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Emergence of Private Sustainability Standards: Concerns and Challenges for India's Exports and Domestic Industries





Abstract¹

Private sustainability standards (PSS), voluntary, industry-driven standards addressing environmental and labour metrics, have become de facto mandatory for market access, yet fall outside the WTO's TBT and SPS Agreements. This study, commissioned by India's Department of Commerce and prepared by the Centre for WTO Studies, IIFT, examines their implications for India's exports and domestic industries in three parts: a legal and conceptual analysis, an assessment of global trends against India's socio-economic realities, and a survey of 300 firms across six sectors. It finds that PSS, largely developed in industrialised countries, impose disproportionate costs on developing-country exporters, particularly SMEs, through fragmented compliance, low awareness, and weak traceability. It recommends building a national registry, strengthening inter-ministerial coordination, synchronising testing norms with international benchmarks, and engaging in standard-setting while advocating a WTO framework, underscoring that standards, not tariffs, now determine market access.

Key Words: technical barrier to trade (TBT), sanitary and phytosanitary (SPS), private standards, voluntary/private sustainability standards (V/PSS), world trade organisation (WTO), India, private sector, marine, food processing, leather, chemicals and pharmaceuticals, wood, united nations, SDGs, Trade, WTO, Sustainability, Exports, India, Trade Policy.

JEL Classification:

¹ This report was prepared under the sole guidance of Prof Murali Kallummall, Centre for WTO Studies, Centre for Research on International Trade (CRIT), IIFT, New Delhi. The team consisted of Ms **Hari Maya Gurung** and Mr **Jayant Raghu Ram** as research fellows at the CWS. We want to express our deepest gratitude to Prof Abhijit Das for the overall support throughout the project period from 2016 onwards. I would also like to acknowledge personally and express my deepest appreciation for the constant and painstaking work carried out by the team from BRIEF, Mr Samit and Dr Afaq, the company engaged for the survey.



Draft Executive Summary

A study on private sustainability standards (PSS) was commissioned to the Centre for WTO Studies (CWS), CRIT, Indian Institute of Foreign Trade on May 20, 2017, by the Trade Policy Division, Department of Commerce, Government of India.

The study titled ‘Emergence of Private Sustainability Standards: Concerns and Challenges for India’s Exports and Domestic Industries’ was completed on December 15, 2017. The study has analysed PSS issues in three parts. The recommendations of the report are also provided in three sections: legal and conceptual analysis of PSS and its linkages with WTO agreements, followed by recommendations based on trends in the usage and socioeconomic realities in India; and lastly, those which were based on the analysis of ground realities of 300 firms across six sectors (the survey was based on Questionnaires).

Part I — Legal and Conceptual Analysis

Over seven decades of GATT/WTO liberalisation have driven tariffs down, but non-tariff measures—technical regulations and standards in particular- have risen in their place. The WTO’s TBT and SPS Agreements discipline standards set by governments, yet their scope does not extend to standards framed by private entities. This leaves private sustainability standards (PSS), voluntary, industry-driven standards targeting sustainability metrics such as environment and labour, largely developed in developed-country markets, without any clear international legal framework to discipline them.

Although PSS are voluntary under the law, strong consumer and buyer preferences have rendered them de facto mandatory for market access. Their design can present a distorted picture of sustainability and tilt trade in favour of domestic producers, as the “food miles” controversy over air-freighted Kenyan flowers illustrated. Producers in developing countries, especially small and medium enterprises, struggle to comply, yet have little choice but to do so. The foremost obstacle is definitional: PSS are neither defined nor recognised under the TBT and SPS Agreements, and they proliferate with overlapping objectives across sectors.

Key recommendations

- **Address PSS within the WTO, but outside the TBT/SPS framework.** Establish Working Groups under the TBT and SPS Committees; the WTO’s consensus-based, publicly funded setting is a more appropriate forum than the MNC-dominated ISO.
- **Build a bridge between standard-takers and standard-makers.** The Department of Commerce should map the de facto standards imposed on Indian exporters and raise firms’ awareness of them.
- **Have the government play a surrogate role.** The government should participate in PSS bodies’ decision-making and standard-setting on behalf of largely absent Indian exporters, without incurring liability for membership or participation fees.



- **Advocate a WTO legal framework.** India should align with like-minded developing countries to press for disciplines addressing PSS and their impact on developing-country exports.

Part II — Global Trends and India’s Socio-Economic Realities

Since the early 1980s, trade policymaking in industrial economies has shifted from price-based instruments such as tariffs towards public policy measures, SPS and TBT regulations, and, increasingly, private standards. The WTO’s two-decade effort to harmonise mandatory standards has effectively stalled amid this proliferation, leaving compliance to be governed by market forces and third-party auditors. Of roughly 621–624 private standards analysed, about 82 per cent originate in industrial countries, posing a disproportionate challenge for India’s geographically dispersed exporting firms.

The understanding underpinning today’s PSS traces to United Nations “soft law” from the 1970s and 1980s, and these standards have gradually drifted from voluntary status towards a quasi-mandatory character. A recurring concern is the uneven application of Sustainable Development Goal 12: current standards regulate production processes and products but leave consumption untouched, imposing producer-centric costs on developing countries without a balancing discipline on consumption. India currently has no nodal agency or registry to record and analyse the private standards operating in its markets.

Key recommendations

- **Establish a national registry / nodal agency.** Preferably housed in a research institution with data-analysis capacity, to track PS and PSS usage and assess their impact on domestic industry and exports.
- **Create transparent inter-ministerial coordination.** A mechanism for information-sharing across finance, labour, health, environment and commerce on international commitments, mandatory and non-mandatory alike.
- **Participate in review and standard-setting, and develop India-specific standards.** Following the model of the FSSAI “green dot,” and promote the regionalisation of standards to fit Indian conditions.
- **Keep any government funding consistent, targeted and time-bound.** Avoid directly funding certification fees; instead support cooperative structures. Advocate consumer-centric standards to balance SDG 12.

Part III — Questionnaire-Based Survey of Six Sectors

The third part reports a face-to-face survey of 300 manufacturer-exporters—50 each across marine (fisheries), leather, textiles, wood, food processing, and chemicals and pharmaceuticals—drawn from major clusters nationwide. Firms consistently reported that PSS and their associated compliance requirements are driven by client needs, which differ from buyer to buyer even within the same country.



This frequently forces exporters to build separate production lines or plants for individual buyers, a burden that falls hardest on small and medium enterprises.

Awareness of PSS is strikingly low even among firms that comply with them, limiting Indian participation in standard-setting. Traceability emerged as a serious constraint—particularly in the marine, food processing, and wood sectors—where weak data on vessels and raw material sources undermine the credibility of traceability certificates. A mismatch between Indian testing norms and international restrictions on chemicals and antibiotics leads to export rejections and inflated costs. Reported benefits of adoption include better product quality, confirmed orders and improved market access; most firms spent under ₹4 million on compliance, though some large marine firms exceeded ₹6 million.

Key recommendations

- **Standardise compliance requirements** to reduce duplication of plants, audits and certifications across buyers.
- **Build traceability systems and institutional capacity**, including a dedicated cell and reliable vessel / raw-material data.
- **Synchronise Indian testing and restriction policies** on chemicals, antibiotics and similar contents with international benchmarks to cut rejections and costs.
- **Conduct more technical workshops on PSS** to close the awareness gap among manufacturer-exporters.
- **Promote export of finished products** rather than intermediate or semi-finished goods, to strengthen firms' bargaining power and lessen the adverse impact of compliance.



Emergence of Private Sustainability Standards: Concerns and Challenges for India's Exports and Domestic Industries

Part I - Legal²

INTRODUCTION

Almost 70 years after the formation of the GATT, international trade in goods has grown in both volume and value. This has been facilitated by low tariffs cutting across most sectors. However, even though tariff barriers as such have declined, the multilateral trading system has witnessed a rise in non-tariff measures ("NTM") such as technical regulations, standards, licensing requirements, trade-related investment measures, etc. Of these NTMs, technical measures such as product regulations and standards are widely used. NTMs, such as technical regulations and standards, are primarily used by governments to achieve legitimate objectives, including environmental protection, health, safety, and labour welfare.

While the utility of NTMs for achieving the aforesaid legitimate objectives has been recognised, it is today also commonly accepted that NTMs have also provided gateways for governments to discriminate in favour of their domestic producers vis-à-vis foreign exporters. The result is that these NTMs become non-tariff barriers ("NTB") to trade and are used as a disguised restriction on international trade. In today's landscape, NTBs are identified as one of the biggest impediments to international trade in goods.

Fortunately, multilateral agreements exist in relevant fora, such as the WTO, to discipline the use of such NTBs. The WTO's Agreement on Technical Barriers to Trade ("**TBT Agreement**") and the Agreement on Sanitary and Phytosanitary Measures ("**SPS Agreement**") are the two prime instruments for disciplining a WTO Member's technical regulations and standards. These two agreements contain vital principles about transparency, international standards, trade restrictiveness, non-discrimination, conformity assessment procedures, and related matters. At the WTO, these two agreements have served an important basis for challenging inconsistent measures instituted by errant Members. The contribution of the WTO's dispute settlement mechanism in supplementing these two agreements is noteworthy.

² This part of the report is authored by Prof. Murali Kallummall and Mr Jayant Raghu Ram.



While the role of the TBT and SPS Agreements in disciplining these NTBs is commendable, they have a shortcoming: their ability to address NTBs is strictly confined to measures adopted by governments. The definitional scope of the TBT and SPS agreements covers only standards and measures formulated by Member governments, governmental bodies, or bodies legally empowered to do so (quasi-governmental bodies). The definitional scopes of these two agreements do not extend to technical standards framed by private entities, i.e. private standards. The result is that there is no clear international legal framework for disciplining private standards. While private standards may per se be legitimate, especially those that have objectives such as quality, safety, efficiency, etc, what is problematic are those private standards that intend to achieve sustainability metrics such as environment, labour, etc., which are better understood as private sustainable standards ("PSS").

Private sustainability standards have largely evolved in response to consumer sensitivities to sustainability metrics such as labour and the environment. However, it is important to note that while the putative objective of PSS may be to inform consumers whether a particular product has met certain sustainability criteria, it can present a distorted picture of reality. Furthermore, even though PSS are entirely voluntary and lack a legal mandate, evidence shows that strong consumer and producer preferences for products that adhere to these PSS have shifted the nature of these standards from voluntary to de facto mandatory.

A brief review of PSS reveals that most PSS are formulated and developed in developed-country markets by private entities, usually industry-associated. An example is the Marine Stewardship Council, which has developed the MSC ecolabel for sustainable fishing. Given the level of economic and technological advancement, it can be assumed that private producers in such countries would be able to comply with, or are already complying with, such standards. However, the real problem would be for imports from developing countries, which have lower levels of economic and technological advancement. Producers from these developing countries, especially small and medium enterprises, would find it difficult to comply with such standards. However, since they are de facto mandatory for gaining market access, there is no choice but to ensure their products comply with such standards.

However, an equally big problem arising from PSS is that the design of the standards may end up providing a distorted picture of the objectives intended to be achieved. In effect, this can tilt the balance of trade in favour of domestic producers, to the disadvantage of imports. The classic example of how a private supermarket standard – Food Mile – gave Dutch tulips a competitive advantage vis-a-vis imported African flowers highlights the depth of the issue. The following news report from *The Guardian* illustrates the problem.



The above example of food miles, which highlights the threat that exporters from developing countries would face due to PSS, is not the sole instance, nor is it a new phenomenon. Though PSS have existed for decades, there has been a proliferation of PSS in the recent decade on account of certain factors. The increasing global rhetoric on sustainable development and rising consumer sensitivities to sustainability metrics have given impetus to the adoption of PSS, eroding the inherent competitive advantages accruing to developing countries. Further, though the WTO Membership has taken notice of private standards, the absence of an international legal framework to discipline PSS has encouraged the unfettered and discriminatory development of PSS.

Air-freight flowers greener than Dutch hothouses, say Kenyans

British government backs Africans in food miles row European emissions dwarf those from poor countries

Ashley Seager, Wednesday 14 February 2007 08.11GMT

The British and Kenyan governments weighed in on the growing debate over "food miles" yesterday, insisting that it was ethically and environmentally sound to buy flowers from Kenya on Valentine's Day.

There is increasing concern at the amount of carbon emitted by the fleets of aircraft that carry millions of flowers to Europe every day from the impoverished east African nation. People in Britain will buy 10,000 tonnes of roses today.

Joseph Muchemi, the Kenyan high commissioner to Britain, said: "Food miles' is a valuable concept but it must be looked at in the whole. It is neither fair nor sustainable to stigmatise certain goods solely because they have been freighted by air. 'Food miles', or the distance food has travelled, is on its own not a reliable indicator of the environmental impact of food transport."

Hilary Benn, the international development secretary, said that while people wanted to buy ethically and do their bit to tackle climate change, they often did not realise they could support developing countries and reduce carbon emissions.

"Recent research shows that flowers flown from Africa can use less energy overall than those produced in Europe because they are not grown in heated greenhouses.

"So, this Valentine's Day, you can be a romantic, reduce your environmental impact and help make poverty history. This is about social justice and making it easier, not harder, for African people to make a decent living."

Mr Muchemi said Kenya provided 31% of Europe's cut flowers, directly employing 500,000 people and another million through auxiliary services.

Air-freighted fresh flowers, fruit and vegetables from across sub-Saharan Africa accounted for less than 0.1% of the UK's total carbon emissions, he said. Moreover, while the average Briton emits 9.3 tonnes of carbon a year, the average Kenyan emits 0.2 tonnes.

"European nations must look to reduce their emissions first before penalising African producers. A boycott of Kenyan roses or green beans would be disastrous for many Kenyan farmers, especially smallholders, and would do little to mitigate climate change."

Mr Benn pointed to a recent study that showed that emissions from growing flowers in Kenya, where it is warm and sunny, and flying them to the UK can be less than a fifth of those from flowers grown in heated and lighted greenhouses in the Netherlands, Europe's main producer of flowers. "Climate change is hugely important to the future of developed and developing countries, but if we boycott goods flown from Africa we deny the poor the chance to grow; their chance to educate their children and stay healthy.

"We in the West can have more impact on our huge carbon footprint by turning off our TVs at night and using energy-saving lightbulbs."

Mr Muchemi said he was concerned that plans by European retailers to introduce labels on their products more clearly identifying their origin could hit Kenyan farmers. "We cannot have a situation in which poor farmers in Africa pay the price for European carbon emissions. It is simply not fair to penalise African farmers."

Environmentalists, though, are concerned about the ecological impact of flower cultivation in Kenya.

As we report in The Guardian today, the thousands of workers who have flocked to the shores of Lake Naivasha to work in the flower-growing areas are placing enormous strain on the local ecology, such that the lake could soon be polluted beyond use and have all but dried up in the next 10 to 15 years.

David Harper, a University of Leicester ecologist, says the flower trade is devastating the area. "The lake is being destroyed at an alarming rate by the sheer pressure of people on it." He does not advocate boycotting Kenyan flowers but wants to see a "Fair Trade" system and "Fair Planet" label to highlight the problem. Its profits would be used to improve the lake's environment, he says.



Food miles

The idea of **food miles** is an extension of the argument that the farther goods are transported to Britain from other countries, the more carbon dioxide is emitted.

The study mentioned by Hilary Benn yesterday, though, shows that the arguments can become complex if, in the case of fresh **flowers**, they are also produced in Europe but in heated **greenhouses**, which emit CO₂ in far greater quantities than aircraft that bring flowers from Kenya.

Having presented a brief overview of PSS and the issues they pose for developing countries, it is necessary to develop a comprehensive understanding of the overarching issues about PSS and the competitive disadvantages they pose for exports from developing countries. This paper is an attempt in this direction.

At the direction of the Trade Policy Division (TPD), Department of Commerce, Ministry of Commerce and Industry, Government of India, a comprehensive study on the emergence of PSS and the concerns and challenges they pose for India's exports has been undertaken. As per the Terms of Reference that formed the basis of the study and were approved by the TPD, the Centre for WTO Studies proposes to undertake a study on PSS and its implications for Indian producers and to publish it as a comprehensive report, which would involve a primary survey. Further, this study is intended to have three parts.

This paper is the first of the two-part comprehensive study. It is intended to provide an overall assessment of PSS's global presence and impact, based on secondary sources. This paper is divided into the following sections. Having introduced the topic in section I, section II provides a brief overview of the definition of the PSS and its scope, clarifying what this paper considers a PSS, given the multitude of (private) standards currently in existence. Section III then discusses the evolution of the PSS to understand how it has come to dominate today. Section IV is important and discusses the effectiveness of PSS and their impact on developing countries. Since the legitimacy of PSS is under question, Section V discusses two legitimacy-related aspects of PSS – transparency and accountability. Section VI is important and discusses compliance costs related to PSS.

Meaning and Scope of "Private Sustainability Standards"

Definition of Standards under the TBT Agreement

Before discussing the various aspects of PSS, it is important first to define PSS and its scope. A simple meaning refers to standards developed by private (non-governmental) entities that focus on sustainability metrics such as pollution and conservation.



The TBT Agreement defines the terms “technical regulation” and “standard” in Annex 1. According to paragraph 1 of Annex 1, a technical regulation is a:

Document that lays down product characteristics and their related processes and production methods, including the applicable administrative provisions with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.

According to paragraph 2 of Annex 2, a standard is a:

Document approved by a recognised body that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.

Articles 2 and 3 of the TBT Agreement deal with the preparation, adoption and application of technical regulations by ‘central government bodies’, and ‘local government bodies’ and ‘non-governmental bodies’. Article 4 of the TBT Agreement on the preparation, adoption, and application of standards refers to Members’ obligations about ‘central government standardising bodies’ and ‘local government and non-governmental standardising bodies’. These terms have been defined in Annex 1.

According to paragraph 6 of Annex 1, a central government body is defined as: the central government, its ministries and departments, or any person subject to the central government's control in respect of the activity in question. Paragraph 7 of Annex 1 defines a local government body as a government other than a central government (e.g., states, provinces, Länder, cantons, municipalities, etc.), its ministries or departments, or any person subject to the control of such a government in respect of the activity in question. Paragraph 8 defines a non-governmental body as a body other than a central government body or a local government body, including one that has legal authority to enforce a technical regulation.

From the above legal texts, it is clear that the TBT Agreement covers only bodies that are of a ‘governmental nature’ or that are legally empowered to prepare, adopt, and apply standards.

Paragraph 2 of Annex 1 defines a standard as a:

Document approved by a recognised body that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production



methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.

Even though there is significant legal uncertainty about whether the TBT Agreement covers private standards, attempts have been made to at least discuss the issue within the TBT Committee. However, discussions, and even attempts to initiate them, have been marked by deep discord over whether the scope of the TBT Agreement covers private standards. With a few minor exceptions, this divide has primarily been along the development divide, with developing countries such as India often raising concerns about private standards, while developed Members such as the EU, Japan, and the United States have often refuted the possibility that the TBT Agreement could cover private standards.

In July 2007, the topic of private standards was first raised in the TBT Committee.³ While Egypt, Kenya, and Chile requested that the issue of private standards be included on the agenda of the next meeting, Brazil expressed the view that the TBT Committee should not address private standards. It reasoned that the TBT Committee needed to confine its discussions to standards and regulations that affected governments, not necessarily the private sector. Brazil was backed by the EU, which argued that private standards could not be considered as standards within the meaning of the TBT Agreement. The EU further argued that “private standards could perhaps more easily be characterised as technical specifications set up for business-to-business activities and it was doubtful that as such they could be considered to fall under the scope of the TBT Agreement”.

At the TBT Committee meeting in June 2009, the European Union raised an eloquent argument against including private standards within the scope of the TBT Agreement.⁴ While not denying that private standards raised concerns, the EU questioned the appropriateness of the TBT Committee to discuss the topic. Pointing out the lack of identification by the demander of a clear distinction between the standards under the TBT Agreement and private standards as such, the EU was of the view that standards for the TBT Agreement were only those standards developed by "recognised bodies" (Annex 1, para 2 of the TBT Agreement).

The EU argued that most of the "private standards" referred to by delegations were unlikely to have been developed by "recognised bodies" under the TBT Agreement. The EU referred to

³ Minutes of the Meeting (Held on 5 July 2007), G/TBT/M/42 (6 August 2007), Committee on Technical Barriers to Trade||World Trade Organization

⁴ Minutes of the Meeting (Held on 25-26 June 2009), G/TBT/M/48 (29 September 2009), Committee On Technical Barriers To Trade||World Trade Organization



paragraph 8 of Annex 1, which clearly defined the concept of "non-governmental body". According to the EU, any measure that did not fall within the aforementioned definitions was outside the scope of the TBT Agreement. The EU thus concluded that any eventual discussion on the subject needed to be undertaken without prejudice to the TBT Agreement and the Committee's role.

At the same meeting, the United States echoed the concerns raised by the EU. According to the US, it was not clear what the term "private standard" meant. According to the US, since the TBT Agreement did not mention the term "private standards", it was unclear how the TBT Committee could further address the issue.⁵

Private Standards Under the SPS Agreement

The SPS Agreement deals with sanitary and phytosanitary measures. Is the scope of "sanitary and phytosanitary measures" broad enough to cover private standards? Article 1.1 of the SPS Agreement applies to all sanitary and phytosanitary measures that may, directly or indirectly, affect international trade. The term "sanitary and phytosanitary measures" is defined in Annex A of the agreement as:

"1. *Sanitary or phytosanitary measure* - Any measure applied:

- (a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
- (b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;
- (c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
- (d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods; testing, inspection, certification and approval procedures;

⁵ *ibid*



quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety." (Emphasis added)

Unlike the TBT Agreement, the Agreement's definition of SPS measures does not focus on who prepares, adopts, or applies them. Instead, it focuses on a subset of measures covered by SPS. Some guidance is provided in the second paragraph of the above definition as to instruments or modalities through which SPS measures may be implemented. SPS measures have been defined to include all *relevant laws, decrees, regulations, requirements and procedures*. The ordinary meaning of laws, decrees, regulations, and requirements can be attributed to those prepared by the government or by a non-governmental organisation that has been legally empowered to prepare, adopt, and apply an SPS measure.

It is important to note that, compared with the TBT Committee, the SPS Committee's pace of discussions and work is faster. So much so that the SPS Committee has even formally discussed possible definitions of "private standards".

It is also important to note that SPS measures do not cover sustainability metrics, such as environmental and social issues; rather, they focus on biosafety metrics, including the health and safety of humans, plants, and animals. Although there may be private biosafety standards, they would not fall within the definition of private sustainability standards, as they are not sustainability metrics. Hence, for this paper, the scope is limited only to private standards about sustainability metrics.

The broad notion of PSS which this study will be focusing on is – standards, the implementation of which is voluntary and not *de jure* mandatory, which have been established by entities, which are not government bodies (in terms of the TBT and/or SPS agreements), nor are they non-governmental bodies having legal authority for establishing standards. In this sense, they are private standards as against public standards. Since there are several private standards on a range of issues, such as food safety and product quality, only those that focus on sustainability metrics, such as environmental protection, labour welfare, and water conservation, will be the focus of this study.



Emergence and Proliferation of Private Sustainability Standards

Over the past couple of decades, there has been a rapid proliferation of industry standards and quality requirements.⁶ The proliferation has been contributed to by many agribusiness firms, industry organisations, and consortia developing their own standards and quality requirements.⁷ The main objectives of these private standards, which often surpass public standards, are to manage risk relating to product safety and quality.⁸ A particular feature of recent times is the sharp rise in interest in process-based standards, which focus on environmental, social, and economic sustainability, fair trade, and related areas.⁹ One of the underlying factors in the proliferation of private standards is the diversity of their scopes and objectives.¹⁰ According to a joint publication by the UNEP and FAO on the subject of PFF, “they have been developed to apply to a product, a product category, to address a specific issue, or for a company”.¹¹

There is no dearth of private standard-setting organisations (“SSOs”) and the standards they formulate. In fact, PSS proliferate across sectors, and there may be more than one PSS relevant to a particular sector. For example, in the fisheries sector, you have the standards set by the Marine Stewardship Council, the Friends of the Sea’s Sustainable Fishing Requirements, etc. Even though multiple PSS exist for a particular sector, the underlying objectives are quite common, even if the SSO defines them differently. For example, in 1996, the International Institute for Environment and Development analysed 17 initiatives on forest sustainability standards and found the following features common to them.¹²:

- sustaining yields of all forest goods and services including timber, non-timber products and ecological services;
- conserving biodiversity at the ecosystem, species and genetic levels; and

⁶ Challenges of Agribusiness and Agro-Industries Development, FAO, 2007, cited by Annamaria Pastore, FAO’s Strategic Vision to Engage with the Private Sector, in Voluntary Standards for Sustainable Food Systems: Challenges and Opportunities|A Workshop of the FAO/UNEP Programme on Sustainable Food Systems, Food and Agriculture Organization of the United Nations|United Nations Environment Programme, 2014, available at <www.fao.org/3/a-i3421e.pdf>

⁷ ibid

⁸ ibid

⁹ ibid

¹⁰ ibid

¹¹ ibid

¹² Bill Vorley, Dilys Roe, and Steve Bass, A Sectoral Analysis for the Proposed Sustainable Trade and Innovation Centre (STIC), International Institute for Environment and Development, 200X, available at <pubs.iied.org/pdfs/G02162.pdf> (Vorley, et al – A Sectoral Analysis)



- ensuring positive social and economic impacts on different groups (indigenous people,
- local communities, and employees.

