.5. Over the past five years, have your exports to these markets changed?

Increased No change Decreased

2.6. What are the main reasons why exports have changed over the past five years?

1. _____
2. _____
3. _____

2.7. Who are your major customers for tea/fish?

- Importers
- Supermarkets
- Food processors
- Wholesale markets
- Other (specify) _____

2.8. How frequently do the buyers you supply change?

- Very frequently Frequently Neither frequently nor infrequently Infrequently Very infrequently

2.9. How significant are the costs of changing buyers?

- Very significant Significant Neither significant nor insignificant Insignificant Very insignificant

2.10. What are the main reasons for these changes?

1. _____
2. _____
3. _____

2.11. From where do you source your supplies of fish/tea?

1. _____
2. _____
3. _____

2.12. Who are your main suppliers?

1. _____
2. _____
3. _____
4. _____
5. _____

2.13. Do you source from small and medium-scale suppliers?

- Yes No (proceed to Question 2.15)

2.14. Has the number of small-medium scale suppliers increased/decreased in the recent years?

- Increased No change Decreased

2.15. Why has it changed? _____

2.16. Is the ability to meet the standards a factor in your choice of suppliers?

- Yes No

2.17. Could you describe the supply chain for tea/fish from the point of production until it reaches the customers? _____

2.18. Which parts of the chain are you involved in? _____

3. Export Requirements

3.1. Please list the specific standards relating to food safety, product quality, social and environment that you have to meet when exporting?

1. _____
2. _____
3. _____
4. _____
5. _____

3.2. How important are each of the following requirements when exporting?

	Very important	Important	Neither important nor unimportant	Unimportant
Food safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3. When did these requirements come into place and why? _____

3.4. Do you think the requirements in place are justifiable?

Yes No

3.5. Do buyers in the export markets provide you with written specifications on standards?

Yes No

3.6. Who certifies/audits the compliance with the standards?

3.7. How frequently are you inspected/audited?

Very frequently Frequently Neither frequently nor infrequently Infrequently
Very infrequently

3.8. When exporting to different markets, does each buyer require a different certificate/audit?

Yes No (proceed to Question 3.10)

3.9. Is this a significant constraint for market access?

Very significant Significant Neither significant nor insignificant Insignificant Very insignificant

3.10. Would you prefer to have one standard that covers food safety, quality, environment and social conditions?

Yes No

3.11. Where do you obtain information on these requirements you have to meet?

- Foreign buyers
- Industry associations
- Government
- Consultants
- Internet
- Trade publications
- Other sources (specify) _____

3.12. Do you have any problems meeting these requirements?

Yes No (proceed to Question 3.14)

3.13. What specific problems did you experience in meeting each of these requirements?

Food safety: 1. _____
2. _____
3. _____

Product quality: 1. _____
2. _____
3. _____

Social: 1. _____
2. _____
3. _____

Environment: 1. _____
2. _____
3. _____

3.14. Which of the above requirements are most difficult for you to meet?

Food safety Product quality Social Environmental quality

3.15 Do these difficulties apply to other exporters?

Yes No Do not Know

3.16. Have you had any consignments rejected because of non-compliance with these requirements?

Yes No (proceed to Question 3.22)

3.17. How frequently are consignments rejected?

Very frequently Frequently Neither frequently nor infrequently Infrequently
 Very infrequently

3.18. What are the most common reasons for rejections?

1. _____
2. _____
3. _____

3.19. What eventually happened to the consignment? _____

3.20. What costs did you incur? _____

3.21. What action did you subsequently take to avoid the problem happening again?

3.22. Of your 5 main export markets, which do you consider has the strictest requirements?

3.23. Why do you consider it to be so? _____

4. Management capacity

4.1. How adequate do you consider your own capacity for meeting the standard requirements in the major markets?

Totally adequate Somewhat adequate Neither adequate nor inadequate
 Somewhat inadequate Totally inadequate