PSS have also emerged in developing countries. Initiatives such as KenyaGAP and ChileGAP have been developed based on interpretations of Good Agricultural Practice.¹³ KenyaGAP has even been benchmarked against the GlobalGAP standard. In the Indian context, one PSS that has emerged is the Vriksh standard, which is a collective standard for sustainable forestry.

When private standards within a particular sector covering a specific product or product category proliferate, they lead to overlap and conflict among them. One of the challenges posed by this is that it becomes very difficult to assess which standard to adhere to objectively.¹⁴ In 2009, the WTO's TBT Committee held a workshop on the Role of International Standards in Economic Development attended by several WTO Members. At this workshop, one of the concerns raised by participants was that proliferation of private standards could result in unnecessary trade barriers, creating confusion in the marketplace.¹⁵

There is no doubt that the TBT and SPS Agreements give Member governments the requisite policy space to prepare, adopt, and apply standards to achieve legitimate objectives such as environmental protection and consumer health. What then has necessitated the development of standards by the private sector? According to an information product jointly published by the FAO and the UNEP in 2014, there are three 'driving forces' that have contributed to the emergence and proliferation of private food safety standards.¹⁶ These are discussed below.

Growth of Government Concerns and Public Standards

Private standards emerged first in developed countries as governments began to enact stricter regulations in response to food safety scares, starting in the late 1980s and early 1990s. Several food safety concerns, such as those stemming from BSE in the 1980s, prompted governments to set more stringent food safety standards. These new public standards and associated national

¹³ Tallontire at page 778

¹⁴ Conference Report, The Effectiveness of Voluntary Sustainability Standards, ESF Exploratory Workshop: 1-3 October 2014 (Leuven, Belgium), available at <<https://ghum.kuleuven.be/ggs/documents/esf-workshop-report-final-with-comments.pdf>> at page 27

¹⁵ Report by the Chairperson to the TBT Committee (Final, 19 March 2009), Workshop on the Role of International Standards in ECONOMIC DEVELOPMENT (16-17 MARCH 2009), Committee on Technical Barriers to Trade, World Trade Organisation.

¹⁶ Alexandre Meybeck and Vincent Gitz, Signs to Choose: Voluntary Standards and Ecolabels as Information Tools for Consumers, in Voluntary Standards for Sustainable Food Systems: Challenges and Opportunities||A Workshop of the FAO/UNEP Programme on Sustainable Food Systems, Food and Agriculture Organization of the United Nations||United Nations Environment Programme, 2014, available at <www.fao.org/3/a-i3421e.pdf>



food control systems evolved into risk-based preventive systems that emphasised increased self-control rather than state control.¹⁷

Axel Marx describes this reason for the proliferation of PSS as “the regulatory operationalisation of due diligence requirements”.¹⁸ According to Marx, the increasingly globalised nature of food markets made it difficult for individual governments to track the wide range of food products imported into their territories and posed a challenge to risk assessment.¹⁹ In response, governments adopted a regulatory approach, shifting responsibility to food retailers, since retailers were recognised as the final link between producers and consumers.²⁰ One example cited by Marx is the UK Food Safety Act (UKFSA) of 1990, which imposed due diligence obligations on food retailers. This prompted the food retail industry to develop many private standards.²¹ It was only later that private standards began to extend to other areas, such as sustainability, mostly in response to consumer concerns and NGO outcries.²²

In fact, one researcher, Axel Marx, points out that many private standards are actually heavily reliant on and incorporate public rules and standards.²³ Some private standards are also based on extant international standards and agreements.²⁴ For example, some Forest Stewardship Council standards explicitly reference public international law.²⁵

Retailer Motivations

The joint FAO/UNEP publication attributes the greater internationalisation and consolidation of retailer chains' global outsourcing to the growth of private standards. The increasing number of global retailers and the growth of food industry chains sourcing from distant places have necessitated strengthening supply chain control. This has largely been achieved by using private standards for supply chain coordination. The advantages the private sector sees in privately developed standards are that they tend to be more stringent, more rigorously enforced,

¹⁷ ibid

¹⁸ Axel Marx, The Public-Private Distinction in Global Governance: How Relevant is it in the Case of Voluntary Sustainability Standards? The Chinese Journal of Global Governance, 2017 (3), at page 16 DOI: 10.1163/23525207-12340022 at page 7

¹⁹ ibid

²⁰ ibid

²¹ ibid

²² Julie Subervie and Isabelle Vagneron, A Drop of Water in the Indian Ocean? The Impact of GlobalGap Certification on Lychee Farmers in Madagascar, World Development, Vol. 50(2013), at page57, available at <<http://dx.doi.org/10.1016/j.worlddev.2013.05.002>>

²³ Axel Marx, The Public-Private Distinction in Global Governance: How Relevant is it in the Case of Voluntary Sustainability Standards? The Chinese Journal of Global Governance, 2017 (3), at page 16 available at <doi 10.1163/23525207-12340022>

²⁴ ibid

²⁵ ibid



and broader in scope than public standards. They are also considered more dynamic and responsive to changing demands than international standards, which are set based on extensive expert consultations and consensus-building among many countries.

Enhancing reputation and engaging in non-price competition through a risk management strategy are also cited by the publication as among the main interests of retail chains in setting private standards. A concomitant benefit is that it improves product image and consumer confidence about the products. The publication, however, acknowledges that private standards raise concerns about equity and fairness because producers, rather than retailers, bear the costs of implementation.

Consumer concerns about environmental and social issues

A third driving force cited by the publication for the emergence of private standards is rising consumer concerns about issues such as animal welfare, the environment, and labour welfare. The publication identifies two components of this driving force: first, “professional lobbying institutions are strongly influencing political opinion on these matters, especially in developed countries”. Second, “producer groups are willing and able to distinguish the social and environmental characteristics of their products and position them in international markets, and are prompted to develop and/or implement private standards”.

A research publication from the Leuven Centre for Global Governance Studies cites another reason for the proliferation of private standards. This publication states that some of these standards have emerged in response to other standards. Sometimes, when one or two private standards emerge, the industry ends up developing standards in response.²⁶ This behaviour has been observed in metrics such as labour, and in sectors such as forest and agricultural commodities.²⁷

In the raw materials market, PSS began to proliferate in the 1990s.²⁸ In this regard, the lead in developing PSS was taken by corporate firms themselves.²⁹ Since corporations lacked experience or specialisation in sustainability metrics, they relied on standards developed by

²⁶ Axel Marx, Arjun Sharma, and Emile Bécault, Voluntary Sustainability Standards: An Overview, Acropolis Report-Klimos, Leuven Centre for Global Governance Studies, 2015, available at <https://ees.kuleuven.be/klimos/papers/marx_2015_voluntary_sustainability_standards.pdf> at page 10

²⁷ *ibid*

²⁸ Cornelia B Flora, Carmen Bain, and Caleb Call, Sustainability Standards and Their Implications for Agroecology, in W. Bruce Campbell & Silvia López Ortiz ed., *Integrating Agriculture, Conservation and Ecotourism: Societal Influences*, 2012, Springer at page 173

²⁹ *ibid*



civil society organisations (CSOs).³⁰ Transnational corporations came to rely on these CSO standards as a reference point for setting their own standards to gain broader social and environmental acceptability among consumers.³¹ A concomitant result was that CSOs began to indirectly compete in developing their standards, leading to the proliferation of standards.³²

From the mid-1990s onwards, and especially the 2000s, standards emerged from multi-stakeholder initiatives such as the Forest Stewardship Council and the Marine Stewardship Council.³³ These initiatives were multi-stakeholder, rather than single-organisation initiatives, and included a wide variety of participants, such as corporations, financing entities, retailers, processors, CSOs, and traders.³⁴ Accompanying these initiatives were crop-specific standards such as for soy, cotton, palm oil, coffee, etc.³⁵

One of the problems posed by the proliferation of PSS is the chaos it creates in the market.³⁶ Consumers would be unable to differentiate among the standards that may apply to a given product; they may be confused by the multiplicity of claims presented by each standard; they may have doubts about the credibility of the different standards.³⁷ This is exacerbated by the fact that most consumers are unsophisticated and may lack the ability to make the necessary evaluation of the different standards.³⁸

Another reason for the proliferation of PSS is the broad scope of sustainability issues they address.³⁹ For example, in the coffee sector, some environmental objectives may include protecting earthworms, preserving bird habitats, and using soil-friendly pesticides. Within the same coffee sector, some of the social objectives covered by a standard may include protecting the income of small-scale growers, child-labour-free practices, and providing health facilities for workers. Furthermore, these issues are brought to consumers' consciousness by the media, advertising campaigns, CSOs, and even producers and retailers.

The type and size of the producer enterprise may also drive the proliferation of PSS.⁴⁰ An example is the forestry sector in Europe, where different forest producers seek differentiation by producer type. To substantiate this, small-scale family producers usually prefer standards

³⁰ *ibid*

³¹ *ibid*

³² *ibid*

³³ *ibid*

³⁴ *ibid*

³⁵ *ibid*

³⁶ *Id* at page 216

³⁷ *ibid*

³⁸ *ibid*

³⁹ *Id* at page 219

⁴⁰ Vorley, et al – A Sectoral Analysis, *supra* note 10, at page 24



from the Programme for the Endorsement of Forest Certification.⁴¹ On the other hand, large enterprises seem to prefer ISO standards. However, again, “forest companies that are well-endowed with forestry expertise, suitable forests, and links to environmentally discriminating markets generally prefer FSC”.⁴²

Effectiveness of Private Sustainability Standards and their Impact on Developing Countries

One of the putative objectives of PSS is to contribute to sustainability metrics, such as improved environmental quality and increased labour welfare. PSS intend to promote a particular parameter, such as “decreasing poverty” or “contributing to a better environment”. In fact, the achievement of these very objectives is often marketed as a selling point of PSS for both consumers and producers. However, the example of PSS's distorting impact on Africa-grown tulips in the European market raises questions about the effectiveness of these PSS schemes. This example also highlights the issue of PSS's effect on developing countries. This section reviews the effectiveness of PSS by examining relevant literature.

While PSS may have a positive effect in theory, in practice its impact on developing countries may be skewed. A short note by trade lawyer Arthur Appleton on PSS captures this point succinctly. According to Appleton,

*“By emphasising one stage in a product’s life-cycle, private labelling schemes, including those based on Air Miles and Food Miles, provide a misleading view of a product’s environmental implications. When environmental and organic labelling schemes take transport considerations into account, the result is often de facto discrimination against exports from farmers in developing countries. Such schemes may therefore cause economic damage that leads to other environmental problems.”*⁴³

Apart from Appleton’s brief note, a couple of articles have investigated the effectiveness of specific PSS in developing-country sectors.

Mitiku et al. (2017) conducted a study analysing the implications of PSS schemes in Ethiopia's coffee sector.⁴⁴ Their study covered four PSS – Rainforest Alliance (RA), Fairtrade (FT), Organic (Org), and double Fairtrade-Organic (FT-Org). It analysed the impact of these schemes

⁴¹ ibid

⁴² ibid

⁴³ Arthur E. Appleton, Supermarket Labels and the TBT Agreement: “Mind the Gap”, Business Law Brief, Fall 2007, at page 10

⁴⁴ Fikadu Mitiku, Yann de Mey, Jan Nyssen and Miet Maertens, Do Private Sustainability Standards Contribute to Income Growth and Poverty Alleviation? A Comparison of Different Coffee Certification Schemes in Ethiopia, available at <<http://www.mdpi.com/2071-1050/9/2/246/pdf>>



on a sample of specific certified and non-certified smallholder coffee farmers in Ethiopia who are members of a coffee cooperative linked to an export chain. Their study finds that participation in an RA and in the double FT-Org certification scheme results in substantially higher incomes and lower poverty rates. In the case of RA, this effect mainly stems from higher farm-gate prices, whereas for double certification it results from both higher prices and higher yields. Their study found no effect of participation in an FT scheme on household income or poverty.

Koen Vanderhaegen et al. (2017) conducted a study on whether PSS improve economic and environmental sustainability in Uganda's coffee sector.⁴⁵ The survey focused on 600 farm-households in the Mt. Elgon National Park area from February to March 2014. The study also conducted a field-level inventory covering 74 coffee gardens in the subject area, collecting data on tree and invertebrate biodiversity and carbon storage. The key findings of their study are:

- Certification fails to create a win-win outcome for economic and ecological sustainability.
- For those implementing the double FT-Org standard, the standard had a negative income effect on respondents. The 10% price premium was offset by a 26% yield loss, though there were gains in carbon storage and biodiversity.
- Utz-RA-4C performs better from a socio-economic perspective and worse from an ecosystem service perspective
- PSS reduce trade-offs between economic and ecological benefits

Two important implications which are presented from their study are: (1) low-intensity agriculture promoted by PSS can trap farmers into poverty; and (2) Yields are more important than prices in increasing returns for smallholder coffee farmers. Two PSS-specific suggestions they make in their study are: (1) standards need to be harmonised; multiple certifications do not necessarily increase the impact of PSS; (2) they also suggest that PSS should be adapted to local conditions. They also note that improved agronomic practices are key for increasing coffee productivity.

In another paper, Mitiku et al. (2017) investigate whether PSS can promote land-sharing between coffee cultivation and forest conservation in Ethiopia, with a particular focus on the economic benefits of coffee intensification and Rainforest Alliance (RA) certification of less-

⁴⁵ Koen Vanderhaegen, Kevin Teopista Akoyi, Wouter Dekoninck, Rudy Jocqué, Bruno Verbist, Bart Muys and Miet Maertens, Do Private Sustainability Standards Walk the Talk in Improving Economic and Environmental Sustainability? Case Study: Coffee on Mt. Elgon, Uganda [PPT], ACROPOLIS Workshop 22 04 2017, Tackling Climate, Fragility & Finance Challenges for the 2030 Agenda for Sustainable Development, available at <https://ees.kuleuven.be/klimos/presentaties/acropolis_20170420_koen_vanderhaegen.pdf>



intensive forest coffee systems.⁴⁶ To obtain RA certification, one must meet several criteria related to soil sustainability and environmental conservation. In their study, Mitiku et al, compare garden and semi-forest coffee systems, including non-certified and RA-certified semi-forest coffee, and evaluate yields, productivity and profits. They use original household- and plot-level survey data from 454 households and 758 coffee plots in two particular zones in southwestern Ethiopia.

Their study finds that RA certification increases land and labour productivity and profits of semi-forest coffee production. However, they note that this is achieved primarily by offering farmers a price premium, rather than by improving yields.

Liu makes an important distinction between prescriptive standards and result-based standards.⁴⁷ Prescriptive standards set precise requirements for how a product should be produced; results-based standards state the results to be achieved but leave the how of achieving them to the standard-takers. Liu points out that prescriptive standards are often difficult for producers in production systems other than those for which the standard was originally developed or those with which the authors are familiar, because many of the criteria may be irrelevant.⁴⁸

Liu cites the example of the GlobalGAP standard, which was primarily designed for European farmers, being found to be both irrelevant and excessively costly for African smallholders. He argues that result-based standards are preferable because producers can implement them in a manner consistent with the local conditions.⁴⁹ Junji Nakagawa also argues that standards such as GlobalGAP, developed for large European farmers, are ill-suited to adoption by small farmers in developing countries.⁵⁰

⁴⁶ Fikadu Mitiku, Jan Nyssen and Miet Maertens, Can Coffee Certification Promote Land-sharing and Protect Forests in Ethiopia?, Bioeconomics Working Paper 2017/01, available at <https://ees.kuleuven.be/bioecon/working-paper-series/BioeconWP_2017_1.pdf>

⁴⁷ Pascal Liu, Private Standards in International Trade: Issues and Opportunities, Paper Presentation, Workshop on Environment-Related Private Standards, Certification and Labelling Requirements, 2009, World Trade Organization, Geneva, available at <http://www.fao.org/fileadmin/templates/est/AG_MARKET_ANALYSIS/Standards/Private_standards___Trade_Liu_WTO_wkshp.pdf> at page 13 (Hereinafter "Liu – Private Standards in International Trade")

⁴⁸ ibid

⁴⁹ ibid

⁵⁰ Junji Nakagawa Ed., Record of the 76th GSDM Platform Seminar, International Symposium on "Private Standards and Global Governance: Prospects and Challenges", ISS Research Series, Institute of Social Science, University of Tokyo, December 2016, available at <[jwww.iss.u-tokyo.ac.jp/publications/issrs/issrs/pdf/issrs_62.pdf](http://www.iss.u-tokyo.ac.jp/publications/issrs/issrs/pdf/issrs_62.pdf)> (Hereinafter Nakagawa, Private Standards and Global Governance) at page 33



The problem with means-based PSS is that it takes a one-size-fits-all approach, which can be difficult to implement effectively internationally due to the variety of circumstances worldwide.⁵¹ This is particularly the case for products based on agriculture or horticulture, as there are differences in climate, soils, ecosystems, and even culture and traditions.⁵² To address this diversity of circumstances, PSS intended for global application should use a generic framework rather than be uniquely designed for a particular region or target group.⁵³

Legitimacy of Private Sustainability Standards: Transparency and Accountability

Private standards are standards set by the private sector. This can include standards established by CSOs, producers, retailers, or by an organisation comprising a mix of these stakeholders. It is not clear to what extent producers from developing countries, who are the usual standard-takers, participate in the standard-setting process. This raises the spectre of the legitimacy of the standard-setting process.

Before delving into the legitimacy aspects of PSS, it would be material to distinguish what makes public standard setting legitimate. The setting of standards by the government can be considered *prima facie* legitimate, since decision-making is undertaken by representatives of the people, i.e., the government and its instruments, however ostensible the claim of representativeness may be.⁵⁴ Setting standards in the public sector is also considered a legitimate process, as relevant stakeholder interests are taken into account and there is a system of redress for those affected.⁵⁵ Even though these premises of legitimacy may not be perfect in the public sphere, their public domain lends public standards greater legitimacy than private standards, which may be shrouded in secrecy.

According to Fuchs et al, private actors, particularly corporations, are playing a larger role in today's global food governance than ever before.⁵⁶ Fuchs et al. state that these private actors have become rule-setters rather than rule-takers and are increasingly deciding, implementing, and enforcing rules and regulations.⁵⁷ In the context of this paper, sustainability initiatives

⁵¹ Liu – Private Standards in International Trade, *supra* note 46, at page 15

⁵² *ibid*

⁵³ *ibid*

⁵⁴ Doris Fuchs, Agni Kalfagianni, and Tetty Havinga, *Actors in Private Food Governance: The Legitimacy of Retail Standards and Multistakeholder Initiatives with Civil Society Participation, Agriculture and Human Values*, September 2011, Vol.28:3, pp 353–367 (Fuchs et al, Private Food Governance)

⁵⁵ *ibid*

⁵⁶ *ibid*

⁵⁷ *ibid*



undertaken by supermarket chains, such as **AirMiles** and **FoodMiles**, are examples of this increasing private food governance.

The development of PSS is conceptually not government-led; non-state actors carry it out. PSS can either be developed by a single private entity such as Tesco's 'Nature's Choice' standard, Starbucks' Coffee Sourcing Guidelines/Preferred Supplier Program, etc.⁵⁸ They may also be developed collectively, in which case they are usually more formal and involve several actors beyond private companies such as CSOs.⁵⁹ Some collective PSS may also be developed collectively by industry-specific associations.⁶⁰

Fuchs et al, evaluate the democratic legitimacy of private food retail governance institutions using the criteria of participation, transparency and accountability.

Transparency in Setting of Standards and Implementation

In the context of legitimacy, one key element is transparency. This is a process-based legitimacy that is concerned with how a PSS is created or assessed.⁶¹ Transparency may be either passive or active. When transparency concerns merely making available information to the public and/or other concerned stakeholders, it is passive transparency.⁶² When transparency concerns the participation of other concerned stakeholders in the process, it is active transparency.⁶³ Clearly, active transparency is more important than passive transparency, and even more so in the context of private standard-setting.⁶⁴

Ideally, participation should include all stakeholders who are potentially affected by the decisions. To effectively participate in standard-setting, stakeholders need full access to information and should also have a role in decision-making. Participation may also vary in degree, for example, from mere observer-ship to the right to be present and to participate in the decision-making process. According to Fuchs et al, “participation as a criterion for the democratic legitimacy of a private food governance institution would require that all of the

⁵⁸ Anne Tallontire, CSR and Regulation: Towards a Framework for Understanding Private Standards Initiatives in the Agri-Food Chain Source, *Third World Quarterly*, Vol. 28, No. 4, (2007), at page 777, available at URL: <http://www.jstor.org/stable/20454961>

⁵⁹ *ibid*

⁶⁰ *ibid*

⁶¹ Nakagawa, Private Standards and Global Governance, *supra* note 49, at page 9

⁶² *ibid*

⁶³ *ibid*

⁶⁴ *ibid*



groups affected by that institution need to receive decision-making *power in the central governing organ of the institution*".⁶⁵

A study by Tim Chipperfield on the legitimacy of private standard-setting in the textile sector, comparing Europe and Bangladesh, provides important insights. Chipperfield provides the example of the Zero Discharge of Hazardous Chemicals Programme/Foundation to illustrate how private standard-setting in developed countries is generally based on a top-down model, with constituent members added at later stages through consultations rather than being involved as partners from the outset. Chipperfield adds that the ZDHC Foundation particularly focuses on adding brands from the US to the EU as stakeholders.⁶⁶

Chipperfield cites the "grassroots democracy argument" to suggest that a bottom-up model in decision-making in standard-setting would be more legitimate than a top-down model. A top-down model such as the ZDHC raises questions about its legitimacy because it ultimately excludes the stakeholders who really matter. For example, factory workers who are inevitably affected by hazardous chemicals have no say in ZDHC's decision-making process. Chipperfield argues that "*if the standards that the ZDHC is working on include dialogue and public justifications accessible to all stakeholders, it may be legitimate*".⁶⁷

As noted in the previous section, PSS are usually driven by stakeholders such as producers (in the importing country), retailers, consumers, and NGOs. It is possible that, in some cases, exporters from developing countries who must meet these standards are excluded from the standard-setting process. They are either de facto excluded, usually because of capacity reasons, or lack of awareness, or because the SSOs allow only certain stakeholders to participate in the standard-setting process.

Pascal Liu has argued that the requirements of standards would be more relevant if SSOs involved suppliers in setting standards.⁶⁸ He points out that this would make it less likely that complying with the standard would be costly or complicated for producers.⁶⁹ One reason for

⁶⁵ Fuchs D., Kalfagianni A. and Having T., Actors in private food governance: the legitimacy of retail standards and multistakeholder initiatives with civil society participation, Agriculture and Human Values, 2011, 28 (3) p.357.

⁶⁶ Tim Chipperfield, The Legitimacy of Private Standard Setting for Sustainable Textiles: Perspectives from Bangladesh and Europe, Discussion Paper No. 3, 2016, International PPE Conference, available at < https://www.ppe-conference.org/fileadmin/img/Paper_2016/Tim_Chipperfield_The_Legitimacy_of_Private_Standard_Setting_for_Sustainable_Textiles.pdf > at page 16

⁶⁷ id at page 19

⁶⁸ Liu – Private Standards in International Trade, supra note 46, at page 15

⁶⁹ ibid



SSOs' reluctance to involve other stakeholders may be that their involvement would slow the standard-setting process due to conflicting goals among stakeholders.⁷⁰

However, some SSOs seem inclusive in their standard-setting process. For example, SSOs such as GlobalGAP and the Forest Stewardship Council often invite public comment before establishing a standard. However, the extent to which the comments from these less-powerful groups, such as small suppliers in developing countries, have a say in the decision-making process is uncertain.

It is pertinent to note that some NGOs involved in developing private standards have already taken steps towards transparency in the development and assessment of PSS.⁷¹

Box 2 - ISEAL Alliance and Code of Good Practice

The problem of the effectiveness and legitimacy of PSS has come to be recognised even by private SSOs, some of whom have taken steps they perceive as addressing the situation. One such step is the International Social and Environmental Accreditation and Labelling Alliance (ISEAL Alliance), an initiative to develop and apply a Code of Good Practice for private SSOs in the social and environmental areas. The ISEAL was formed in 2002 when some SSOs, such as the FSC and the MSC, came together to create the ISEAL.

In 2004, the ISEAL published certain Codes of Good Practice: a Standard-Setting Code, an Impacts Code, and an Assurance Code. The Standard-Setting Code, also known as the Code of Good Practice for Setting Social and Environmental Standards, defines effective standard-setting processes to enhance the credibility of the resulting standard. According to ISEAL:

The Standard-Setting Code applies to all standards that aim to have positive social or environmental impacts. It focuses on the standards development process and on the structure and content of the standard. It captures the good practices to follow in standards development for any sector or product to ensure the standard is credible and effective, and that it achieves its objectives.¹

In 2010, ISEAL developed an Impacts Code, also known as the Code of Good Practice for Assessing the Impacts of Social and Environmental Standards, which aims to help standards systems better understand the sustainability outcomes of their work and the effectiveness of their programs. According to ISEAL:

The Impacts Code offers a framework for building a monitoring and evaluation system capable of examining both short- and long-term outcomes, and it requires systems to report their evaluation results publicly.¹

In 2012, the ISEAL Alliance launched the Assurance Code, also known as the Code of Good Practice for Assuring Compliance with Social and Environmental Standards. According to the ISEAL Alliance, “the purpose of the Assurance Code is to provide guidance for high-quality assurance that supports sustainability and improves the effectiveness of different verification and certification models”.¹

⁷⁰ ibid

⁷¹ Nakagawa, Private Standards and Global Governance, supra note 49, at page 22



Accountability

Deirdre Curtin and Linda Senden, in their paper on accountability and PSS, provide the following conceptual understanding of accountability as consisting of seven elements: a relationship between an actor and a forum (i), in which the actor has an obligation (ii) to explain and to justify (iii) his or her conduct (iv), the forum can pose questions (v) and pass judgment (vi), and the actor may face consequences (vii).⁷² They also highlight that the concept of accountability raises the underlying questions of who is accountable, to whom, and for what exactly.⁷³

Furthermore, the absence of ex-post mechanisms that could enhance their accountability, such as judicial review and liability for private regulators, further reduces the legitimacy of PSS.⁷⁴

Another aspect of PSS that raises the spectre of accountability is: what is the scientific basis for creating these standards?⁷⁵ In fact, one of the criticisms of PSS is that they are established arbitrarily rather than on scientific principles.⁷⁶ Given the virtual exclusion of private standards from the ambit of multilateral institutions such as the WTO, how then are the SSOs of private standards to be held accountable?

Compliance Costs

Compliance with standards, whether private or public, can be a costly affair for the standard-taker. These costs can be higher for producers in developing countries due to lower income levels. Further, the compliance process involves many steps that broadly fall under conformity and assessment. These standards can be particularly onerous for small-scale operators, making compliance difficult for many. This can be explained by the fact that compliance with standards often requires considerable human, physical, financial, informational, and network resources, which small operators mostly lack access to.⁷⁷

The actual costs of compliance with a standard generally include:

⁷² Deirdre Curtin and Linda Senden, Public Accountability of Transnational Private Regulation: Chimaera or Reality?, *Journal of Law and Society*, Vol. 38, No. 1 (2011), at page 181, available at URL: <http://www.jstor.org/stable/23030401>

⁷³ *ibid*

⁷⁴ *id* at page 179

⁷⁵ Thorstensen and Vieira

⁷⁶ Liu – Private Standards in International Trade, *supra* note 46, at page 15

⁷⁷ Sylvaine Lemeilleur, Smallholder Compliance with Private Standard Certification: The Case of GlobalGAP Adoption by Mango Producers in Peru, *International Food and Agribusiness Management Review*, Vol. 16:4, 2013, available at <<https://www.ifama.org/resources/Documents/v16i4/Lemeilleur.pdf>> at page 160



- costs associated with upgrading infrastructure and practices, including staff training
- certification and audits.⁷⁸

A study conducted by the FAO on PSS in the marine sector, published, has derived vital information on compliance costs from interviews with respondents.⁷⁹ According to this study, the cost of certification for one or more PSS can range from several thousand to hundreds of thousands in terms of US dollars. This, they point out, would depend on the company's size, the type of operation, and the gap between the standard-taker's current systems and those required by the PSS. They also identify the direct and indirect costs. Examples of direct costs include the actual certification fee, while indirect costs are those incurred in implementing the PSS, such as staff training.

Apart from compliance on the part of the standard-taker, the standard-taker must also verify their compliance with the standard. This is usually carried out by an external, independent auditor or certification agency such as OEKO-TEK. Audits to maintain certification are usually conducted once a year. While audits can be expensive for the standard-taker, most of the financial burden comes from the changes required to practices and infrastructure to comply with the standards.⁸⁰ When multiple standards must be complied with, this can increase the standard-taker's costs. However, if the certifying agency is authorised to audit more than one standard, this reduces the cost for the standard-taker to some extent.⁸¹

The process of certification for compliance with PSS presents a separate set of challenges, in addition to price, for standard-takers. According to certain experts, the certification industry wields undue influence in setting norms and deciding who may audit and certify in accordance with the norm in question.⁸² This certification industry also tends to abuse its market power to exert anti-competitive practices, such as unfair pricing, inadequate inspections, and corruption.⁸³

Complying with the mandatory technical regulations of importing countries' governments entails high costs for governments and suppliers in developing countries.⁸⁴ It therefore becomes

⁷⁸ Sally Washington and Lahsen Ababouch, Private Standards and Certification in Fisheries and Aquaculture: Current Practice and Emerging Issues, Fisheries and Aquaculture Technical Paper No. 553, 2011, Food and Agriculture Organization of the United Nations, available at <<http://www.fao.org/docrep/013/i1948e/i1948e.pdf>> (Hereinafter "Washington and Ababouch – Private Standards and Certification in Fisheries and Aquaculture") at page 92

⁷⁹ *ibid*

⁸⁰ *ibid*

⁸¹ *id* at pages 92-93

⁸² Nakagawa, Private Standards and Global Governance, *supra* note 49, at page 27

⁸³ *ibid*

⁸⁴ Liu – Private Standards in International Trade, *supra* note 46, at page 17



difficult to justify investing additional resources to comply with additional private-sector requirements, especially if there is no sound rationale for such standards.⁸⁵

Andrew Graffham, Esther Karehu, and James MacGregor conducted a 2007 study investigating the impact of EurepGAP standards on small-scale vegetable growers in Kenya. They investigated the impact of the EurepGAP 2.1 standard, introduced in Kenya in 2003. Their study found that:

“As of mid-2006, 60% of these smallholders have been dropped by the export company they were linked with in 2005 or withdrawn from EurepGAP compliance schemes as a direct result of non-compliance with EurepGAP. While there are many components of failure, the primary reason is financial rather than a lack of technical ability to meet the standard. Farmers are credit constrained and have to invest in relatively complex systems.”⁸⁶

An important point made by Graffham et al. in their paper is that they dispel the belief that compliance with standards such as EurepGAP is a one-time expense and merely requires an annual certification fee. They state that this is not the case and that, in fact, many recurring costs vary by crop type and system used. The following list identified in their paper gives an idea of such costs:⁸⁷

- Plot markers (replace every two years if wooden)
- Refill for first aid kits (annual)
- Handwash (replace every two years if using leaky tin)
- Personal protective clothing (many items require annual replacement)
- Annual maintenance for
 - field shelters and field toilets (especially if thatch type)
 - charcoal cooler if used
 - knapsack sprayers
- Disinfectant, soap and chlorinating solution
- Salaries for record clerks
- Annual refresher training on GAP, food safety & hygiene and safe use of CPP
- Provision of technical advice

⁸⁵ ibid

⁸⁶ Andrew Graffham, Esther Karehu and James MacGregor, Impact of EurepGaP on Small-Scale Vegetable Growers in Kenya, Fresh Insights, Number 6 (September 2007), International Institute for Environment and Development, available at https://assets.publishing.service.gov.uk/media/57a08be6ed915d3cfd001018/60506fresh_insights_6_EurepGapKenya.pdf

⁸⁷ id at page 24



- Replacement of posters and extension materials (every two years)
- Record keeping forms (annual supply)
- Documentation (annual in most cases)
- Sampling and laboratory analyses (soil, water and MRL)
- Internal farm inspection (annual)
- Pre-audit (annual)
- External certification audit (annual)
- Updating of system to meet new requirements in line with upgraded standards

Another important finding in their paper is the impact of the cost of *maintaining* the certification that standard-takers have obtained. According to their paper, the high costs of maintaining certification have been a deterrent to continued compliance with the EurepGAP standard.⁸⁸

Furthermore, it is widely known that although compliance with PSS and its demonstration entail substantial costs, much of the value generated by such compliance is captured by downstream markets, particularly retailers, and only a small share accrues to producers.⁸⁹ This has been documented in the fisheries sector, where the FAO's report notes:

*“Overall, general concerns have been raised that, whatever the costs of certification, fish farmers and processors bear a disproportionate share of the burden compared with those at the retail end of the supply chain (where demands for certification generate). In aquaculture, both producers and processors are likely to bear a significant proportion of the costs of FSMS certification. In the wild-capture area, processors are likely to feel the weight of private standards more than their counterparts in the harvest sector.”*⁹⁰

The challenge for smallholders in complying with PSS is offset to some degree by exporting companies. A survey by Lemeilleur with 228 small-scale mango producers in a mango-producing region in Peru showed that support from exporting companies, in the form of farming contracts, technical advice, and payment of annual certification costs, has helped these standard-takers comply with the standard. She thus argues that the inclusion of smallholders ultimately depends on exporters' compliance decisions and their assistance to farmers in the compliance process.⁹¹ The implication of the (high) costs of compliance with standards,

⁸⁸ id at page 41

⁸⁹ Liu – Private Standards in International Trade, supra note 46, at page 1

⁹⁰ Washington and Ababouch – Private Standards and Certification in Fisheries and Aquaculture, supra note 80, at page 115

⁹¹ Sylvaine Lemeilleur, Smallholder Compliance with Private Standard Certification: The Case of GlobalGAP Adoption by Mango Producers in Peru, International Food and Agribusiness Management Review, Vol. 16:4, 2013, available at <<https://www.ifama.org/resources/Documents/v16i4/Lemeilleur.pdf>> at page 161



including private standards, is that it results in the exclusion of small stakeholders from market access.

The problem created by the proliferation of standards is that compliance with new standards imposes additional costs on suppliers, such as investments in upgrading production facilities.⁹²

Unlike technical or food safety regulations, PSS are inherently process standards, as they specify sustainability metrics for how a product should be manufactured. Unlike product standards, verification of compliance with process standards is more difficult. Liu points out that this is why certification agencies require extensive documentation in addition to the inspection of the production facility. Liu also points out that since standard-developers already prescribe documentation requirements in the standards themselves, certification agencies may face practical difficulties when documentation is problematic, such as in areas with high illiteracy.⁹³

One of the advantages of complying with PSS, besides market access, is the price premium consumers may be willing to pay for products that comply with the PSS compared with those that do not.⁹⁴ This is the general argument put forth by proponents of PSS, particularly for goods exported from developing countries. However, Liu finds that only a small share of the price premium paid by consumers accrues to suppliers (producers and exporters), with most captured by downstream retailers. He specifically cites case studies of certified banana exports from the Dominican Republic and Peru, in which less than 20% of the premium accrued to the producing country.⁹⁵

Associated costs of PSS compliance may include time beyond what is necessary to meet mandatory regulations.⁹⁶ If the onus of complying with the standards indirectly falls on exporters, then agents from the exporting agencies may also have to spend time inspecting whether producers are complying with the standards.⁹⁷

One practice to foster the adoption of PSS in developing countries is to provide financial and technical assistance to standard-takers. Donors can be government agencies, though this is

⁹² Liu – Private Standards in International Trade, *supra* note 46, at page 16

⁹³ *id* at page 14

⁹⁴ Washington and Ababouch – Private Standards and Certification in Fisheries and Aquaculture, *supra* note 80, at page 93

⁹⁵ Liu – Private Standards in International Trade, *supra* note 46, at page 17

⁹⁶ Washington and Ababouch – Private Standards and Certification in Fisheries and Aquaculture, *supra* note 80, at page 95

⁹⁷ *ibid*



mostly in the case of government-promoted voluntary standards. Donors can also be private aid agencies, such as USAID, ITC, and GIZ.⁹⁸

Part I - Conclusion

Part I and Part II of this paper have highlighted the challenges that may arise from PSS for exports from developing countries. While PSS may have legitimate objectives, their implications for developing country export interests are indeed telling. Part I of this paper has attempted to provide a conceptual and theoretical outline of PSS, setting the foundation for Part II of the study. This section concludes the theoretical part and presents recommendations to the Government of India to develop a framework to address PSS.

Given that the private sector drives PSS and lies beyond the government's regulatory sphere, regulating PSS by the sovereign can become dicey. This in itself is a challenge. However, this cannot and should not prevent governments from reacting to it.

Among the challenges, the foremost is the need for a workable definition. This is a challenge because PSS are not expressly addressed or even recognised under the TBT Agreement. Given their implications for global trade, some have suggested establishing a Working Group at the WTO to address the issue.⁹⁹

At the WTO's TBT Committee, certain Members have questioned the propriety of discussing PSS as a formal topic at the WTO, since the TBT Agreement does not cover the establishment and implementation of private-sector standards. However, there are many reasons to justify discussing PSS at the WTO. Rather than discussing such a topic in private fora or in a hybrid organisation such as the ISO, where the effective participation of countries may not be guaranteed, discussion of this topic at a publicly funded institution where decision-making operates on a consensus basis makes the WTO a very appropriate forum.¹⁰⁰ Suggestions to discuss PSS at the Geneva-based International Standardisation Organisation ("ISO") have been opposed by certain stakeholders because multinational corporations dominate it.¹⁰¹

One of the major challenges perceived during the course of the study is the lack of awareness, even of the existence of PSS, among exporting entities in India that are otherwise shown to

⁹⁸ Axel Marx, The Public-Private Distinction in Global Governance: How Relevant is it in the Case of Voluntary Sustainability Standards? *The Chinese Journal of Global Governance*, 2017 (3), at page 16, doi: 10.1163/23525207-12340022

⁹⁹ Nakagawa, Private Standards and Global Governance, *supra* note 49, at page 41

¹⁰⁰ *Id* at page 19

¹⁰¹ *ibid*



comply with them! As a result, the participation of these entities in decision-making and the standard-setting process concerning PSS is null. There is therefore a **need to establish a bridge to connect the standard-taker and the standard-maker**. The Department of Commerce could facilitate this. The Department of Commerce could identify a comprehensive list of standards that are being *de facto* imposed on Indian exporting entities. The Department could then survey the number of entities that would, *de facto*, have to comply with them to access developed-country markets. Hand-holding by the Department of Commerce to raise Indian exporters' awareness of these standards would be a great first step.

Another prominent challenge with PSS is its proliferation, multiplicity, and overlap across sectors and objectives. While there are indeed international initiatives such as the ISEAL Alliance, there is a need to broaden similar efforts to harmonise many of the PSS. **Active participation by developing-country governments in these initiatives would be essential to ensuring they** serve a meaningful purpose.

Building on the previous recommendation, this paper extends the call for government participation to include the development and establishment of PSS. As can be seen from Part II of this paper, exporter participation from India in the establishment of PSS and the decision-making processes of PSSOs is virtually absent. Therefore, **there is a need for the government to play a surrogate role by participating in PSSOs' decision-making and in the establishment of PSS. Governments participating in such fora should not be liable to pay any membership or participation fees.**

Finally, as part of the broader framework, the Government of India should advocate for a legal framework at the WTO to address PSS and their implications for developing-country exports. The Government of India would be well served in its endeavour if it aligned with like-minded developing countries at the WTO to further such objectives.

Emergence of Private Sustainability Standards: Concerns and Challenges for India's Exports and Domestic Industries

Part II (Socio-Economic)

(Definitional Issues and its Relevance for India)¹⁰²

Introduction

In recent years, private sustainability standards (PSS) have gained considerable significance in agricultural products and labour-intensive sectors globally. The use of PSS has increased across major crops, such as coffee.¹⁰³ These include cocoa, soybeans, sugar cane, cotton, meat, palm oil, and labour-intensive sectors such as biofuels, forestry, textiles, clothing, and leather products. The dominant characteristics that have emerged from the analysis of the PSS products are three: 1) all these are premium products; 2) many of them are identified as having a direct bearing on sustainability; and 3) many others are labour-intensive products. Products with these three tags are also largely part of global value chains (GVCs) being created worldwide for sale in regions with very high per capita incomes. More importantly, some of these products have been re-considered in terms of market access considerations based on 'free trade' (tariff-centric approach) and re-defined as products of fair trade (sustainability). Therefore, market access is increasingly determined by production and product standards and less by tariffs and conventional non-tariff barriers (such as quotas, rules of origin, anti-dumping measures, etc.).

To quote, Dragusanu *et al.* from the article 'The Economics of Fair Trade':

Although Fair Trade–certified products still comprise a small share of the market—for example, Fair Trade–certified coffee exports were 1.8 per cent of global coffee exports in 2009—growth has been very rapid over the past decade. Fair Trade coffee sales have increased from 12,000 tonnes in 2000 (Fairtrade International, 2012b, p. 24) to 123,200 tonnes in 2011.¹⁰⁴

The comparison exposes a weakness in the literature: the coffee trade, when evaluated using two different parameters (relative share and absolute quantities), yields a completely wrong understanding of PSS. Clearly, the literature on the subject is divided and lacks clarity regarding the merits and demerits of adopting PSS. India, being an agricultural product exporter, initiated a study on PSS. The surge in non-tariff measures has nullified the liberalisation of tariffs; this has been the case ever since the nineties. A significant surge of NTMs is evident from the UNCTAD study of 2004. The analysis of the UNCTAD TRAINS database suggested that of the 5,620 tariff lines, the mandatory standards (technical measures)

¹⁰² This part of the report is authored by Prof. Murali Kallummal and Ms Hari Maya Gurung.

¹⁰³ In the United States in 2009, 11 coffee certification schemes accounted for more than 8% of the (green) coffee trade, indicating that sustainability initiatives are targeting the coffee sector. See, http://www.ico.org/event_pdfs/wcc2010/presentations/wcc2010-giovannucci-e.pdf.

¹⁰⁴ See Dragusanu R., Giovannucci D., and Nunn N, 2014, "The Economics of Fair Trade", Journal of Economic Perspectives, 28(3), Summer, pp. 217- 236.



alone accounted for 58.5% of NTBs in each country (Fugazza & Maur, 2008).¹⁰⁵ The evidence from the study by Kallummal (2017) supported and qualified it further. The analysis of 133 countries, with a total of 26,856 technical barriers to trade (TBT) notifications to the WTO from January 1995 to December 2016, shows that, on average, six products were covered by a single notification, accounting for a total product coverage of 0.15 million at the heading level. The paper also carried out a profiling exercise of the TBT notifications under the various categorisations followed by the World Trade Organisation (based on commercial interest), World Bank (based on income) (WB) and United Nations Industrial Development Organisation (based on manufacturing sector share to GDP) (UNIDO). Commercial interest is the basis of WTO categorisation, wherein TBT notifications from developing countries are much higher than those from developed and least developed countries (LDCs).

A detailed analysis reveals that a significant portion of them were notifications by emerging markets with international standards organisation (ISO) standards. The situation is reversed under the World Bank and UNIDO classifications, which consider income and industrial dominance to classify the notifications. Accordingly, the higher-income countries, in the case of the World Bank, and countries with a higher share of the manufacturing sector, in the case of UNIDO, dominated TBT notifications (Kallummal, Sekhri and Gurung 2017)¹⁰⁶. Therefore, trade policymaking in the industrial countries shifted towards favouring public policy measures as a key instrument. These led to a proliferation of standards, while tariffs were in a continuous downward trend. The policy shift clearly favoured the creation of non-tariff measures mainly in the areas of the environment, labour, and other standards. Efforts toward mainstreaming (WTO) private standards began with the United Kingdom's submission in 2007, when the yearly numbers also peaked; it may be coincidental, but it cannot be ruled out. The submission was to analyse whether public and private agricultural product regulations and standards are helping or hindering developing countries' access to international markets. Bringing discussions on private standards into the SPS and TBT committees reflects a design that industrial countries have followed throughout the history of GATT and the WTO. Once the industrial countries have sufficiently mastered how to impose such private standards, these would then be applied to unsuspecting developing and LDC members, thereby allowing MNCs from the developed world to continue their dominance.

* This part of the report is authored by Prof. Murali Kallummal and Ms. Hari Maya Gurung.

¹⁰⁵ Marco Fugazza, Jean-Christophe Maur, 2008, "Non-tariff barriers in CGE Models: How useful for policy?", Journal of Policy Modeling, v.30 pp. 475-490.

¹⁰⁶ Kallummal Murali, Sheshna Sekhri and Hari Maya Gurung, 2017, "**Decoding and Profiling TBT Measures Notified to the WTO: Commercial vs. Economic interest**", Centre for WTO Studies, p.14, November, mimeo.



Theme of Section

At the outset, this report does not claim to have complete clarity on the definition of private sustainability standards as practised/implemented. We have attempted to bring clarity to private standards developed by private players through certifications/accreditations/labels, which are voluntary for market access.

Exactly a decade later, in 2017, this paper conducts the first survey-based analysis of the likely impact of private standards. One of the key challenges in this direction is developing a clear understanding of the scope of private standards, their economic linkages, and the associated gains and challenges. The majority of private standards are used by industrial countries, with nearly 82 per cent of the 621 standards analysed in this paper being used by such countries. Conceptually, the private standards are often developed by industrial countries.¹⁰⁷ Moreover, they may pose a considerable challenge to Indian exporting firms scattered across the vast geography. The emergence of PS as a market access barrier is a relatively new phenomenon, and so is the understanding of private standards in India. Therefore, some questions need to be answered to be able to answer the final position of India on private sustainability standards:

1. Mandatory standard vs private standard (PS) and what are the distinctions of private sustainability standard (PSS)?
2. What are the possible contours of PSS and linkage with Paris, COP-21;
3. Which are the prominent private standards operating in Indian markets, and what is the global acceptance?
 - a. What is the possibility that some of the private standards upgrade themselves to private sustainability standards?

Mandatory Vs Private Standards – Trends and Patterns

A mandatory standard is one for which compliance is required for market access. Mandatory standards (TBT and SPS regulations) are usually harmonised at the global level by aligning national standards and thereby establishing a universal international standard. The international standards-setting organisations for SPS agreements are the FAO/WHO expert committee of the Codex Alimentarius Commission, the World Organisation for Animal Health (OIE) and the International Plant Protection Commission (IPPC). For TBT, these bodies include the

¹⁰⁷ Most of these standards were developed by industrial countries and therefore was designed to address concerns of firms operating within socio-economic situations prevailing in these economies.



International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU).

One of the primary distinguishing features of private standards from mandatory standards is that compliance with them is voluntary in both application and acceptance. A private standard is a document approved by a recognised organisation or entity that provides, for frequent and repeated use, rules, guidelines, or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.”¹⁰⁸ Various studies have suggested that these concepts revolve around principles such as inclusive, egalitarian participation by all interested parties. This includes transparency in the decision-making process, the accountability of decision-makers to the relevant public, and, more generally, the pursuit of the public interest (Fuchs et al., 2009; Henson & Humphrey, 2009). Therefore, the fulfilment of all the principles together makes a private standard. A single attempt by the WTO over nearly two decades to harmonise the mandatory standards (SPS and TBT) has now reached the point of no return with the emergence of private standards.