4.2. How does your capacity to meet the requirements compare to that of other exporters?

Much higher Higher Same Lower Much lower

4.3. How adequate do you consider the capacity in Sri Lanka to be for meeting the standards demanded by major markets?

Totally adequate Somewhat adequate Neither adequate nor inadequate
 Somewhat inadequate Totally inadequate

4.4. What initiatives have you undertaken to enhance capacity to meet standards?

1. _____
2. _____
3. _____

4.5. What initiatives have the industry and government undertaken to enhance capacity to meet standards?

1. _____
2. _____
3. _____

4.6. Do exporters work together to enhance the capacity to meet the standards?

- Yes No (proceed to Question 4.8)

4.7. Can you give a specific example?

4.8. Do exporters and government work together to enhance capacity to meet the standards?

- Yes No (proceed to Question 4.10)

4.9. Can you give an example? _____

4.10. Do exporters work with buyers to enhance capacity to meet the standards?

- Yes No (proceed to Question 4.12)

4.11. Can you give an example?

4.12. Do exporters work with suppliers to enhance the capacity to meet the standards?

- Yes No (proceed to Question 4.14)

4.13. Can you give an example? _____

4.14. Did you receive any assistance from the government, industry associations or buyers in complying with standard requirements?

- Yes No (proceed to Question 4.16)

4.15. What kind of assistance have you received?

- Technical assistance. Specify: _____
 Management advice. Specify: _____
 Financial assistance. Specify: _____

4.16. Did you provide any assistance to suppliers in complying with standard requirements?

- Yes No (proceed to Question 4.18)

4.17. What kind of assistance did you provide?

- Technical assistance. Specify: _____
 Management advice. Specify: _____
 Financial assistance. Specify: _____

4.18. What kind of assistance is required in complying with standards?

1. _____
2. _____

3. _____

5. Compliance Strategy

5.1. When faced with changes in standard requirements in export markets, how did you respond?

- Complied with the standards (proceed to Question 5.2)
- Stopped supplying to the market (proceed to Questions 5.3-5.5)
- Challenged the standards (proceed to Question 5.6)

5.2. When did you comply with the standards? Answer and proceed to Question 5.7

5.3. Did you shift your exports towards developing country rather than developed country markets because of standards?

- Yes
- No (proceed to Question 5.5)

5.4. Was it easy to make this shift?

- Yes
- No

5.5. How do the prices compare in developing country markets to those in developed country markets? Answer and proceed to Question 5.7

- Much better
- Better
- Same
- Worse
- Much worse

5.6. How did you challenge the imposition of standards? _____

5.7. How did you respond to the imposition of standards?

- Proactively
- Reactively

5.8. How successful do you consider you were?

- Totally successful
- Successful
- Neither successful nor unsuccessful
- Unsuccessful
- Totally unsuccessful

6. Costs and Benefits of Compliance

6.1. What specific actions did you undertake to comply with the standards?

1. _____
2. _____
3. _____
4. _____
5. _____

6.2. What costs were involved in complying with the standards?

- Inputs costs
- Processing costs
- Packaging costs
- Storage/distribution costs
- Capital investment
- Staff time
- External services
- Loss of production

- Procurement costs
- Labelling costs
- Certification fees
- Other (specify)

6.3. How significant are these costs in terms of total earnings?

- Very significant
- Significant
- Neither significant nor insignificant
- Insignificant
- Very insignificant

6.4. Who bore these costs? _____

6.5. Are costs of compliance typically higher for small and medium sized exporters?

- Much higher
- Higher
- Same
- Lower
- Much lower

6.6. Do you think that small/medium sized businesses are more likely to be excluded from export markets due to standards than large businesses?

- Yes
- No
- Do not know

6.7. What were the benefits involved in complying with changes in standards?

- Continued and better market access
- Enhanced efficiency
- Reduction in wastage
- Reduction in product inspection and detention
- Higher price
- Improved social and environment
- Other (specify)

6.8. Are costs of compliance offset by their benefits?

- Yes
- No
- Do not know

6.9. Do you think that standards are non-tariff barriers to trade?

- Yes (specify)
- No (specify)
- Do not know

Thank you for filling out the questionnaire