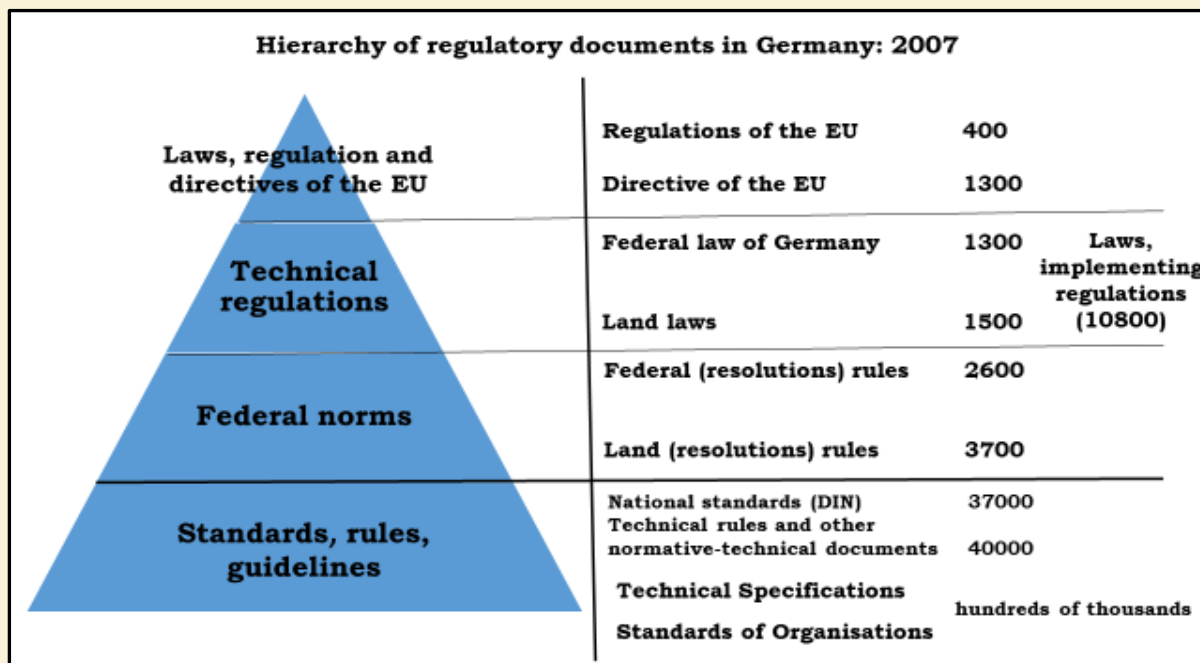
Standards Harmonisation impact of Differential Regulation

Each country is developing national standards and technical regulations to meet the needs of industry and society, which may or may not take international practices into account. As a result, the requirements for the same products can, and often do, vary across countries. These differences have become a real problem for the manufacturing industries, especially in the major exporting countries. On the other hand, local industries quickly realised that these differences might protect them from competitive imports and therefore supported them. In general, for imported products, it became increasingly difficult to meet diverse requirements.¹⁰⁹ For example, Figure 1 depicts one such case: the European Commission's mandatory regulatory regime. In the EC, the number of standards increases as we move toward the base of the pyramid, suggesting the possibility of large deviations among similar products across countries.

¹⁰⁸ WTO Legal Text on TBT Agreement.

¹⁰⁹ See, <https://www.unecce.org/fileadmin/DAM/trade/wp6/>

Figure 1: Hierarchy of Mandatory Regulations and its linkages



Source: Recreated based on figure 12.3, https://www.unece.org/fileadmin/DAM/trade/wp6/AreasOfWork/EducationOnStandardization/Module_12_International_trade_Eng_01.pdf.

Divergence in Regulation and Standards

These differences in standards can create more complex structures of standards regimes in which trading with compliance can become impossible. Therefore, private standards are standards/certificates/labels that are not mandatory requirements for any product, created by dominant players from leading countries, and mostly imposed by private players (individuals, firms, or associations of firms).¹¹⁰ Further, these standards are consolidated and grounded in science, technology, and experience, aimed at promoting community benefits. Therefore, these are apparently not the mandatory standards imposed by governments (public authorities) as the technical barriers to trade (TBT) and sanitary and phytosanitary (SPS) measures.

The FAO distinguished them in the following manner:

...standards set by public authorities usually referred to as “technical regulations” are typically mandatory. Private standards, by definition, are voluntary, although, as discussed later, they may, in practice, become de facto mandatory where compliance is required for entry into certain markets.¹¹¹

¹¹⁰ It is very rarely that the national governments also impose such requirements.

¹¹¹ See, <http://www.fao.org/docrep/013/i1948e/i1948e02.pdf>



In practice, FAO's definition of private standards becomes de facto mandatory, suggesting that private standards may undermine the potential achievements of the multilateral process over the past two decades. It depends on the compliance requirements in a market; in such cases, the requirements under the private standards take precedence and thereby become mandatory.

We provide a detailed understanding of both mandatory and voluntary standards by categorising them into four categories, as indicated in Figure 2. The four categories are based on the nature of standards being public or private and, based on the compliance requirement, further divided into two separate categories: mandatory and voluntary. All the standards were captured in four cells; the first cell contains public standards with mandatory compliance (A, X). The second cell contains standards that are private but de facto mandatory (B, X); the third contains public standards, but compliance is voluntary (A, Y); and the fourth contains standards that are private and voluntary (B, Y).

Figure 2: Typology of Regulations and Standards¹¹²

Regulation/ Standards	Public/NGOs (A)	NGOs/Private (B)
Mandatory (X)	Regulations (A,X)	Legally-mandated private Standards (B,X)
Voluntary (Y)	Public voluntary standards (A, Y)	Private voluntary Standards (B,Y)

Private
Sustainability
Standards
(A,Y; B,X; B,Y..)

Source: Adopted by the authors based on Figure 2, Henson S. and John Humphrey, 2009, *The Impacts of Private Food Safety Standards on the Food Chain and on Public Standard-Setting Processes*, Paper Prepared for FAO/WHO, May. p.4.

¹¹² This is the conceptual understanding developed for this Report.



If the regulations and standards are divided into four mutually exclusive cells, then private standards having this characteristic of mandatory nature are the private standards belonging to **the ‘B, X’ cell**; the FAO private standards which acquired mandatory status would certainly belong here, see Figure 2. While other regulations that are purely mandatory are those falling in the cell of ‘A, X’ the second column in Figure 2); these are TBT or SPS regulations issued by countries.

The last two cells are ‘A, Y’ and ‘B, Y’; both are voluntary standards distributed through public and private channels. One example of a publicly certified private standard is Ecomark-India, a government-operated seal-of-approval program for environmentally preferable consumer products. To increase consumer awareness, the Government of India launched the eco-labelling scheme known as ‘Ecomark’ in 1991 to facilitate the easy identification of environment-friendly products. The other example of public-channel private standards is the EU Ecolabel certification, established in 1992, a voluntary scheme designed to encourage businesses to market products and services that are kinder to the environment and to European consumers.

All voluntary private standards belong to the cell ‘B, Y’; a classic example is the Dolphin Safe/Dolphin Friendly label, which has existed since 1990. The Earth Island Institute initiated this certificate. The initiative covers tuna companies worldwide to ensure tuna is caught using methods that do not harm dolphins and protect the marine ecosystem. The tuna catch is considered “Dolphin Safe” only if it meets the following standards:

1. No intentional chasing, netting or encirclement of dolphins during an entire tuna-fishing trip;
2. No use of drift gill nets to catch tuna;
3. No accidental killing or serious injury to any dolphins during net sets;
4. No mixing of dolphin-safe and dolphin-deadly tuna in individual boat wells (for accidental kill of dolphins), or in processing or storage facilities; and
5. Each trip in the Eastern Tropical Pacific Ocean (ETP) by vessels 400 gross tons and above must have an independent observer on board attesting to compliance with its objectives.¹¹³

Conformity with the Dolphin Safe/Dolphin Friendly standard is verified by the organisation (second party) that sets the standard.

Detailed trends across the world are discussed in the next subsection of the paper; it provides a final analysis of 621 private standards covering a vast area, nearly three-fourths of Figure 2.

¹¹³ See, <http://www.earthisland.org/index.php/aboutUs/story/>



These are private but mandatory standards (B, X), public and voluntary standards (A, Y), and private but voluntary standards (B, Y). However, the four categories captured virtually the entire universe of possible standards until recently; a new categorisation emerged, called private sustainability standards (PSS).¹¹⁴

Trends in Private Standards: Global

As defined at the beginning of this paper, private standards are those developed by private bodies and are voluntary; therefore, mandatory requirements such as TBT and SPS measures are not required for market access. On the other hand, there is some clarity regarding the legal coverage of technical regulations (TBT), standards, and conformity assessment (non-governmental organisations such as ISO and IEC).¹¹⁵ This report would provide additional clarity on distinctive features of private standards (PS) and private sustainability standards (PSS).

There are two databases on private standards: the Ecolabel Index, the most extensive global directory of ecolabels, with records of 465 ecolabels from 199 countries and coverage of 25 industrial sectors; and the 'Standards Map' providing information on 210 standards. For this analysis, a standard dataset has been created by combining information from these two datasets, which comprise 675 private standards as of December 2016. With duplicates (common private standards) across datasets eliminated, the final count is 621 private standards. Further, with 67 PS with no establishment year, Figure 3 (a & b) provides a detailed list of 554 yearly private standards.¹¹⁶ The trend in PS suggests increasing significance, but the annual numbers have declined since peaking at 40 private standards in 2007. Private standards emerged actively after a prolonged stagnation, averaging nearly 2 per year until 1985.

After 1985, the PS grew in strength, reaching 11 in 1990 and peaking at 21, 28, and 34 in 1992, 2002, and 2006, respectively. It suggests that certain countries were actively pursuing private standards even though they negotiated a global multilateral deal under the WTO. The private standards recorded nearly 19 per cent growth from 1981 to 1995; after that, this growth decreased to 4.5 per cent from 1996 to 2010, and subsequently there was a drastic decrease, with a 41 per cent negative growth rate.

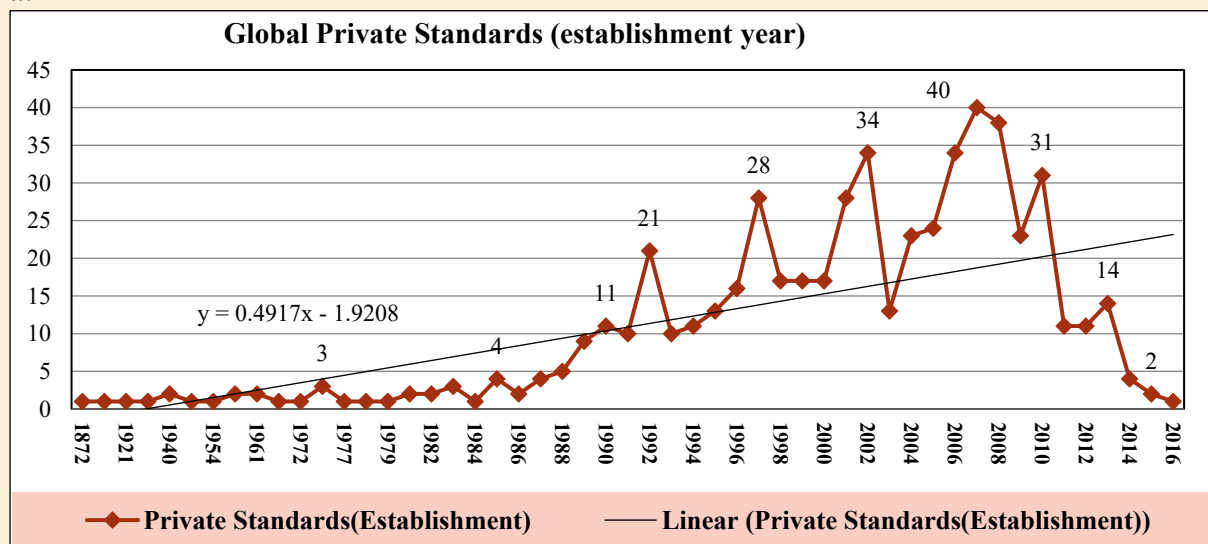
¹¹⁴ As of July 2026, the International Trade Centre (ITC), a joint agency of the United Nations and World Trade Organisation, tracks and maps over 200 Voluntary Sustainability Standards (VSS) and private certification systems in its database.

¹¹⁵ WTO, 2014, 'The WTO Agreements Series Technical Barriers to Trade', ISBN 978-92-870- 3836-4.

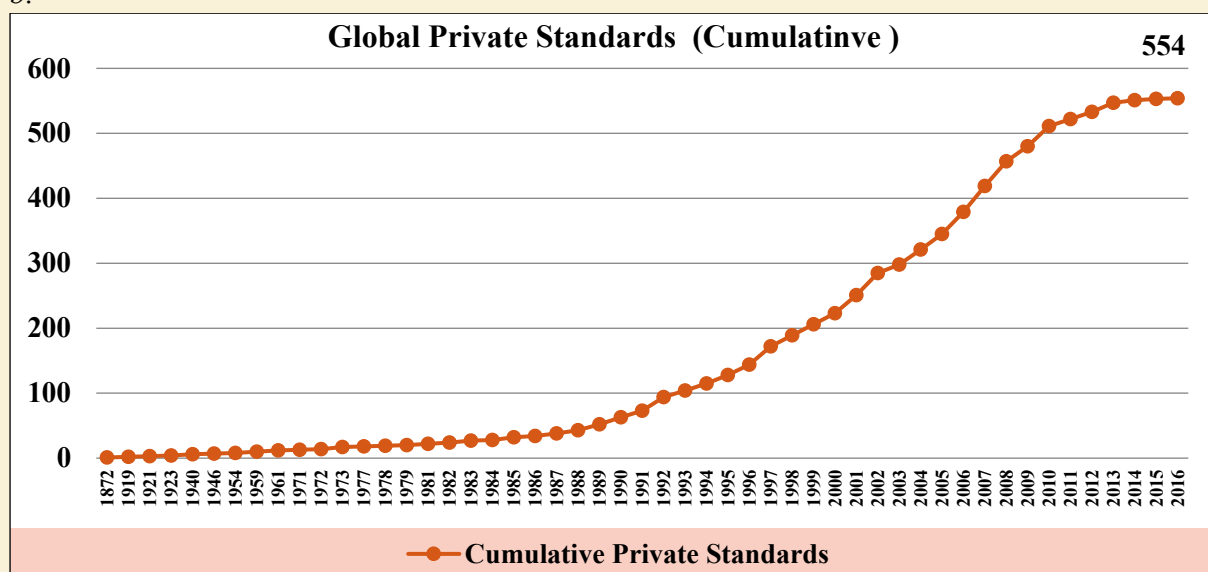
¹¹⁶ Of the 621 private standards, 67 could not be traced to their establishment year.

Figure 3: Global 554 Private Standards: 1872 to 2016

a.



b.



Source: Compiled by the authors from the Standards Map and the Ecolabel Index.

Figure 3b suggests that the scope and coverage of private standards have remained at the 2013 level, with only a minimal incremental yearly increase in the number of new private standards after 2013. On the other hand, the trends in Figure 3a show that private standards decreased from a peak of 40 in 2007 to 31, 14, and 2 in 2010, 2013, and 2015, respectively.



Private Sustainability Standards

The conceptual understanding of private sustainability standards (PSS) seems to be a recent phenomenon. The understanding developed in Figure 2 is that we could assess the scope and reach of private sustainability standards. Sustainability standards and certifications are voluntary, usually third-party-assessed norms and standards relating to environmental, social, ethical, and **food safety** issues, adopted by companies to demonstrate the performance of their organisations or products in specific areas. The trend started in the late 1980s and 90s with the introduction of ecolabels and standards for organic food and other products. In recent years, numerous standards have been established and adopted, particularly in the food industry. Most of them refer to the triple bottom line of environmental quality, social equity, and economic prosperity.¹¹⁷ Normally, sustainability standards are accompanied by a verification process - often referred to as "certification" - to verify that an enterprise complies with a standard, as well as a traceability process for certified products to be sold along the supply chain, often resulting in a consumer-facing label. Certification programmes also focus on capacity building and on working with partners and other organisations to support smallholders or disadvantaged producers in making the social and environmental improvements needed to meet the standard.

International Agreements - Limitations

A series of multilateral environmental agreements (MEAs), such as the Basel Convention, led to the control of Transboundary Movements of Hazardous Wastes and their Disposal. The **Stockholm Convention** called for measures and international cooperation to control the production, use, trade, and disposal of substances known as persistent organic pollutants (POPs). Moreover, the **Rotterdam Convention** established clear rules for the proper handling and safe management of toxic pesticides and other hazardous chemicals that cause serious harm to humans, animals, and the environment. The **Montreal Protocol** finally regulated the use of Ozone Depleting Substances (ODS) that are controlled as hazardous substances under the Environmental Protection and Management Act. All these conventions have had their share in regulating hazardous and environmentally degrading chemicals.

Further, national governments began addressing the environmental and health risks of pesticides in the 1980s by establishing a voluntary Prior Informed Consent (PIC) procedure,

¹¹⁷ Hagen Oliver von, Manning Stephan and Reinecke Juliane, 2010, "Sustainable Sourcing in the Food Industry: Global Challenges and Practices", *Moderne Ernährung Heute*, Official Journal of the Food Chemistry Institute of the Association of the German Confectionery Industry, Vol. 4, p. 1-9, October



administered by UNEP and FAO. PIC requires exporters trading in a list of hazardous substances to obtain the prior informed consent of importers before proceeding with the trade. In 1998, governments decided to strengthen the procedure by adopting the **Rotterdam Convention**, which made PIC legally binding upon entry into force on 23 February 2004. The Rotterdam Convention establishes the first line of defence by giving importing countries the tools and information they need to identify potential hazards and exclude chemicals they cannot manage safely. If a country agrees to import chemicals, the Convention promotes their safe use through labelling standards, technical assistance, and other forms of support. It also ensures that exporters comply with the requirements.

Brundtland Commission report titled ‘Our Common Future’ of 1987 defined sustainable development at the United Nations, World Commission on Environment and Development (WCED). From an economist’s point of view, the word can be defined as the process of converting separate national economies into an integrated world economy.

This conversion is primarily achieved through three channels:

- a) **International trade**, which is still the primary and the most critical link with the national economies, primarily achieved through reduction of tariffs and other barriers under the WTO;
- b) **International factor movements**, which are mainly confined to capital flows; the international mobility of workers is still rather low and is facing substantial opposition from the developed world;
- c) The **international diffusion of technology**, which is only partly a by-product of international flows of goods and capital; increasingly, it is based on intangible cross-border flows of information.¹¹⁸

The most widely quoted definition of sustainable development is that of the United Nations World Commission on Environment and Development (WCED), the Brundtland Commission.¹¹⁹ report titled ‘Our Common Future’ of 1987. The definition in the report is “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. As part of the report, policy directives suggested focused attention on the areas of population, food security, the loss of species and genetic resources, energy, industry, and human settlements - realising that all of these are connected and cannot be treated in isolation from one another.

¹¹⁸ OECD, 1999, “The Future of the Global Economy Towards a Long Boom?”, Organisation of Economic Co-operation and Development (OECD), p.116.

¹¹⁹ IISD, (n.d.), **Sustainable Development**, <https://www.iisd.org/mission-and-goals/sustainable-development>.



Forty-five years after the 1972 United Nations Conference on the Human Environment, most of the global environmental challenges had apparently not been adequately addressed. In several ways, these challenges had grown. Like all well-intentioned policies, these directives and policy recommendations are not fully implemented, as the issues they address require unbridled coordination among nations.

Finally, guidance on such sustainability concerns can also be traced to discussions at the United Nations on climate change and the need to protect primary resources such as forests, water, and air. While trading such protections cannot be absolute and will have to be addressed within the context of industrial activities. Therefore, the level of absolute protection compromises specific restrictions, and disciplines are created around the most advanced industrial activities prevalent at the time.

Therefore, the activities/standards to protect and preserve these resources for future use are the compromises reached by 196 parties at the 21st Conference of the Parties to the UNFCCC in Paris, adopted on 12 December 2015. Sustainability Standards stemming from the three goals of COP 21: Goal 12, 'Ensure sustainable consumption and production patterns'; Goal 8, 'Promote inclusive and sustainable economic growth, employment and decent work for all'; and, lastly, Goal 17, which seeks to revitalise the global partnership for sustainable development.

Goal 12 addresses some of the critical challenges regarding sustainable consumption and production patterns. Such as environmentally sound sustainable management and efficient use of natural resources, decreasing global food waste, the treatment and impacts of general and hazardous waste, recycling and reuse, the promotion of corporate sustainable reporting, monitoring the impacts of sustainable tourism, strengthening the scientific and technological contribution to sustainable consumption and the need to reduce inefficient fossil fuel subsidies that encourage wasteful consumption.¹²⁰ In addition to formal standards set by laws and regulations, private standards, often set by producers, may contribute to food losses and waste.

Therefore, without controls on consumption activities, it seems difficult to achieve sustainability by regulating production alone. Therefore, the partial implementation of Goal 12 will have repercussions for global production activities. The developed world, which consumes many of the products, has been let off the hook. At the same time, developing countries, which serve as the manufacturing base, are brought under scrutiny for their

¹²⁰ See, <http://stats.unctad.org/Dgff2016/planet/goal12/index.html>



sustainability standards and made to comply. Along with specific sustainability standards, it also points to the proliferation of aesthetic or functional standards that lead to the rejection of bent cucumbers and carrots (Stuart, 2009), even if the products fulfil food quality and safety standards. Private standards are often set in response to consumers' requests for products with a perfect shape, a specific size, and a certain colour, creating a reciprocal influence between **consumers and retailers.**¹²¹

Finally, at the global level, another governance transformation has been the growing prominence of public-private partnerships (PPPs) in global business and trade. Combined with the above-mentioned international conventions and agreements, the sustainability standards and their governance get complicated.¹²² In the final analysis, all these soft international legal agreements affect trade for developing countries.

Further, the discussion of private sustainability standards has overshadowed the separation achieved under the WTO for SPS and TBT standards. The PSS is seen as integrating two different approaches to trade standards, one more favoured by industry (TBT) and the other favoured by science.

Contours of PSS - Social Implications

As mentioned above, national and international regulations and agreements guided the identification of products, activities, processes, and methods that are considered sustainable. The processes of identification helped to value the natural world and to select the right products (agro and industrial) from the many other similar products. A sustainable product would, therefore, have the potential to be reused, recycled, or otherwise repeated.

One of the earliest recorded definitions of sustainability appeared in the forestry sector in 1804, by a German forest researcher. Georg Hartig defined sustainability as utilising forests to the greatest possible extent, while ensuring that future generations receive as much benefit as the present generation, suggesting the need to maximise the lifespan of timber resources.

Sustainability can be expressed in three different ways: ecolabels, messages and claims about a product or process. Therefore, it is essential to know what practices are required to comply with sustainability standards. The concepts are developed to incorporate sustainability across

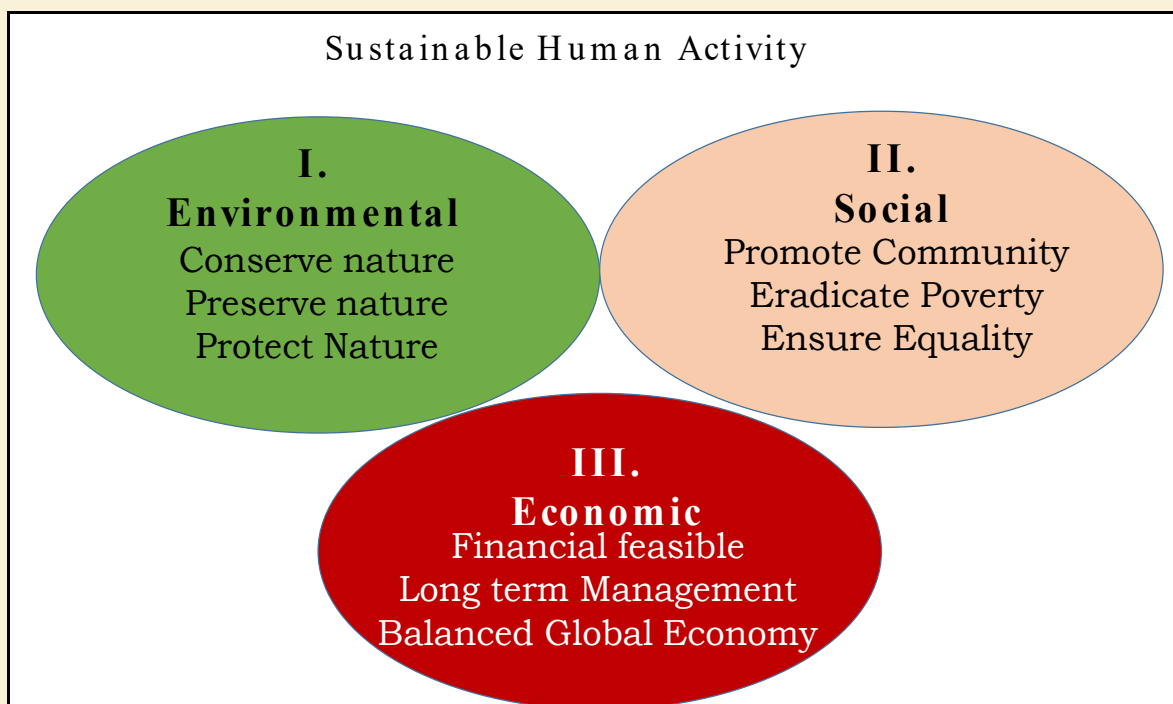
¹²¹ FAO, 2014, "SAVE FOOD: Global Initiative on Food Loss and Waste Reduction", Background paper on the economics of food loss and waste, Global Initiative on Food Loss and Waste Reduction, p. 58.

¹²² OECD, 2012, 'Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships',



all procurement, production, and trading activities. Sustainable development would, therefore, mean keeping a check on three fundamental pillars: social progress, economic development, and the environment and climate.

Figure 4 Sustainable Human Activities



Source: Authors

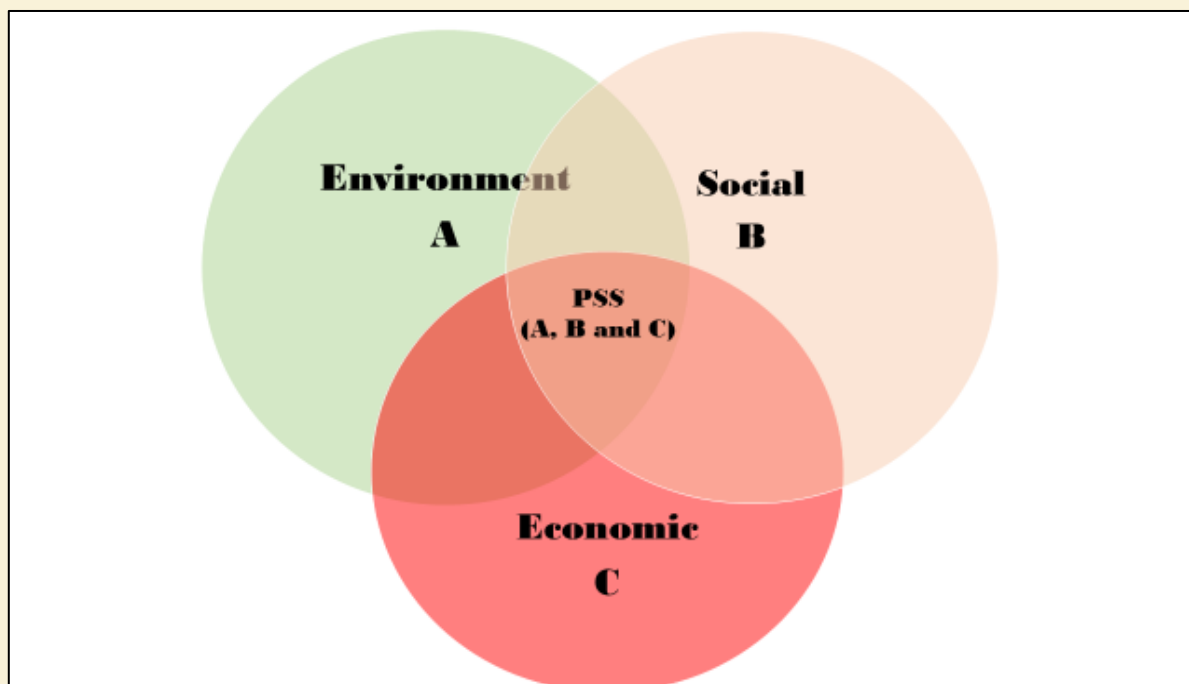
Figure 4 traces three activities under each of the three fundamental pillars identified for assessment of sustainable human activity. Under the first pillar, environment & climate, the objectives are to conserve, preserve and protect nature. The second pillar, social progress, has three objectives: to promote community, to eradicate poverty, and to ensure equality. Finally, the last pillar, economic development, has three objectives: financial feasibility, long-term management, and a balanced global economy. A standard formed by all three pillars acting in an interlocking manner is the only sustainable one; see Figure 5. While economic and commercial factors are important, environmental and social factors also need to be addressed to create sustainability.

Monitoring the imbalance among the objectives across the three pillars must be initiated at the earliest possible time, and necessary action taken. However, the current danger is that there are no multilateral or non-governmental bodies, with markets (private players) considered the



best judges. Presently, sustainability principles are being addressed by the ISEAL Alliance and the "Code of Good Practice," a private initiative formed in 2002.¹²³

Figure 5: Private Sustainable Standards (PSS)



Source: Authors

ISEAL Alliance undertakes and encourages sustainability standards systems to engage in shared learning to improve the effectiveness of standards systems, demonstrating and improving impact by engaging current and potential users of standards. It also builds awareness, develops strategies to scale up the use of standards, and advocates for standards to policymakers.¹²⁴

Since 2004, the ISEAL Alliance's mission has been to strengthen standards systems through a market-based approach for the benefit of people and the environment. It thus proposed that, for the segregated analysis of standards and to analyse the impacts, the following steps would have to be undertaken:

1. **Standard-Setting Code:** ISEAL Code of Good Practice for Setting Social and Environmental Standards;

¹²³ See, <https://www.isealalliance.org/about-us>

¹²⁴ Ibid.

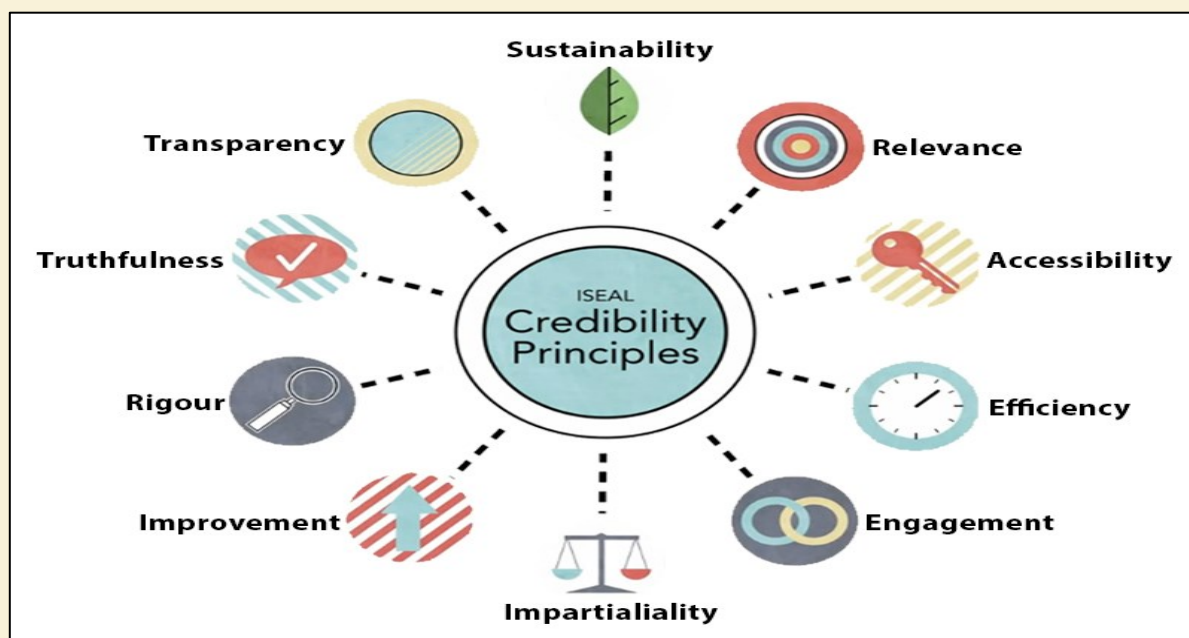


2. **Impacts Code:** ISEAL Code of Good Practice for Assessing the Impacts of Social and Environmental Standards¹²⁵
3. **Assurance Code:** ISEAL Code of Good Practice for Assuring Compliance with Social and Environmental Standards

The ultimate aim of sustainability standards systems is to bring about positive social, environmental and economic impacts while decreasing negative impacts. Impacts can be difficult to demonstrate, particularly in the short-term. Integrating these principles increases the likelihood that a standards system will achieve its intended positive impacts.¹²⁶

ISEAL Alliance is the global membership association for credible sustainability standards, which work together to improve the impact and effectiveness of current and potential future members. ISEAL Alliance distinguishes and promotes credible standards and supports cooperation among our members and other interested parties to shape an effective standards movement. By building a collaborative movement, ISEAL Alliance aims to achieve a significant and increasing impact on the sustainability of products and services worldwide.

Figure 6: ISEAL's Credibility Principles



Source: Adopted from ISEAL Alliance web page, <https://www.isealalliance.org/our-work/defining-credibility/credibility-principles>.

¹²⁵ Through ISEAL's 10 Credibility Principles which are applied on every standard.

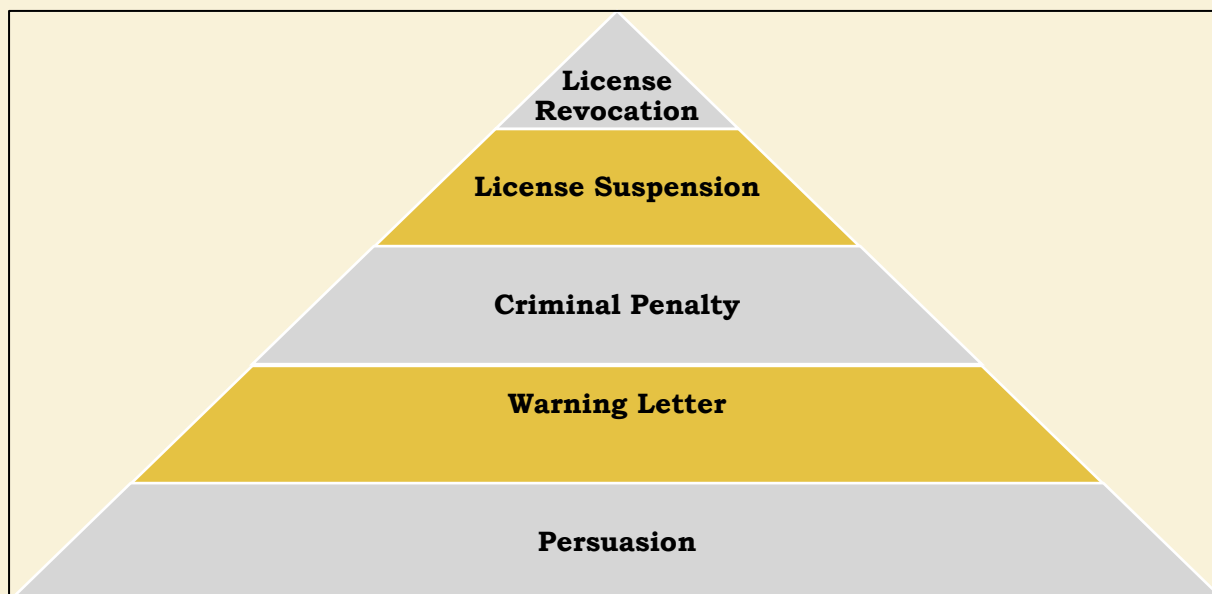
¹²⁶ See, <https://www.isealalliance.org/sites/default/files/Credibility%20Principles%20v1.0%20low%20res.pdf>



Third Party Auditors and PSS

However, recent developments, when taken into consideration, will put pressure on the nature of the imbalance between countries.

Figure 7: An Enforcement Pyramid for Defaulters



Source: Adapted from Ayres, I., and Braithwaite, J., 1992, Response Regulation: Transcending the Deregulation Debate, Oxford University Press, New York, p. 35.

The enforcement mechanism and the implications for exporting firms are affected by how the judiciary treats independent auditors in cases of non-compliance with sustainability standards. Often, the auditors (independent as they are) impose unreasonable demands that may not align with the actual conditions of private sustainability standards.

Driven by the legal processes in the importing country, compliance with PSS may become further complicated. As more and more cases of penalisation or imprisonment of individuals or firms (auditors) are found non-compliant with domestic regulations.¹²⁷ Presently, there is a conflict regulatory function, the responsibility of national, international, public and private actors alike, the legitimisation framework becomes blurred, and the prospect of a global democratic order is far off. (Held 1995 and Brunkhorst, 2002)

¹²⁷ Cameron George, Mike Knapper, Pam Taak, Pewter Scott, Ian Giles, Susannah Rogers and Maria Georgiou, 2017, "Medical product regulation and product liability in UK (England and Wales): Overview", Norton Rose Fulbright LLP, <https://uk.practicallaw.thomsonreuters.com/>



Regulators are increasingly using various options, such as punitive sanctions, to respond to non-compliant enterprises or individuals and demonstrate the process of justice. These are helping governments develop new capacities and identify best practices for improving the quality of their regulatory decisions (see figure 1). Although the sequencing of punitive actions need not necessarily follow this hierarchical order, it may vary from case to case. Therefore, what the PS and PSS would end up doing is encouraging the regionalisation of standards, with ever-growing inequities between countries. No single country would have the capacity to meet global demand, so let multinational firms fill this gap. The WTO compliance of private sustainability standards has been sufficiently elaborated in Part One of the Three-Part Report on PSS.

Private Standards Operational in Indian Markets¹²⁸

Private standards generally target products that are actively traded globally by developing and developed countries. Over the years, global disciplining under the WTO and various other regional trade initiatives have reduced the production capabilities of developing countries into a few niche areas/sectors. The application of private standards further targets these.

Presence of Private Standards in India

We examine 31 prominent private standards originating in India and their compliance status with respect to market access in other markets.

Best Aquaculture Practices



Founded in 1997, the Global Aquaculture Alliance (GAA) is an international non-governmental organisation dedicated to advocacy, education and leadership in responsible aquaculture.¹²⁹

¹²⁸ This section draws significant number of contents from websites like ecolabel index and other relevant web pages as mention in the sub-section.

¹²⁹ See, <https://www.aquaculturealliance.org>.



Established in 2002, the Best Aquaculture Practices Certified (BAP Certified) mark on retail packaging tells consumers (food) that seafood came from BAP-certified aquaculture facilities. The Best Aquaculture Practices standards, developed by the Global Aquaculture Alliance, form the basis for BAP certification. The standards specifically protect biodiversity and worker rights within a program that addresses environmental, social, food safety and traceability issues throughout producers' operations. The BAP has been improving the environmental, social and economic performance of the aquaculture supply chain and growing the global supply of responsibly farmed seafood since 2002.

The Aquaculture Certification Council implements BAP certification. This independent certifying agency employs an international team of accredited evaluators to inspect facilities against BAP standards through site inspections, sampling, and record reviews. BAP certification is currently available for shrimp farms and hatcheries, and seafood processing plants.¹³⁰

Compliance with the BAP Certification

Conformity with Best Aquaculture Practice's standards is verified by an independent organisation (third party). The product categories this ecolabel applies to are fish/fisheries and food. It is a third-party certification that ensures the audit is fair, objective, and traceable. It is the only aquaculture certification that encompasses the entire production chain: farms, processing plants, hatcheries and feed mills. The BAP standards cover virtually 100% of the finfish, crustacean and mollusc species produced around the globe. It follows a scientific, rigorous, and ever-evolving approach to meet the challenges in aquaculture. More than 150 retail and foodservice companies worldwide are publicly committed to sourcing seafood from BAP-certified facilities. BAP certification is considered proof of a commitment to the environment, social integrity, and the health of animals and consumers.

BAP certification is accepted as a compliant product standard in 15 global markets, including Bangladesh, China, Ecuador, El Salvador, Guatemala, Honduras, Indonesia, Italy, Malaysia, Nicaragua, Thailand, the United Kingdom, the United States, Vietnam, and Canada. Acceptance in three of India's traditional markets is significant for Indian exporters.

¹³⁰ See, <http://www.ecolabelindex.com/ecolabel/best-aquaculture-practices>.



Better Environmental Sustainability Targets (BEST) Standard 1001



Established in 2008, the Better Environmental Sustainability Targets (BEST) certification recognises lead battery manufacturers that meet minimum emission standards and agree to take back used batteries for environmentally sound recycling. The objective is to reduce emissions from lead battery plants and recyclers, and prevent lead poisoning through an incentive program for these companies.

More than 80 per cent of all lead production goes into batteries. Battery manufacturers in developing countries generally collect less than 1% of used batteries for proper recycling. As a result, backyard smelters for recycling batteries have proliferated, further contributing to lead poisoning and environmental contamination. Three objectives are achieved through the certification of battery producing companies: 1) reduce lead exposures in communities where lead batteries are manufactured; 2) Reduce lead exposures and improve the health status of workers in lead battery manufacturing facilities that are occupationally exposed to lead and other hazardous materials; and 3) Increase the adoption of sustainable practices in order to reduce the environmental impact of lead battery manufacturing by encouraging efforts to minimize waste, lower emissions, reduce energy and water consumption, and encourage environmentally sound recycling.¹³¹

Compliance with **the** BEST certification

Conformity with Better Environmental Sustainability Targets (BEST) Standard 1001 is verified by an independent organisation (third party). According to the ecolabel index website, BEST certifications are not globally accepted; they are only accepted and certified in India.

¹³¹ See, <http://www.okinternational.org/docs/BEST%20Work%20Program08.pdf>



Bio Suisse



Established in 1981, Bio Suisse is a private-sector organisation and the federation of Swiss organic farmers, with over 6,140 members. More than 885 processing and trade companies have a licence contract with Bio Suisse to use the Bio Bud label. Bio Suisse helps to bring people, animals and nature back into balance. The Bud label indicates that the products are fully organic and more than 90% of the raw materials are produced in Switzerland.

Compliance with BIO Suisse certification

Conformity with Bio Suisse's standard is verified by an independent third-party organisation (IFOAM) in accordance with ISO/IEC Guide 65: Product Certification. Product categories this ecolabel applies to: fish/fisheries and food. According to the ecolabel index website, BEST certifications are not globally accepted; they are only accepted and certified in India.

Bonsucro



Established in 2005, Bonsucro is a multi-stakeholder association established to reduce the environmental and social impacts of sugarcane by designing a Standard and program to transform the sugarcane industry. Bonsucro-certified sugarcane products, processes and services will soon be available for purchase. Bonsucro-certified products and companies will be third-party verified against Bonsucro's Standard, which sets out principles and criteria for environmental responsibility, social development, economic return, and good industry practices.

For buyers or traders, from global brands to artisan manufacturers, demonstrating sustainability is important, and the changed environment created by Bonsucro certification would require a comprehensive network of organisations invested in sugarcane.



Compliance with the Bonsucro certification

Conformity with Bonsucro's standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO / IEC Guide 65 Product Certification. Product categories this ecolabel applies to: carbon, commodities, energy, food and other products. This ecolabel is found in 14 markets, including Algeria, Australia, Bolivia, Brazil, Colombia, Denmark, France, Japan, Kenya, Luxembourg, the Netherlands, Switzerland, Thailand, and the United Kingdom.

Carbon Neutral Certification



Established in 2008, the Carbon Neutral Certification is a label given to businesses that offset their carbon footprint. Verus Carbon Neutral first calculates the carbon footprint of a business seeking Carbon Neutral Certification. They then offset the carbon footprint by retiring carbon credits. Offsetting allows businesses to mitigate greenhouse gas emissions they cannot eliminate through energy efficiency and other reduction strategies.

Compliance with the Carbon Neutral certification

Conformity with Carbon Neutral Certification's standard is verified by our own organisation (second party). Product categories this Carbon Neutral ecolabel applies to: building products containing carbon, carbon offsets, cleaning products, cosmetics / personal care, electronics, energy, food, forest products/paper, health care services & equipment, machinery & equipment, packaging, textiles, tourism, transportation, and waste management & recycling. Brazil and the United States accept the certification.



Compostability Mark of European Bioplastics



Established in 2000, the Compostability Mark of European Bioplastics certification enables the identification of compostable products by a unique mark and channels for the recovery of their constituent materials through specially developed processes. The Compostability Mark thus conveys product information to waste-disposal plant operators and product image to consumers.

Compliance with the Compostability Mark of European Bioplastics Certification

Conformity with the Compostability Mark of European Bioplastics' standard is verified by an independent organisation (third party) following ISO 17025 Testing and Calibration Laboratories, ISO / IEC Guide 65 Product Certification. Product categories this ecolabel applies to include: packaging, textiles, waste management & recycling and any other products. This ecolabel is accepted in 27 markets, including Australia, Belgium, Brazil, Canada, China, the Czech Republic, Denmark, France, Germany, Greece, Hong Kong, Israel, Italy, Japan, Dem. Rep. of Korea, Netherlands, Norway, Poland, Portugal, South Africa, Sweden, Switzerland, Taiwan, Thailand, Turkey, and United Kingdom.

EarthCheck



Established in 1997, EarthCheck is a benchmarking certification and advisory group for travel and tourism. Since 1987, EarthCheck have helped businesses, communities and governments to deliver clean, safe, prosperous and healthy destinations for travellers to visit, live, work and play. EarthCheck's approach has been to help operators break resource challenges into



manageable actions. EarthCheck has over fifteen years of evidence research on operational performance.

Compliance with the EarthCheck certification

Conformity with EarthCheck's standard is verified by an independent organisation (third party) following ISO 17021 Management system certification. Product categories this ecolabel applies to: buildings, carbon, tourism and transportation. This ecolabel is accepted in almost 151 countries.

Ecocert



Established in 1991, Ecocert is a certification body for sustainable development. It is an inspection and certification body established in France by agronomists who recognise the need to develop environmentally friendly agriculture and the importance of recognising those committed to this production method. From its creation, Ecocert has specialised in the certification of organic agricultural products.

Compliance with the Ecocert certification

Conformity with Ecocert's standard is verified by an independent organisation (third party) following ISO 14001 and 9001. Product categories this ecolabel applies to: cosmetics / personal care, food and textiles. This ecolabel is accepted in 18 markets.



Ecomark: India



Established in 1991, the Ecomark-India is a government-run seal-of-approval program for environmentally preferable consumer products. To increase consumer awareness, the Government of India launched the eco-labelling scheme known as 'Ecomark' in 1991 to facilitate the easy identification of environment-friendly products. The criteria follow a cradle-to-grave approach, i.e., from raw material extraction through manufacturing to disposal. The Ecomark label is awarded to consumer goods that meet the specified environmental criteria and the quality requirements of Indian Standards.

Compliance with the Ecomark-India certification

Conformity with Ecomark: India's standard is verified by an independent organisation (third party). Product categories this ecolabel applies to: Appliances, Building products, Cleaning products, Cosmetics/Personal care, Food, Forest products/Paper, Packaging, Textiles, and Other Products (leather, batteries, lubricating oils, wood substitutes, aerosol propellants, plastic products, fire extinguishers). According to the ecolabel index website, Ecomark-India certifications are not globally accepted; they are only accepted and certified in India.

EPEAT



Established in 2006, the EPEAT certification is a global rating system for greener electronics. Using EPEAT ("Electronic Product Environmental Assessment Tool"), purchasers in 43 countries can evaluate, compare and select electronics based on environmental attributes. EPEAT rates products on a lifecycle basis. The system addresses the elimination of toxic



substances, the use of recycled and recyclable materials, product design for recycling, product longevity, energy efficiency, corporate performance and packaging attributes. Products are rated Gold, Silver or Bronze depending upon the number of environmental criteria they meet. Manufacturers register products in EPEAT based on their attainment of standards developed in voluntary consensus processes that are open and transparent for all interested stakeholders. Manufacturers' declarations are subject to ongoing verification to assure the Registry's credibility.

Compliance with the EPEAT certification

Conformity with EPEAT's standard is verified by an independent organisation (third party) following ISO / IEC Guide 65 Product Certification. EPEAT currently includes categories for PCs and Displays, Televisions, and Imaging Equipment (printers, copiers, scanners, multifunction devices, fax machines and mailing machines). Categories for Servers and Mobile Phones are in development. This ecolabel is accepted in 44 markets.

EU Ecolabel



Established in 1992, the EU Ecolabel certification is a voluntary scheme designed to encourage businesses to market products and services that are kinder to the environment and for European consumers - including public and private purchasers - to easily identify them.

Compliance with the EPEAT certification

Conformity with EU Ecolabel's standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO / IEC Guide 65 Product Certification. Product categories this ecolabel applies to: appliances, building products, cleaning products, electronics, forest products / Paper, textiles, tourism, other products (campsite services, bed mattresses, footwear). This ecolabel is accepted in 57 markets.



Forest Stewardship Council (FSC) Certification



Established in 1994, the Forest Stewardship Council (FSC) promotes environmentally appropriate, socially beneficial, and economically viable management of the world's forests. FSC chain of custody (CoC) tracks FSC-certified material through the production process - from the forest to the consumer, including all successive stages of processing, transformation, manufacturing and distribution. Only FSC CoC-certified operations are allowed to label products with the FSC trademarks. The FSC label thus links responsible production and consumption, enabling consumers to make socially and environmentally responsible purchasing decisions.

FSC on-product labels: 100% Products contain only material from FSC-certified forests that meet FSC's environmental and social standards; Mix Products contain material from FSC-certified forests, recycled material, or other controlled sources; and Recycled Products contain post-consumer material and may include some pre-consumer material.

Compliance with the FCC-CoC certification

Conformity with the Forest Stewardship Council (FSC) Chain of Custody Certification standard is verified by an independent organisation (third party). Product categories this ecolabel applies to: Building products, Forest products and Paper Packaging. This ecolabel is acceptable in 70 markets.

GEO Certified



Established in 2009, the GEO certification is a stakeholder-funded, not-for-profit organisation, dedicated to helping the global golf community establish leadership in environmental



enhancement and corporate responsibility. GEO Certified is an ecolabel for golf development and course/club management.

Building on a history of social and environmental value at the game's roots, golf is poised to emerge as a leader in sustainable sport and business. In many ways, from ecosystem services and wildlife conservation to health and well-being for all ages to jobs and economic value through local supply chains, golf is good for nature and communities.

Figure 8: GEO Certification Process



Source: <http://www.golfenvironment.org/vision/action>

Following years of research and professional expertise, the industry is entering a new phase of activity, working to represent its contributions collectively and credibly while also pledging to do more. This effort is delivered in partnership with GEO Foundation, the international non-profit dedicated entirely to providing a credible and practical sustainability system for golf.¹³²

Figure 2 suggests that the GEO certification has integrated sustainability principles and further recognises other private standards such as Fairtrade, Rainforest Alliance, and Forest Stewardship Council (FSC).

Compliance with the GEO certification

Conformity with GEO Certifier's standard is verified by an independent organisation (third party). Product categories this ecolabel applies to: two sectors: Buildings and Energy, Waste management, Recycling & Water. This ecolabel is acceptable in 29 markets.

¹³² See, <http://www.golfenvironment.org/vision>



Global GreenTag Certified



Established in 2010, the Global GreenTag is a third-party, green product rating and certification system, underpinned by scientific and Life Cycle Assessment (LCA) processes. The program assesses products against worst case business as usual products in the same functional category and with the same functional purpose, based on the following impacts/benefits: product synergy; greenhouse emission point (ISO 14067); human health & eco-toxicity (REACH and US EPA); life cycle assessment (ISO 14040-44), biodiversity and resource consumption corporate social responsibility (Ethics, ILO, ISO 8000 & Development Programs). The Global Green Tag® ecolabel rating differentiates a product at the top end of the green product market by scoring, weighting, and developing an EcoPOINT Score (-1 to +1). The system provides metrics for sustainability that include 'Net Positive' impacts such as carbon sequestration, net positive biodiversity or health impacts of products. Global Green Tag® is a registered Certification Mark in Australia and the USA.

Compliance with the Global Green Tag certification

Conformity with Global GreenTag Certification verified by an independent organisation (third party) following ISO / IEC Guide 65 Product Certification. Product categories this ecolabel applies to: Building products of Carbon, Carbon offsets, Cleaning products, Cosmetics / Personal care, Forest products / Paper, Furniture, Machinery & Equipment, Packaging, Textiles, Waste management & Recycling. This ecolabel is accepted in six markets: Australia, China, Malaysia, Singapore, South Africa and the United States.



Global Organic Textile Standard



Established in 2006, the GOTS is a comprehensive set of rules for ecological and socially responsible textile production. The Global Organic Textile Standard (GOTS) was developed to unify existing and draft standards in the field of eco-textile processing and to define worldwide recognised requirements. The organic status of textiles, from the harvesting of raw materials through environmentally and socially responsible manufacturing to labelling, in order to provide credible assurance to the end consumer. Processors and manufacturers shall be enabled to supply their organic fabrics and garments with a single certification accepted in all major selling markets. Basic Features: GOTS requires the use of certified organic fibres; it provides both demanding environmental and social criteria; its criteria apply to all processing stages; and its certification must be based on independent on-site inspections.

Compliance with the Global Organic Textile Standard certification

Conformity with the Global Organic Textile Standard's standard is verified by an independent organisation (third party) following ISO / IEC Guide 65 Product Certification, International Requirements for Organic Certification Bodies (IROCB). This ecolabel applies only to the textiles sector. This ecolabel is acceptable in seventeen markets.

GoodWeave



Established in 1994, GoodWeave works to end child labour in the carpet industry and to offer educational opportunities to children in South Asia. Through its monitoring and inspections program, GoodWeave is helping to combat the problem of exploitative child labour and to



transform the handmade rug industry by certifying child-labour-free rugs and providing education and opportunities to rescue at-risk children. The GoodWeave label assures that no child labour was used in making the rug.

Compliance with the GoodWeave certification

Conformity with the GoodWeave standard is verified by the organisation itself (second party). This ecolabel applies to product categories only in the textiles sector. This ecolabel is accepted in four markets, including Germany, Nepal, the United Kingdom, and the United States.

Green Globe Certification



Established in 1999, the Green Globe Standard facilitates responsible, sustainable environmental and social practices and improves environmental and social outcomes for travel and tourism operations. The Green Globe Standard is a structured assessment of the sustainability performance of travel and tourism businesses and their supply chain partners. Businesses can monitor improvements and document achievements that lead to certification of their enterprises' sustainable operations and management. The Green Globe Standards comprise 339 compliance indicators across 41 individual sustainability criteria. The applicable indicators vary by certification type, geographical area, and local factors. The Green Globe Standard is reviewed and updated twice per calendar year.

Compliance with the Green Globe certification

Conformity with Green Globe Certification's standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO 19011 QMS and EMS auditing (and auditor qualifications). This standard is for-profit, as per the ecolabel website. Product categories this ecolabel applies to include sectors like Tourism, Transportation, and other products (Convention Centres, Cruise Ships, Attractions, Tour Operators, and Spas). The Green Globe is accepted in 67 markets.



Hand in Hand



Established in 1992, the private Fairtrade program of Rapunzel Naturkost GmbH is a supplier of organic products. From the very beginning, when dealing with producers from Southern countries (the so-called developing countries), not only the quality of the organic products but also the quality of the cooperation with the producers was important. The primary aim of Rapunzel Naturkost under the ‘hand in hand’ program is to establish long-term trade relationships with its ‘hand in hand’ suppliers and therefore make them more independent from commodity price fluctuations in the world market and to support them in their eco-social development. Rapunzel Naturkost believes that organic farming and fair trade are the basis for positive and sustainable development, because they secure healthy food products, a healthy environment, and adequate added value for producers. The Rapunzel economy and ecology must progress “hand in hand”.

Compliance with the Hand in Hand certification

Conformity with the “Hand in Hand” standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO / IEC Guide 65 Product Certification. This standard is for-profit, according to the ecolabel website. The product on which this ecolabel applies is food products only. Hand in Hand certification is acceptable in 56 markets.

Hong Kong Green Label (HKGLS)



Established in 2000, the HKGLS is an independent, non-profit, voluntary scheme for the certification of environmentally preferable products, launched by the Green Council (GC). The



scheme sets environmental standards and awards the "Green Label" to products that meet these standards. As with all eco-labelling programs, the aim is to encourage manufacturers to supply products with good environmental performance and provide a convenient means for consumers to recognise products that are more environmentally responsible, thus promoting a more sustainable pattern of consumption.

Compliance with the HKGLS certification

Conformity with Hong Kong Green Label (HKGLS)'s standard is verified by an independent organisation (third party) following ISO 17025 Testing and Calibration Laboratories, ISO / IEC Guide 65 Product Certification. The product categories this ecolabel applies to are: Building products, Cleaning products, Electronics, Health care services & equipment, Appliances, Machinery & Equipment, Textiles, and other products. The HKGLS certification is accepted in only three markets: China, Hong Kong, and Taiwan.

India Organic - National Programme for Organic Production (NPOP)



Established in 2006, the NPOP is a national programme that includes accreditation of certification bodies, norms for organic production, and the promotion of organic farming. The European Commission and Switzerland have recognised the NPOP standards for the production and accreditation system as equivalent to their national standards. Similarly, USDA has recognised NPOP conformity assessment procedures for accreditation as equivalent to those of the US.

Compliance with the NPOP certification

Conformity with the India Organic - National Programme for Organic Production (NPOP) standard is verified by an unknown. The NPOP standard is listed under the government standard on the ecolabel website. Only food products are covered by this ecolabel, and this is not acceptable in any market.



LEAF Marque



Established in 2002, the LEAF Marque recognises food produced by farmers committed to improving the environment for the benefit of wildlife and the countryside. The LEAF Marque mission is to enable farming that enriches the environment and engages local communities. Each activity in the life cycle involves LEAF Marque, farmers, the food chain, and consumers.

Compliance with the LEAF Marque certification

Conformity with LEAF Marque's standard is verified by an independent organisation (third party) following ISO / IEC Guide 65 Product Certification. The NPOP standard is listed under the non-profit standard on the ecolabel website. Product categories this ecolabel applies to: commodities and Food products. The LEAF Marque certification is accepted in only two markets: Ireland and the United Kingdom.

Natrue-Label



Established in 2007, Natrue-Label is a guarantee for cosmetic products. Their goal is to promote and protect natural beauty and skin care products. Any product with the Natrue label is intended to be as natural as possible, using natural and organic ingredients, soft manufacturing processes and environmentally friendly practices.

Compliance with the Natrue-Label certification

Conformity with Natrue-Label's standard is verified by an independent organisation (third party). The Natrue-Label standard is listed under the non-profit standard, as per the ecolabel



website. This ecolabel applies only to two products: Cosmetics and Personal care. Natrue-Label is accepted in 33 countries.

Processed Chlorine Free



Processed Chlorine Free (PCF) was established in 1996. Processed Chlorine Free (PCF) audits require a chain of custody for all raw materials, measure the impact of a manufacturing process on the environment: water and energy use, chemistry, carbon gas releases, reviews environmental policy and permit compliance, reviews ethical management practices and compliance, financial performance, product stewardship, public information, funding of research and development, and employee recognition.

Once the audit is complete, it is provided a ranking on a Sustainability Index {SI rank best of 1350 points}. Only processes or products manufactured free of chlorine chemistry are identified with the TCF {Totally Chlorine Free} or PCF {Processed Chlorine Free} Trademarks. The CFPA has no financial interest in any manufacturer or company of the products it certifies.

Conformity with the PCF certification

Conformity with the Processed Chlorine Free standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO 17021 Management system certification, ISO 19011 QMS and EMS auditing (and auditor qualifications), and ISO /IEC Guide 65 Product Certification. The Process Chlorine Free standard is listed under the non-profit standard, as per the ecolabel website. Product categories this ecolabel applies to: Carbon, Food, Forest products / Paper, Packaging, Textiles and Waste management & Recycling. The PCF is accepted in 10 countries: Canada, China, Denmark, Finland, Germany, Mexico, Peru, Portugal, Spain, and the United States.



Programme for the Endorsement of Forest Certification (PEFC) schemes



Established in 1999, the Programme for the Endorsement of Forest Certification (PEFC) is an international non-profit, non-governmental organisation dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification. It works throughout the entire forest supply chain to promote good practice in the forest and to ensure that timber and non-timber forest products are produced with respect for ecological, social and ethical standards. PEFC is an umbrella organisation. It works by endorsing national forest certification schemes developed through multi-stakeholder processes and tailored to local priorities and conditions. Each national forest certification scheme undergoes rigorous third-party assessment against PEFC's unique Sustainability Benchmark. In 2017, the PEFC included over 35 national certification schemes in its membership; together, these account for over 220 million hectares of certified forests.

Conformity with the PEFC certification

Conformity with the Programme for the Endorsement of Forest Certification (PEFC) schemes' standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO 17021 Management system certification, ISO 19011 QMS and EMS auditing (and auditor qualifications), ISO / IEC Guide 65 Product Certification, ISO Guide 59; ATO, ITTO/IUCN, ITTO and MCPFE. The Programme for the Endorsement of Forest certification is listed as a non-profit standard on the ecolabel website. Product categories this ecolabel applies to: Building products, Buildings, Forest products / Paper, Furniture and Packaging. The PEFC certification ecolabel is acceptable in 197 markets.



SFC Member Seal



Established in 2006, the Sustainable Furnishings Council (SFC) Member Seal is a label representing those companies that have made a public and verifiable commitment to sustainability and to improvement. These companies are involved in the home furnishings industry. The exemplary status is voluntary - all members make a public and verifiable commitment to sustainability, transparency, and continuous improvement.

Conformity with the Sustainable Furnishing Council certification

Conformity with the SFC Member Seal standard is verified by n/a; no verification/certification is required. The SFC certification is listed as a non-profit standard on the ecolabel website. Product categories this ecolabel applies to: only Furniture. The SFC Member Seal ecolabel is acceptable in 44 markets.

Sustainable Agricultural Network



Established in 2001, the SAN awards the Rainforest Alliance Certified eco-label to farms (not companies or products). Farmers may apply for certification for all land in production, and companies may request that all of their source farms be certified. Certifies farms for coffee, bananas, cocoa, oranges, pineapples, floriculture, and ferns in accordance with environmental and social standards. Some smaller crops, often grown in association with these commodities, are also certified, including macadamia nuts, passion fruit and plantains.



Conformity with the SAN certification

Conformity with the Sustainable Agricultural Network's standard is verified by an independent organisation (third party). The SAN certification is listed as a non-profit standard on the ecolabel website. The product categories this ecolabel applies to are food products only. In addition to being available in India, the SAN is also accepted in 50 countries.

Sustainable Forestry Initiative (SFI)



Established in 2001, the SFI program has on-product labels to help customers and consumers identify exactly what they are buying: three SFI chain-of-custody labels and one SFI certified sourcing label. SFI chain-of-custody labels allow the use of fibre from certified forests, certified sourcing, and post-consumer recycled material. All of these terms are defined in the SFI Definitions (Section 13 of the SFI 2010-2014 Standard Requirements). Certified forest content can include fibre certified under the SFI 2010-2014 Standard (objectives for land management), Canadian Standards Association (CAN/CSA-Z809) and/or the American Tree Farm System (ATFS) individual and group certification. The SFI-certified sourcing label and claim do not address certified forest content. Certified sourcing can include fibre sourced from a company that conforms to objectives 8-20 of Section 2 - SFI 2010-2014 Standard's fibre sourcing requirements, from pre- or post-consumer recycled content, or from a certified forest, and from non-controversial sources. Certified sourcing is a defined term in the SFI Definitions (Section 13 of the SFI 2010-2014 Standard Requirements).

Conformity with the SFI certification

Conformity with the Sustainable Forestry Initiative (SFI) standard is verified by an independent organisation (third party), such as ISO 17011 Accreditation, ISO 17021 Management system certification, ISO 19011 QMS and EMS auditing (and auditor qualifications), and ISO /IEC Guide 65 Product Certification. The SFI certification is listed as a non-profit standard on the ecolabel website. Products to which this ecolabel applies are building products, Forest



products/Paper, and Packaging products. In addition to being valid in India, the SFI certification is accepted in 22 countries.

TCO Certified



TCO Certified was established in 1992. TCO Certified is an international sustainability certification for IT products. It includes a wide range of criteria that ensure the manufacturing, use, and recycling of IT products are carried out in a manner that respects environmental and social responsibility. TCO Certified combines requirements for social responsibility at the facilities where the product is manufactured, user safety and ergonomic design, and minimal environmental impact for both the product and its production throughout the whole life cycle. The certification includes verification that the sustainability requirements are followed. TCO began 25 years ago when we introduced the first energy-saving sleep mode for computer displays. Since then, TCO Certified has grown to include ground-breaking work in areas such as hazardous materials and socially responsible manufacturing.¹³³

Conformity with the TCO certification

Conformity with TCO Certifier's standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO 17021 Management system certification, ISO 17025 Testing and Calibration Laboratories, and ISO /IEC Guide 65 Product Certification. The SFI certification is listed as another standard on the ecolabel website. The product to which this ecolabel applies is only electronics products. In addition to India, the TCO is also accepted in 158 countries.

¹³³ See <http://tcocertified.com/the-story-of-tco-certified>.



Totally Chlorine Free



Established in 2001, the Totally Chlorine Free certificate aims to eliminate the use of chlorine in all food products. It is believed that, regardless of where a product is manufactured, we can measure its environmental impacts using a Sustainability Index that includes Environmental Policy, Environmental Management, Mill Process, Forestry Certification, Environmental Risk Management, Product Stewardship, Public Information, Environmental Compliance, and Employee Recognition. Further, by eliminating chlorine chemistry, they can reduce water consumption, and the process cannot produce known toxic, carcinogenic chlorinated compounds such as Dioxins, Furans, PCBs, etc.

Certification of any products under the Sustainable Manufacturing Initiative (SMI) as Totally Chlorine Free (TCF), Processed Chlorine Free (PCF) and Sustainability Index (SI). The Chlorine Free Products Association is listed as one of the strongest auditing processes in North America in a Wall Street Journal Poll. As it is a not-for-profit organisation, **travel expenses must be covered**. This also gives them the chance to visit the plant, and they can bring a local auditor if possible. Generally, the \$10,000 travel fee would be the upfront payment for all overseas pre-audit inquiries and related travel expenses. **Locations in North America will be charged a specific fee. Locations outside North America will have expenses credited to the total contract amount.**¹³⁴

Conformity with the TCF certification

Conformity with the Totally Chlorine Free standard is verified by an independent organisation (third party) following ISO 17011 Accreditation, ISO 17021 Management system certification, ISO 19011 QMS and EMS auditing (and auditor qualifications), and ISO / IEC Guide 65 Product Certification. This claim on the ecolabel web page seems contradictory, since the certification process website says it is a second party. Product categories this ecolabel applies to: Textiles, Food, Forest products / Paper, Health care services & equipment and Waste

¹³⁴ See, http://www.chlorinefreeproducts.org/How_to_get_Certified.php



management & Recycling. This TCF ecolabel is accepted in 10 markets, including Belgium, Canada, China, Denmark, Finland, Germany, Mexico, Peru, Spain, and the United States.

UPS Carbon Neutral



Established in 2009, the UPS Carbon Neutral shipping label indicates that UPS customers have offset the climate impact of the GHG emissions from the shipment's transportation. UPS calculates the emissions and purchases carbon offset credits equivalent to the GHG emissions created in shipping the package to make it "carbon neutral". GHG emissions are tracked using the Carbon Neutral Protocol - a global standard for ensuring the integrity and quality of carbon neutral certification programmes and enabling businesses to be certified as CarbonNeutral. Accredited carbon offset providers are used. UPS customers can access this label by one of two means: Contractual - whereby UPS measures customers' shipping carbon footprint for a set period of time and transactions and offsets are then bought; OR Per-Transaction or Package - where an offset can be bought for one particular shipment. Extending its commitment to sustainability, UPS is currently matching the offset purchases, effectively doubling the offsets purchased in 2011 up to \$1 million.

Conformity with the UPS Carbon Neutral certification

Conformity with UPS Carbon Neutral's standard is verified by our own organisation (second-party). UPS Carbon Neutral applies to products such as Carbon, Carbon offsets, and Transportation. The UPS certification is listed under the for-profit standards on the ecolabel website. In addition to India, the UPS is acceptable in 33 markets.



WQA Gold Seal



Established in 1999, the Water Quality Association's Gold Seal Certification Program is dedicated to providing public health and safety services throughout the USA and globally, while maintaining expert service, superior reputation, and fair pricing. The Gold Seal Program offers certification of all products and chemicals that contact drinking water. WQA's ANSI/SCC-accredited Gold Seal Certification Program assures consumers, regulators and other interested stakeholders that a product has been certified by a reputable, independent third-party organisation.

The WQA Sustainability Certification Program is the first of its kind in the drinking water treatment industry. The Sustainability Certification Mark verifies for retailers and consumers alike that a product has been manufactured in accordance with industry standards and recognised best practices in environmental sustainability and corporate social responsibility. The mark is a symbol that represents achievement in the field of sustainability. It supports profitability by helping identify products that are **safe for both people and the planet**. Once certified, the Sustainability Certification Mark may be displayed on websites, marketing materials, packaging, and the product itself, ensuring that products maintain a competitive edge in the marketplace.¹³⁵

Conformity with the WQA Gold Seal certification

Conformity with WQA Gold Seal's standard is verified by our own organisation (second party) following ISO 17025 Testing and Calibration Laboratories, ISO / IEC Guide 65 Product Certification, and ISO 17020. The WQA certification is listed under the for-profit standards on the ecolabel website. It covers the products that treat or contact drinking water. This ecolabel is accepted in 16 markets like Canada, China, France, Germany, Hong Kong, Israel, Italy, Japan, Republic of Korea, Mexico, Netherlands, Russian Federation, Taiwan, Turkey,

¹³⁵ See, <https://www.wqa.org/programs-services/product-certification/product-certification-areas>



United Kingdom, and United States. We find that among the private standards operating from India.

Part II - Conclusion

Across industrial economies, trade policymaking is shifting towards public policy measures (SPS, TBT, private standards, etc.) rather than price-based measures such as tariffs; this approach has gained prominence since the early 1980s. Ever since, there have also been concerted attempts to harmonise mandatory standards (such as SPS and TBT) under the WTO. However, with the proliferation of private standards, these efforts have reached a point of no return. The domestic regulations of developed countries, both mandatory and voluntary, are creating considerable challenges for developing countries' exports. This is especially evident in rising production costs and sometimes unreasonable quality conditions.

What is often ignored is that there is no universally accepted definition of private sustainability standards. Instead, we have an understanding among a few industrial countries, reinforced by soft laws within the United Nations system of governance. This understanding begins with the Rotterdam Convention, which establishes the first line of defence by giving importing countries the tools and information they need to identify potential hazards and exclude chemicals they cannot manage safely. For imported chemicals, the Convention promotes safe use through labelling standards, technical assistance, and other forms of support. It also ensures that exporters comply with the requirements. The need of the hour is a consensus-based approach at the international level.

It is also a highly unbalanced form of sustainable development, as Goal 12 is applied only partially. The present-day standards are entirely different, and their application will target only the production process. It will not address the restrictions on consumption-related activities as prescribed under Sustainable Development Goal 12. What we have are sustainable standards that put producer-centric restrictions with direct cost implications for developing countries, making these productions unviable. The standards being developed in the industrial countries are limited in scope in addressing sustainable development; they vary in the very understanding of sustainability. Most of these standards are calibrated within industrial capabilities, some of which may themselves lead to unwanted consequences for sustainability. Keeping a balance between many ecosystems becomes even more critical to achieving sustainable development. It affects the conventional approach to production and consumption of goods and services. The



revised emphasis is on preserving resources for the future. Therefore, there is an urgent need for consumer-centric standards and limitations, along with restrictions on production activities.

There are several concerns related to the proliferation of private standards in the context of scientific justification, harmonisation (Codex/IPPC/OIE in the case of SPS and ISO and IEC in the case of TBT)¹³⁶equivalence, transparency, control, inspection, approval procedures, costly certification requirements. What is the nature of private sustainability standards? Its scope of coverage under the WTO mechanisms would evolve further through consultations/dispute settlement. Additionally, costly market access barriers, especially for small-scale producers in developing countries, and, finally, the deviation from the principles of multilaterally agreed trade rules. Harmonisation around international standards in the production process and trading activities through TBT measures, which had minimised various compliance requirements for exporters, has now been stalled. This process is taking a back seat amid the surge in Private Standards and Private Sustainability Standards, making compliance dependent on market forces alone (third-party auditors). The total control of private players over all aspects of governance coordination has taken a hit and, in some cases, is making it difficult for small players to engage in manufacturing, as it has seriously hampered their potential to realise **economies of scale**.

In 2016, the European Commission moved away from reliance on scientific evidence and risk-based approaches to embrace the precautionary principle, or a hazard-based approach. This would require entirely new approaches to production. It seems to be a win-win for countries at a lower stage of industrialisation, where production uses fewer active chemical substances. However, it would certainly cause temporary disruptions in international trade and lead to major realignment with permanent impact. Globally, industrialised countries are consciously replacing the functions of national governments with an increased role for domestic legislation and a larger role for the private sector in standard-setting. Such an effort can be traced to intergovernmental bodies, including the United Nations.

The most significant aspect of private sustainability standards is that these disciplines are applied unevenly to products and production methods, while leaving consumption aspects untouched; this is a clear departure from Goal 12.

¹³⁶ These are basically related to deviations from international standards (MRLs), multiplicity of private standards, more restrictive than official regulations.

EMERGENCE OF PRIVATE SUSTAINABILITY STANDARDS: CONCERNS AND CHALLENGES FOR INDIA'S EXPORTS AND DOMESTIC INDUSTRIES

REPORT III of III

DECEMBER 2017



Introduction

Need and Context of the Study

Market access negotiations have historically centred on two trade policy instruments, viz., tariffs and non-tariff measures (NTMs). While tariff measures have been regulated and disciplined over time, these have extensively been replaced by non-tariff barriers (NTMs) like standards (voluntary and mandatory) and technical regulations. The increased influence of private standards has been associated with the expansion of global trade and globalisation. The varied treatment of tariffs and NTMs evidently indicates an imbalance in the international trade regime. The evolution of private standards into “Private Sustainability Standards” has largely been based on the triple-bottom-line approach of environmental quality, social equity, and economic prosperity.

Private Sustainability Standard (PSS) systems are an innovative market-based approach aimed at promoting sustainable production and business practices. These standards are mostly voluntary and are not created, implemented, or required by governments or governmental organisations. Instead, voluntary sustainability standard systems are non-governmental initiatives that seek to drive sustainable production and consumption by creating market demand for sustainable products and a supply to meet it. (Komives 2014). Even though PSS is designed to help customers identify sustainable products and guide producers/manufacturers in adopting sustainable practices, in the modern market, private sustainability standards can range from regulations on machinery and fertilisers used in production to the quality of packaging and the use of the workforce in processing units. Hence, these standards can control all sections of a production chain. Generally, private sustainability standard systems have been practice-based, with the core underlying idea that “the adopted practices or management techniques would yield desired social and environmental outcomes”.

Over the last decade or so, there has been a drastic shift in the underlying ideology, with private standards set based on performance requirements. This study sought to make an informed assessment of Private Sustainability Standards (PSS), including their nature, applicability, and influence on relevant Indian firms across six selected sectors.

Methodology

The primary research was based on ‘Face-to-Face’ interviews with representative firms, i.e., manufacturer exporters from six select sectors, i.e., marine (fisheries), leather, textiles, wood



products, food processing, and chemicals and pharmaceuticals, using structured questionnaires, which allowed the team of researchers to glean vital information flexibly. The exploratory research method, comprising qualitative and quantitative questions, helped gather relevant information on the incidence and impact of private sustainability standards in these sectors.

Sampling Framework

A survey of representative firms was conducted, adhering to the guidelines mentioned below:

Sample Size and Location: The survey was conducted with 300 companies, evenly distributed across the six sectors.

Classification of Sample: **Sample classification was conducted to achieve optimal** and relevant geographical coverage. The final sample can be classified as follows:

Table 1: Geographical Spread of Sample Companies

State/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood	Marine (Fisheries)	Total
Delhi	10	11	12	9	13	0	55
NCR	10	11	12	9	13		55
Maharashtra	10	8	0	26	15	9	68
Mumbai	10	8		26	15	9	68
Kerala	10	0	0	0	0	20	30
Aleppey						4	4
Aroor						1	1
Cochin	5					11	16
Kollam	5					4	9
Tamil Nadu	10	15	15	0	5	11	66
Chennai	10	15	15		5	11	56
Tirupur		10					10
Punjab	1	4	10	0	0	0	15
Ludhiana	1	1					2
Jalandhar		3	10				13



State/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood	Marine (Fisheries)	Total
Uttar Pradesh	0	0	0	0	17	0	17
Saharanpur					17		17
Gujarat	0	0	0	15	0	0	15
Ahmedabad				15			15
West Bengal	9	2	13	0	0	10	34
Kolkata	9	2	13			10	34
Surveyed Firms (Total)	50	50	50	50	50	50	300

Sampling Technique: Sector-wise samples were selected using convenience sampling, based on accessibility and proximity. However, the study aimed to cover important clusters – for each sector – nationwide to capture a holistic picture of the impact of Private Sustainability Standards (PSS) on firms in relevant geographies across sectors.

Selection of Respondents: The respondents from all the representative samples were entities dealing in standards and related certifications/audits relevant to the study. The proportion of samples dealing in standards that qualified as PSS, as per predefined parameters (refer to section 1.1.2.), formed the respondent sets for these samples.

Parameters for Selection of Standards

This report aims at covering standards which display the following properties:

- They have to be private standards, with no direct involvement of governments.
- They have to be voluntary in nature.
- They have to have an impact on the following sustainability aspects:
 - Environmental benefits
 - Labour welfare

Limitations to the Study

Some of the limitations of this study have been the following:

- There was a general lack of awareness among respondents across sectors on standards. The respondents often spoke about compliance aspects, required certifications, etc.,



with little clarity regarding the nature of governing standards (government/private, voluntary/mandatory, sustainability aspects, etc.).

- Compliance with PSS has been a new development for most of the sectors. Therefore, there has been insufficient information, data, and literature on the subject.
- Many respondents have not disclosed information on parameters such as total cost, paid-up capital, etc. Those parameters have been analysed solely on the basis of the available responses.
- Perception-based feedback represented has been opinion-based and may not be in sync with the inferences drawn in the fact-based sections. For instance, respondents from sectors with comparatively low compliance costs may still have considered it an impediment.

Cross-Sectoral Analysis

2.1. Sample Details

Table 2: Geographical Spread

Geographical Spread (Percentage)						
Location/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Ahmedabad				30		
Aleppey						8
Aroor						2
Chennai	20	30	30		10	22
Cochin	10					22
Delhi	20	22	24	18	26	
Jalandhar		6	20			
Kolkata	14	4	26			20
Kollam	14					8
Ludhiana	2	2				
Mumbai	20	16		52	30	18
Saharanpur					34	
Tirupur		20				

The percentages of companies interviewed across different parts of the country and sectors are shown in Table 2. The table represents the relevant geographies covered in the survey to



identify the appropriate aspects of the impact of Private Sustainability Standards in the chosen sectors.

Table 3: Position in Global Value Chain

Position of Sample Companies in Global Value Chain (Percentage)						
Product Stage/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Raw Materials	2		2	38		10
Semi-finished Raw Materials	4		8	8	5	
Intermediate	12	16	14	10	18	2
Semi-finished Intermediate	58	68	24	18	23	64
Finished	66	16	82	22	84	36

Source: Based on the survey.

The section represents the position of the sample companies in the GVC across the six sectors. As can be observed, the majority of the companies across sectors dealt in finished and semi-finished intermediate goods.

2.2. Respondent Details

Table 4: Size

Size (Percentage)						
Size/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Large	13	15		8		34
Medium	59	25	50	60	45	34
Small	28	60	50	32	55	32
Micro	-	-	-	-	-	-

Source: Based on the survey.

Respondents across sectors were mostly medium- and small enterprises. No micro enterprise was part of the respondent set.

Table 5: Employee Strength

Employee Strength (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 50	24	40	47	29	59	23
51-100	24	21	13	32	25	30
101-200	28	17	16	16	14	32
201-500	17	6	13	16	2	9
501-1000	4	8	13	11		7
Above 1000	2	8	47	8		



Source: Based on the survey.

As represented in Table 5, employee strength was mainly up to 200 for respondents across sectors.

Table 6: Value of Exports

Export Value (Rs.) (Percentage)						
Parameters/Sectors	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 100 million	9	58	20	26	73	10
101-500 million	37	31	50	51	25	43
501 million-1 billion	33	2	20	5	2	17
1.1-5 billion	15	8	10	3		26
Above 5 billion	7					5

Source: Based on the survey.

The export values for the respondents across sectors are presented in Table 6. The majority of the respondents had export values of up to Rs. 1 billion.

Table 7: Experience with PSS

Experience of Sample Companies with PSS (Percentage)						
Years/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 5	35	40	10	58	39	25
6-10	26	27	22	26	14	34
11-15	24	17	47	8	27	30
16-20	9	13	13	8	7	9
Above 20	7	4	10		14	2

Source: Based on the survey.

Amongst the respondents, a majority were recently introduced to the concept of sustainability standards. Experience with PSS for the majority of the firms was 15 years or less.

2.3. Incidence and Scope of PSS

Standards/Certifications/Audits



Table 8: Standards/Certifications/Audits: Marine (Fisheries)

Standards	Websites
BRC (British Retail Consortium) Global Standards	https://www.brcglobalstandards.com/
IFS (International Featured Standards)	https://www.ifs-certification.com/index.php/en/
BAP (Best Aquaculture Practices) Standards	https://www.bapcertification.org/
MSC (Marine Stewardship Council) Standards	https://www.msc.org/
ASC (Aquaculture Stewardship Council) Standards	https://www.asc-aqua.org/
ISO (International Organisation for Standardisation) Standards (9001/14001, 22000)	https://www.iso.org
Dolphin-Safe Certification	http://www.ecolabelindex.com/ecolabel/dolphin-safe
Certifications	
FSMS (Food Safety Management System) Certification	http://www.fssc22000.com/documents/home.xml?lang=en
ACC (Aquaculture Certification Council)	http://www.fis.com
Audits	
Social/Ethical Audit (Intertek, Bureauveritas)	http://www.bureauveritas.com/home/about-us/our-business/cps/our-services/csr-services/social-audit http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

Table 9: Standards/Certifications/Audits: Food Processing

Standards	Websites
Natural (Association of Food Industries)	https://www.afius.org/ and https://www.afius.org/page-1862944 .
BAP (Best Aquaculture Practices) Standards	https://www.bapcertification.org/
BRC Global Standards	https://www.brcglobalstandards.com/
ISO (International Organization for Standardization) Standards (9001:2000, 22000:2005, 9001:2008, 3720)	https://www.iso.org
Certifications	
Inspectorate Griffith Certification	http://www.bureauveritas.co.in/home/about-us/our-business/commodities
Intertek Certification	http://www.intertek.com/
Bureau Veritas Certification	http://www.bureauveritas.co.in/
Audits	



Standards	Websites
Social Auditing (Intertek, Bureauveritas)	http://www.bureauveritas.com/home/about-us/our-business/cps/our-services/csr-services/social-audit http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

Table 10: Standards/Certifications/Audits: Textiles

Standards	Websites
BCI (Better Cotton Initiative) Standards	http://bettercotton.org/
GOTS (Global Organic Textile Standard)	http://www.global-standard.org/certification.html
Fairtrade Standards	https://www.fairtrade.net/
BSCI (Business Social Compliance Initiative)	http://www.bsci-intl.org/
Global Recycle Standard (GRS)	http://www.ecolabelindex.com/ecolabel/global-recycle-standard
ISO (International Organization for Standardization) Standards (9001:2008, 14004:2004)	https://www.iso.org
SA8000 Standard (Social Accountability International)	http://www.saasaccreditation.org/certification
Walmart & Jones Apparel Group Certification	-
Certifications	
OEKO-TEX	https://www.oeko-tex.com/de/business/business_home/business_home.xml , h
Worldwide Responsible Accredited Production (WRAP) Program	http://www.wrapcompliance.org/
Walt Disney Certification	https://thewaltdisneycompany.com/
Supplier Ethical Data Exchange (SEDEX) Certification	https://www.sedexglobal.com/products-services/smeta-audit/
SGS (Société Générale de Surveillance) Certification	http://www.sgs.com/
Audits	
Social Audits (Intertek)	http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

Table 11: Standards/Certifications/Audits: Leather

Standards	Websites
SA8000 Standard (Social Accountability International)	http://www.saasaccreditation.org/certification



ISO (International Organization for Standardization) Standards (9000, 14001:2004, 14000)	https://www.iso.org
Certifications	
Supplier Ethical Data Exchange (SEDEX) Certification	https://www.sedexglobal.com/products-services/smeta-audit/
Audits	
LWG (Leather Working Group)	
BSCI Certificate (Business Social Compliance Initiative)	http://www.bsci-intl.org/
Factory/Social Audits (Intertek, Bureau Veritas)	http://www.bureauveritas.com/home/about-us/our-business/cps/our-services/csr-services/social-audit http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

Table 12: Standards/Certifications/Audits: Chemicals and Pharmaceuticals

Standards	Websites
Bluesign System	https://www.bluesign.com/
GOTS (Global Organic Textile Standard)	http://www.global-standard.org/certification.html
ISO (International Organization for Standardization) Standards (14001:2004, 9001:2008)	https://www.iso.org
Certifications	
OEKO-TEX	https://www.oeko-tex.com/de/business/business_home/business_home.xhtml
Audits	
Audits (Intertek)	http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

Table 13: Standards/Certifications/Audits: Wood Products

Standards	Websites
ISO (International Organisation for Standardization) Standards (9001:2008, 14001)	https://www.iso.org
VRIKSH (Timber Legality Assessment and Verification Standard)	http://vrikshindia.in/index.php/user/index
Certifications	
Chain of Custody (CoC) Certification (FSC)	https://ic.fsc.org/en/what-is-fsc-certification/chain-of-custody-certification



Supplier Ethical Data Exchange (SEDEX) Certification	https://www.sedexglobal.com/products-services/smeta-audit/
Audits	
Factory Audits (Intertek)	http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/
Social Audits (Intertek, Bureauveritas)	http://www.bureauveritas.com/home/about-us/our-business/cps/our-services/csr-services/social-audit http://www.intertek.com/business-assurance/supplier-management/corporate-responsibility/

Source: Based on the survey.

2.4. Incidence and Impact of PSS

Table 14: Benefits of Adoption

Benefits of Adoption of PSS (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Better quality final products	100	98	100	97	88	80
Confirmed business orders for a certain number of years	91	77	91	58	71	59
Exclusivity in terms of supplying to the client	65	75	88	37	73	45
Streamlining the processes (like better resource/inventory management)	80	79	63	34	29	55
Better working conditions	80	71	72	76	61	52
Regulation of waste generation	52	83	54	63	63	75
Promotion of alternative ways of production	48	46	50	21	15	16
Greater access to markets/companies	80	75	19	92	83	70

Source: Based on the survey.

The responses across different parameters regarding the major benefits of adopting PSS are presented in Table 14. A considerable share of the firms indicated that manufacturing higher-quality final products and obtaining confirmed business orders were among the major benefits.

Table 15: Incidence of Increased Export Participation

Increased Export Participation (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 10%	72	96	69	45	61	58



Increased Export Participation (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
11-20%	19	4	31	13	15	26
21-30%	6			32	17	12
Above 30%	3			10	7	4

Source: Based on the survey.

The extent of the respondent company's increased export participation following the adoption of PSS is shown in Table 15. Most firms across sectors experienced export growth of up to 10 per cent after adopting private sustainability standards.

Table 16: Major Challenges Posed by PSS

Major Challenges	
Sector	Challenges
Food Processing	- Varied demands by customers - Structural changes
Textiles	- Structural changes and modifications (buildings, production processes, machines) - Restrictions on hazardous contents and waste management - High cost-related issues - Time-consuming process
Leather	N/A
Chemicals & Pharmaceuticals	- Varied demands by customers - Structural Changes - Cost-related issues - Time-consuming processes
Wood Products	- Limitations in export - Cost-related issues
Marine (Fisheries)	- Multiple certifications/audits issues - Time-consuming processes - Cost-related issues

Source: Based on the survey.

The major challenges faced by respondents across sectors have been listed in Table 16. Varied customer demands, cost issues, and required structural changes were the major challenges faced by the respondents.



2.5. Financial Aspects of PSS Compliance

Table 17: Total Cost towards PSS

Total Cost towards PSS (RS.) (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 0.5 Mn.	100	94	42	50	100	75
0.6-1 Mn.		2	10	8		9
1.1-1.5 Mn.		2	16	13		
1.6-2 Mn.			8	8		
2.1-4 Mn.		2	22	18		5
4.1-6 Mn.			2	3		
Above 6 Mn.						11

Source: Based on the survey.

Of the respondents across sectors, the majority spent less than Rs. 4 million towards PSS compliance. Around 11 per cent of the large-scale companies in the marine sector incurred costs exceeding Rs. 6 million.

Table 18: Renewal Fees

Annual Renewal Fees (RS.) (Percentage)						
Parameters/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Up to 0.5 Mn.	100	100	100	24	100	100
0.6-1 Mn.				11		
1.1-1.5 Mn.				11		
1.6-2 Mn.				8		
Above 2 Mn.				3		

Source: Based on the survey.

The annual renewal fees paid by the relevant respondents across the six sectors are shown in Table 18. In all sectors except chemicals and pharmaceuticals, renewal fees were up to Rs. 0.5 million.



Table 19: Visit Related Costs

Visit Related Costs (RS.) (Percentage)							
Heads	Parameters	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood Products	Marine (Fisheries)
Travel	Up to 0.01 Mn.	7	2				
	0.011-0.02 Mn.	2	2				
	0.021-0.03 Mn.	2	4	7			10
	0.031-0.05 Mn.						3
	0.05-0.1 Mn.		4				
	Above 0.1 Mn.						
Accommodation	Up to 0.01 Mn.	9		4			
	0.011-0.02 Mn.	2	11				2
	0.021-0.03 Mn.		19				
	0.031-0.05 Mn.	2	2				9
	0.05-0.1 Mn.		45		74	7	2
	Above 0.1 Mn.		21		8		
Visits	Up to 0.01 Mn.		6				14
	0.011-0.02 Mn.	18	6		5	2	
	0.021-0.03 Mn.	7		3.5	3	5	
	0.031-0.05 Mn.	7	2	3.5		2	
	Above 0.05Mn.	2					
Testing	Up to 0.01 Mn.					2	
	0.011-0.02 Mn.	4	6	3			11
	0.021-0.03 Mn.	11	13				
	0.031-0.05 Mn.	18	4			7	2
	0.05-0.1 Mn.		32			2	
	Above 0.1 Mn.		17				
Miscellaneous	Up to 0.01 Mn.	13	6	3			20
	0.011-0.02 Mn.	9	6			9	
	0.021-0.03 Mn.	2	4			2	
	Above 0.03 Mn.		2				

Source: Based on the survey.



Table 19 shows the share of companies that incurred additional costs across various aspects of PSS inspection visits.

Table 20: Comparison between total cost towards PSS and Size of companies

Cost	Large	Medium	Small	Micro
Marine				
Up to 0.5 Mn.	12	13	8	0
0.6-1 Mn.	1	0	3	0
1.1-5 Mn.	0	0	2	0
Above 5 Mn.	2	2	1	0
Leather				
Up to 0.5 Mn.	0	16	16	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0
Textiles				
Up to 0.5 Mn.	5	11	29	0
0.6-1 Mn.	1	0	0	0
1.1-5 Mn.	1	1	0	0
Above 5 Mn.	0	0	0	0
Wood				
Up to 0.5 Mn.	0	20	24	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0
Food Processing				
Up to 0.5 Mn.	6	27	13	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0
Chemicals and Pharmaceuticals				
Up to 0.5 Mn.	2	10	7	0
0.6-1 Mn.	0	2	1	0
1.1-5 Mn.	1	11	4	0
Above 5 Mn.	0	0	0	0
Cross Sector				
Up to 0.5 Mn.	25	97	97	0



Cost	Large	Medium	Small	Micro
0.6-1 Mn.	2	2	4	0
1.1-5 Mn.	2	12	4	0
Above 5 Mn.	2	2	1	0

Source: Based on the survey.

Source: Based on the survey

Table 20 provides a comparative analysis of the total cost incurred by companies for PSS and company size.

Table 21: Incidence of Multiple PSS on the Same Product in Different Markets

Sector	Percentage of Respondents
Marine (fisheries)	5
Leather	-
Textiles	6
Wood	-
Food Processing	-
Chemicals and Pharmaceuticals	18

Source: Based on the survey

Of the respondent set, only a small percentage experienced multiple PSS for the same product across different markets. The leather, wood, and food processing sectors did not have any such reported instances.



Exhibit: Client-Based Compliance Procedures and Structural Changes Thereof – The Marine Example

In the marine (fisheries) sector, clients and their requirements play a significant role in the adoption of Private Sustainability Standards (PSS). Due to the specific nature of products and the importance of sustainability and environmental considerations in determining the final value, exporters are largely driven by client demands. These demands are client-specific and not necessarily region- or country-specific. This case study provides necessary insights into this factor, using details from a specific sample company (referred to as Company A here).

Company A							
Particulars		Plant 01	Plant 02	Plant 03	Plant 04	Plant 05	Plant 06
Freezing Capacity (Tonnes/Day)	Plate Freezer	20	12	24	12	15	12
	Tunnel Freezer	5	8	Nil	Nil	10	Nil
	Spiral Freezer	Nil	10	Nil	25	10	Nil
Total Number of IQFs (Individual Quick Freezers)		5	18	-	25	20	-
Cooking Capacity (Tonnes / Day)		Nil	8	Nil	Nil	4	Nil
Ice Capacity (Tonnes / Day)		30	60	60	45	50	30
Product(s)		Cultured / Sea Shrimp, Squids, Cuttlefish, Crab	Cultured / Sea Shrimp	Cultured Shrimp	Cultured Shrimp	Cultured / Sea Shrimp, Squid, Cuttlefish, Crab	Cultured / Sea Shrimp
Port(s) of Shipment		Tuticorin	Chennai	Chennai, Kakinada, Visakhapatnam	Chennai, Kakinada, Visakhapatnam	Chennai, Kakinada, Visakhapatnam	Visakhapatnam
Certification(s)		USFDA, EU	ACC, BRC, USFDA, EU ISO 9001:2000	USFDA, EU.	ACC, BRC, USFDA, EU ISO 9001:2000	USFDA, EU. BRC/ISO 9001:2000	USFDA, EU
Country(s)		USA	Europe	USA	USA	Europe	Europe and Thailand
Client		Client 1	Client 2	Client 3	Client 4	Client 5	Client 6

As can be seen, the company runs six different production units. These units are located in different places and comply with comparatively different certifications and licenses. It may be noted that client requirements can differ even when clients are from the same country/region. This development often leads exporters to build separate production plants for specific buyers, as complying with multiple certifications in a single plant becomes infeasible. Different certifications/PSS have varying requirements, and meeting them at one or two plants can be time-consuming and costly. Further, a company with a single production unit may face difficulties during a Factory/Social Audit, as it is often impossible for a single unit to comply with all PSS requirements. The drastic difference in the demands of various PSS makes the compliance process extremely difficult. Different PSS may require different structural modifications to hard infrastructure (laboratories, manufacturing plants, etc.), labour practices, and auditing systems, which are difficult to accommodate within a single processing plant. These reasons make it necessary for certain exporters to operate multiple plants to comply with multiple PSS. As a result, the cost of adapting to PSS compliance requirements generally increases, as one-time investments and maintenance costs impose a significant financial burden on the exporter. This also discourages small- and medium-scale exporters, as maintaining multiple production units might not be financially feasible for them.



3. Sectoral Analysis

3.1. Marine

3.1.1. Overview

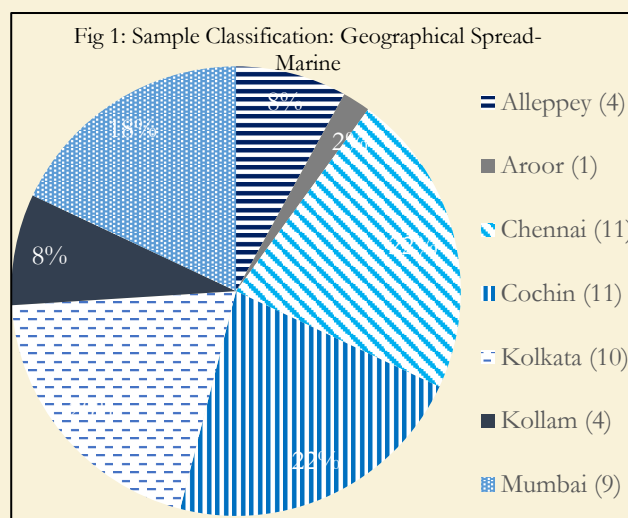
The marine (fisheries) export industry in India holds a significant position in the country's exports due to its access to lucrative markets worldwide, such as the USA, Europe, Vietnam, and Japan. Over the years, India has made substantial advances in aquaculture and is the world's second-largest producer after China. (MPEDA, 2016). India's marine products industry accounts for approximately 5-6 per cent of global exports. Furthermore, it is projected to become one of the top five seafood-exporting countries in the world by 2020 (IBEF, 2016). Indian marine exports have been experiencing a steady growth over the last couple of decades, according to MPEDA.¹³⁷ India exported 11,34,948 MT of seafood, worth an all-time high of USD 5.78 billion, in 2016-17 as against 9,45,892 tons, valued at USD 4.69 billion, a year earlier. The USA and Southeast Asia remained the major importers, while demand from the European Union (EU) grew substantially during this period. The USA imported 1,88,617 MT of Indian seafood, accounting for 29.98 per cent of the value (in dollar terms). Southeast Asia remained the second largest destination of India's marine products, with a share of 29.91 per cent in terms of value, followed by the EU (17.98 per cent), Japan (6.83 per cent), the Middle East (4.78 per cent), China (3.50 per cent) and other countries (7.03 per cent). In terms of volume, exports to Southeast Asia increased by 47.41 per cent during this period. Lately, large-scale production and export of vannamei have led to the development of certain export pockets within the country, with Vizag being one of the most prominent. Looking beyond conventional marine export concepts and adopting modern techniques has played a significant role in the substantial growth of India's marine export sector. (Survey, 2017).

¹³⁷ MPEDA: Marine Products Export Development Authority

3.1.2. Firm Details

3.1.2.1 Sample

The sample selected for analysing the incidence and impact of private sustainability standards/certifications/audits in the marine (fisheries) sector comprised entities from Aroor, Chennai, Cochin, and Kollam in the southern region; Mumbai in the western region; and Kolkata in the eastern region. The share of companies covered from these destinations is shown in Figure 1.



Source: Based on the survey.

Table 22: Position of Sample Marine Companies in the Global Value Chain – Marine

Product Category	Percentage of Sample
Raw Materials	10
Semi-finished Raw Materials	-
Intermediate	2
Semi-finished Intermediate	64
Finished	36

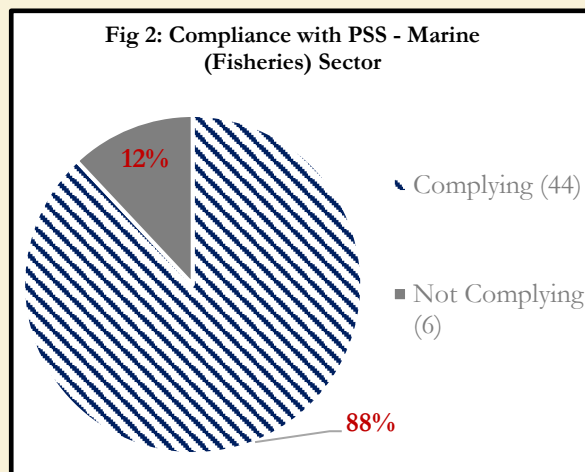
Source: Based on the survey.

Table 22 summarises how the sample marine (fisheries) companies cater to the global value chain. With almost 64 per cent of firms in the marine products sector classified as semi-finished, the impact would be significant for both standards and compliance. Therefore, critical that we take steps in the long run to address the issue of over-dependence on semi-finished exports. To avoid the problem of standards affecting Marine exports, there should be a conscious shift toward exporting finished products.

3.1.2.2 Application and Scope of PSS



To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance, challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.



3.1.2.3 Costs

The survey focussed on financial aspects such as total costs towards PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost of individual standards, and the percentage increase in per-unit product price due to compliance, as per the availability of information.

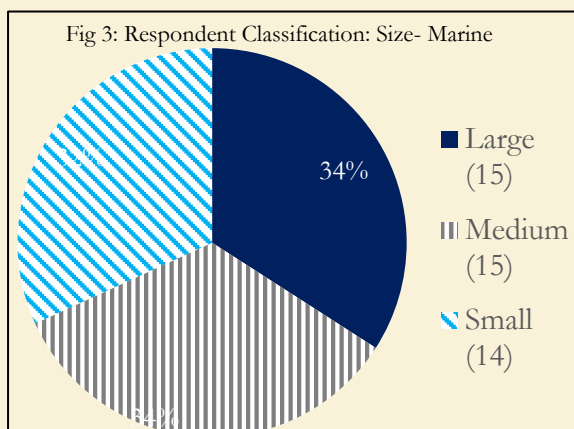
3.1.2.4 Adoption of PSS – Potential Gains

To assess the benefits derived from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focused on product-level improvements due to compliance.

3.1.3. Respondent Details

3.1.3.1 Share of Respondents in the Marine Sector

The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS, was 88 per cent for the marine sector. The remaining did not comply with any PSS, as per the responses received. Therefore, based on a representative sample of companies complying with various standards, around 88 per cent had to comply with private, voluntary standards, with implications for sustainability areas such as environmental protection and labour welfare.



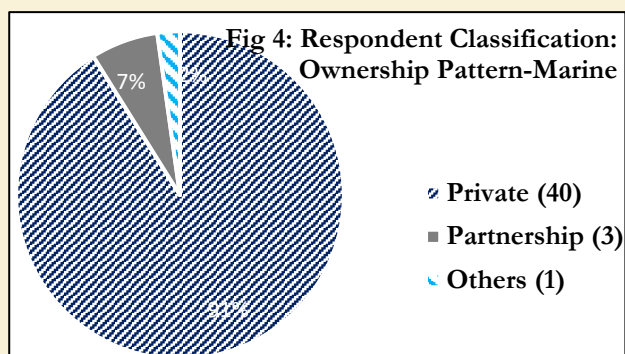
Source: Based on the survey.

3.1.3.2 Size-wise Distribution of the Marine Sector Respondents

The marine (fisheries) sector respondents displayed a uniform distribution of company sizes. Around 34 per cent of the marine respondents were mid-sized companies, with small and large companies accounting for 32 per cent and 34 per cent, respectively.

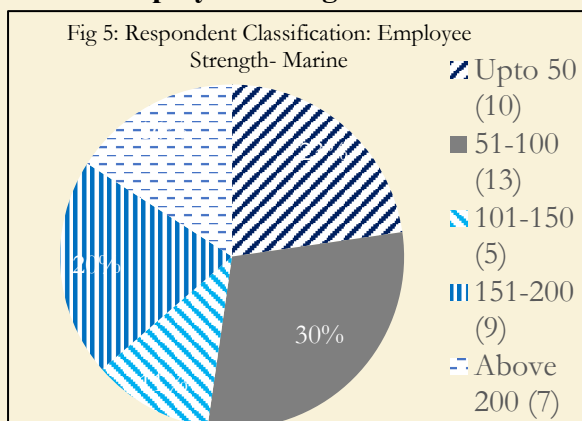
3.1.3.3 Ownership Pattern of the Marine Sector Respondents

The majority of the respondent companies were private entities, accounting for 91 per cent of the sample. Partnership companies formed 7 per cent of the respondents.



Source: Based on the survey.

3.1.3.4 Employee Strength of the Marine Sector Respondents

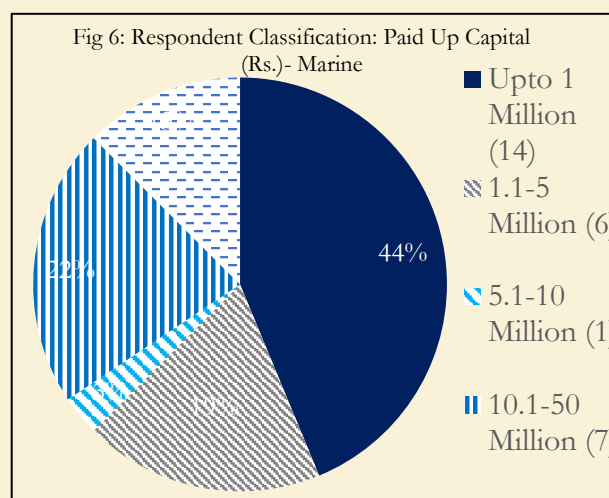


Source: Based on the survey.

Companies with an employee strength between 51 and 100 accounted for 30 per cent of the respondent set. Companies with up to 50 employees accounted for 23 per cent, while those with employee strength in the ranges 101-150 and 151-200 accounted for 11 per cent and 20 per cent of the respondents, respectively.

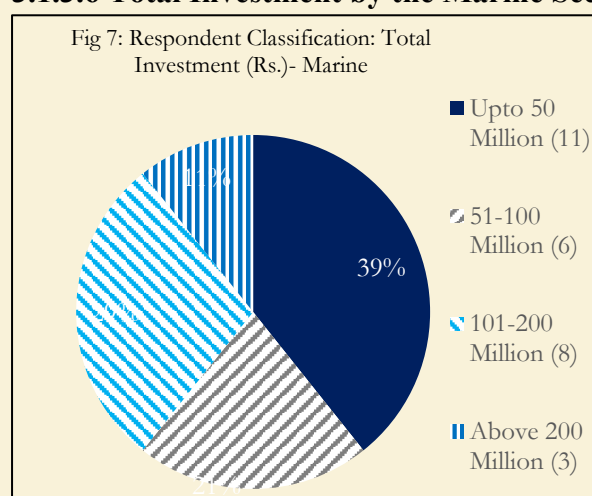
3.1.3.5 Paid Up Capital in the Marine Sector

Of the responses received for the marine (fisheries) sector, around 44 per cent reported paid-up capital of up to Rs. 1 Mn. Companies with paid-up capital in the ranges of Rs. 1.1-5 Mn., Rs. 5.1-10 Mn., Rs. 10.1-50 Mn., and above Rs. 50 Mn. formed 19 per cent, 3 per cent, 22 per cent and 13 per cent of the respondents respectively.



Source: Based on the survey.

3.1.3.6 Total Investment by the Marine Sector Respondents



Of the responses received from among the respondent companies, around 39 per cent had total investments of up to Rs. 50 Mn. Firms with Rs. 51-100 Mn, Rs. 101-200 Mn, and Rs. 200 Mn and above in investments accounted for 21 per cent, 29 per cent, and 11 per cent of the respondent companies, respectively. A considerable share of relevant respondents, i.e., around 40 per cent, had total expenditure figures of Rs. 101 Mn. or more, which may be

due to factors such as the labour-intensive nature of operations, compliance costs, storage and transportation costs, etc.

Source: Based on the survey.



Table 23: Products Handled by the Marine Sector Respondents– Marine

Broad Categories of Marine (Fisheries) Products	
Frozen products, chilled products and others	
Product(s)	Percentage of Respondents
Shrimps/shrimp blocks/processed shrimps/prawns	66
Cuttlefishes	23
Squids	39
Octopuses	18
Tuna fishes	5
Vannamei Shrimps	2
Bigeye fishes	2
Frozen fishes and other marine products	25
Cephalopods	2
Chilled fishes	20
Ready-to-cook/ready-to-eat items, pickles, etc.	5
Re-processing items	2
Live fishes	27

Source: Based on the survey.

The marine (fisheries) respondents dealt broadly in frozen products (such as frozen fish, prawns, octopuses, etc.), chilled products (such as cephalopods, chilled fish, etc.), and other varieties such as ready-to-cook items, reprocessing items, and live fish. The table summarises the product variants dealt in by the respondent companies along with the share of respondents dealing in them. Shrimps and allied products, squids, cuttlefishes, fishes, etc. were the products mostly dealt in, as per the responses.

Table 24: Export Destinations for the Marine Sector Respondents– Marine

Export Destinations		
Countries/Regions	Share (Range) (Percentage)	Share (Average) (Percentage)
Australia	-	25.00
Canada	-	20.00
East Asia (Including China, Japan, Taiwan and Korea)	10-70	24.20
Europe (including Netherlands, Italy, UK, Belgium, France and Russia)	5-40	19.10
Middle East (including UAE)	5-60	26.32
Singapore	10-20	13.75
Thailand	15-40	22.00
USA	10-40	21.74
Vietnam	5-35	20.00

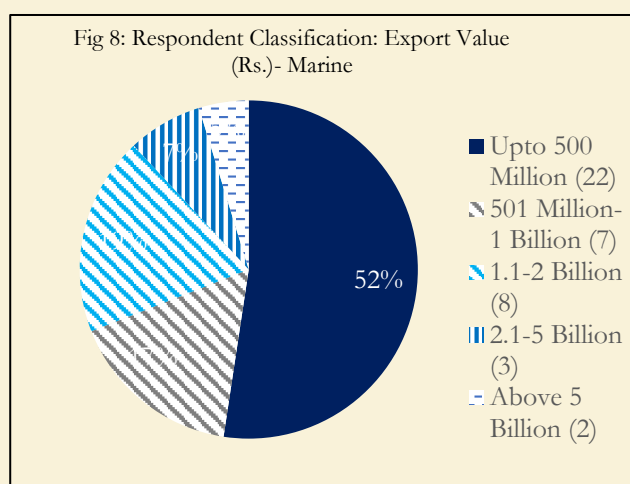
Source: Based on the survey.



The table summarises the major importing countries/regions for the respondent companies, as well as the ranges and average export shares to these countries. The respondents primarily served East Asian, European, Middle Eastern, and American markets, with other important markets including Thailand and Vietnam.

3.1.3.7 Value of Exports by Respondents in the Marine Sector

For a considerable share of the respondent companies, i.e., 52 per cent, the total export value for the last completed year was up to Rs. 500 Mn. Companies having annual export values in the range Rs. 501 Mn. -1 billion accounted for 17 per cent of the sample; the shares of those with export values of Rs. 1.1-2 billion, Rs. 2.1-5 billion, and above Rs. 5 billion were 19 per cent, 7 per cent, and 5 per cent, respectively.



A majority of firms operating in the marine sector exported up to Rs. 500 Mn. worth of products.

Source: Based on the survey.

Table 25: Share of Exports in Marine Sector – Marine

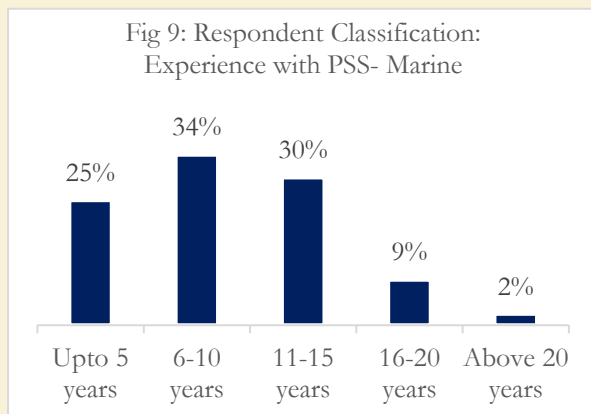
Share of Exports in Sales	Percentage of Relevant Respondents
100 percent	77
76-99 per cent	23

Source: Based on the survey.

As per 77 per cent of the responses received, the entire sales by the concerned companies were through exports. Companies for which exports fell by 76-99 per cent of total sales accounted for 23 per cent of the responses received. Therefore, it is evident that for the majority of the companies in the marine (fisheries) respondent set, exports accounted for their entire sales volume.



3.1.3.8 Experience with Private Sustainability Standards for Marine Sector Respondents



The concept of compliance with PSS has gained ground in recent years, with almost 60 per cent of respondents having dealt with them for a decade or less. Companies with over 20 years of experience in such standards accounted for only 2 per cent of the respondent set.

Source: Based on the survey.



3.1.4. Incidence and Scope of Private Sustainability Standards

Globally, the respondent companies comply with a myriad of standards/certifications/audits. The following table lists the same as per the responses received. It also summarises the associated products, validity details, relevant countries and broad description of the standards/certifications/audits listed. However, the surveyed results are further divided into three categories: standards, certificates and audits. Some of the surveyed firms did not qualify for any of the three categories.

Table 26: Description of Standards/Certifications/Audits– Marine

PSS Name	Products	Validity (Years)	Countries/Regions	Description
Standards				
BRC (British Retail Consortium) Global Standards	Shrimps, cuttlefishes, squids, tuna fishes, processed fish items, octopuses	2	Europe, USA	BRC is a Global Food Safety Initiative (GFSI)- benchmarked food safety standard covering food safety and the management of product quality in food packaging and processing operations. BRC is aimed at promoting best practices and improving supply standards and consistency. It also tries to create a system that eliminates multiple buyer audits and supports the retailer objectives at all levels.
IFS (International Featured Standards)	All marine products	1	Europe, China, Japan	The IFS comprise eight different food and non-food standards, covering processes across the supply chain. IFS provide a risk-based assessment of the different processes involved in manufacturing and serves as a guideline for monitoring and enhancing product quality and trade practices.
BAP (Best Aquaculture Practices) Standards	Frozen fish products and shrimps	1	USA, Europe (including the Netherlands, Italy and Belgium), Japan, Vietnam, Middle East (including the UAE), China	BAP is a combination of certain farm-raised seafood certification standards developed by the Global Aquaculture Alliance. It is one of the world's most comprehensive third-party certification systems for aquaculture facilities, addressing all key elements of responsible aquaculture, including environmental responsibility, social responsibility, food safety, animal welfare, and traceability.
MSC (Marine Stewardship Council) Standards	All marine products	1	Europe, USA, Japan, Australia, Canada	An independent non-profit organisation that sets a standard for sustainable fishing. MSC uses the ecolabels system to certify a product's sustainability. MSC also provides consumers with complete traceability details for the product.



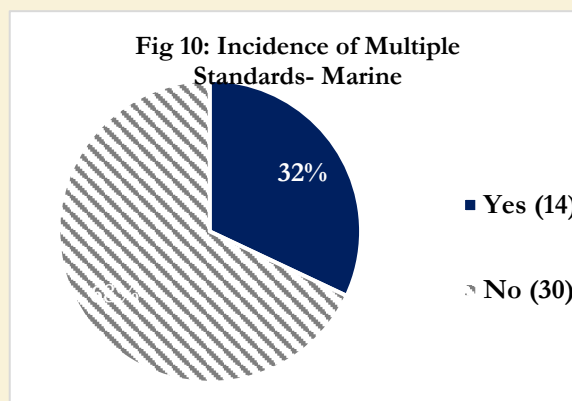
ASC (Aquaculture Stewardship Council) Standards	Aquaculture products	1	Europe, USA, Japan, China	An independent non-profit organisation which sets a standard for sustainable aquaculture. It is comparable to the Marine Stewardship Council, which promotes and certifies sustainable fishing. ASC deals with aquaculture products and the regulations associated with the fishing and manufacturing of marine products.
ISO (International Organization for Standardization) Standards (9001/14001, 22000)	All frozen, chilled and reprocessed products	2	All countries	ISO standards are designed to help organisations ensure they meet the needs of customers and other stakeholders while complying with statutory and regulatory requirements for a product or program. It deals with the fundamentals of quality management systems.
Dolphin-Safe Certification	Tuna fishes	1	USA, Europe	The certification system is designed to monitor tuna companies worldwide to ensure that tuna is caught using methods that do not harm dolphins and protect the marine ecosystem.
Certifications				
FSMS (Food Safety Management System) Certification	Cephalopods	1	Europe, China, Thailand	FSMS certification ensures that the certified organisation has implemented a food safety management system across its processes, activities, products, and services, in line with its food safety policy and ISO requirements.
ACC (Aquaculture Certification Council)	All aquaculture products (e.g. Vannamei)	1	USA, Europe	Aquaculture Certification Council (ACC) Inc. is a non-governmental body established to certify aquaculture facilities for social, environmental, and food safety standards worldwide. Aquaculture Practices standards are a certification system that combines site inspections and effluent sampling with sanitary controls, therapeutic controls and traceability.
Audits				
Social/Ethical Audit	Frozen and chilled products	1	Europe, USA	Companies conduct Social Auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, and sustainability are verified in this process.
Sources: BRIEF Primary Research, Literature Review and Centre for WTO Studies, IIFT.				



3.1.4.1 Incidence of Multiple Standards

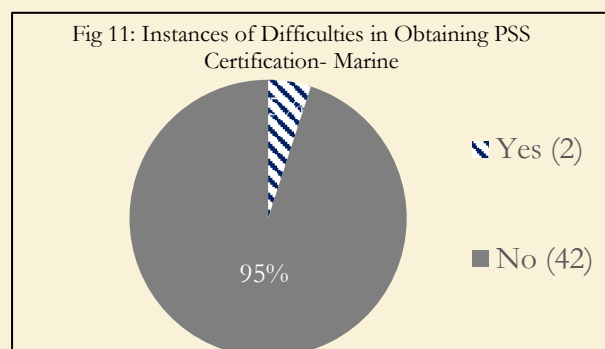
Among marine (fisheries) respondents, around 32 per cent had to comply with more than one standard regarding product variants and client requirements. The remaining 68 per cent reportedly complied with only one standard.

As the findings indicate, for a considerable share of the respondent firms, the procedural and cost implications of PSS were determined by only one relevant standard.



Source: Based on the survey.

3.1.4.2 Difficulties in Obtaining PSS



Among the marine (fisheries) respondents, a majority (95 per cent) did not face difficulties in obtaining requisite standards and certifications. The remaining 5 per cent reported procedural and cost-related impediments.

Source: Based on the survey.

Table 27: Improvements in Products due to PSS Compliance– Marine

Improvements	Percentage of Relevant Respondents
Increased shelf life	46
Free from harmful chemicals and antibiotics	33
Bacteria free	17
Use of natural preservatives	4

Source: Based on the survey.

From the respondent set, around 55 per cent cited improvements in product quality due to compliance with relevant standards. Around 46 per cent of the relevant responses received –



from companies dealing in frozen products, cooked/semi-cooked fish, etc. – indicated an increase in product shelf life, which can be attributed to compliance with standards such as BRC. As per 33 per cent of the responses – from companies dealing in shrimps, fishes, squids, octopuses, and other cephalopods – the products became completely free of chemicals and antibiotics during the compliance process. Around 17 per cent of the responses – from entities dealing in shrimps, shrimp blocks, octopuses, squids and other frozen products – indicated that compliance with standards has made the products free from bacteria. The introduction and use of natural preservatives were reported by 4 per cent of respondents, all from companies dealing in prawns. Therefore, it may be derived that for a considerable share of the respondent set, the compliance aspects related to PSS have resulted in enhanced product quality and thereby increased acceptance.

Table 28: Structural Modifications Required– Marine

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Alterations in sewage/waste management plans	60
	Modifications in building structure	15
	Changes in lab settings	15
	Changes in Heating, Ventilation and Air Conditioning (HVAC) systems	5
	Periodic demand-based modifications (according to social audits, etc.)	15
Accounts and administration	Changes according to demands of social auditing	5
Production process	Modifications for improving/maintaining product quality	20
	Streamlining of production system/processes	50
	Replacement of old machinery	30
	Labour-related modifications (number, wages, etc.)	35
	Maintenance of hygiene and strict avoidance of the usage of harmful chemicals	30
Marketing and sales	None	-

Source: Based on the survey.

The analytical exercise included the assessment of structural modifications – if any – required of the respondent companies with respect to four broad parameters, i.e., building/structural, accounts and administration, production process, and marketing/sales. Around 45 per cent of the respondent set reported structural changes that had to be made within the specified parameters to comply with standards. The table details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes.



It is noticeable that the changes have mostly been structural or process-related. Alterations to waste management plans, streamlining of production processes, replacement of old machinery, and labour welfare and hygiene-related improvements were most evident in the responses.

Table 29: Benefits of Adoption– Marine

Benefits of Adopting PSS	
Parameter	Percentage of Respondents
Better quality final products	80
Regulation of waste generation	75
Greater access to markets/companies	70
Confirmed business orders for a certain number of years	59
Streamlining the processes (like better resource/inventory management)	55
Better working condition	52
Exclusivity in terms of supplying to the client	45
Promotion of alternative ways of production	16

Source: Based on the survey.

All respondent companies acknowledged that compliance with PSS entails various improvements. Around 80 per cent of respondents reported improvements in quality for their products. Increased regulation and management of waste was reported by 75 per cent of the respondent set. Around 70 per cent of the respondents gained greater access to international markets, and 59 per cent of the entities confirmed receiving business opportunities from existing clients. Compliance with PSS led to around 55 per cent of the marine (fisheries) respondent set achieving better streamlining of procedural aspects. Other benefits reported by respondents included better working conditions, opportunities to become exclusive suppliers, and adequate promotion of alternative means of production.



3.1.4.3 Incidence of Increased Export Participation

Among the marine (fisheries) respondents, the majority (98 per cent) of companies confirmed increased exports post-adoption of PSS and compliance with relevant standards, indicating the practical necessity of complying with these standards, even though they are voluntary. For around 58 per cent of these respondents, exports increased by up to 10 per cent, while for another 26 per cent, the increase was 11-20 per cent. Substantial growth in the metric, i.e. in the range 21-30 per cent and above 30 per cent, was experienced by 12 per cent and 5 per cent of the respondents, respectively.

Source: Based on the survey.

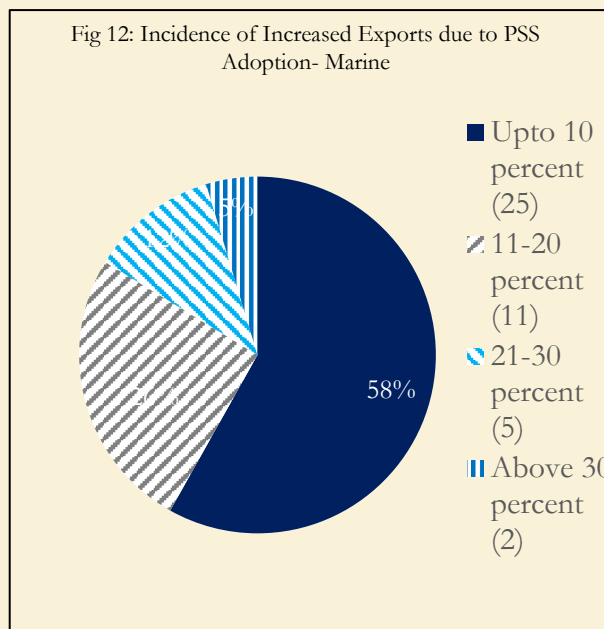


Table 30: Incidence of Conditionality in PSS– Marine

Conditionality	Percentage of Respondents
Restrictions on antibiotic contents	33
Practical issues with generation of certificates	33
Procedural restrictions in certain states	33

Source: Based on the survey.

Around 7 per cent of the respondent companies reported that their business processes were affected by the conditionality aspects of relevant standards.

The factors indicated by these respondents included issues with restrictions in antibiotic contents. Antibiotic content allowed in international markets is much lower than that permitted in Indian markets under Indian government regulations, leading to Indian shipments being rejected at international destinations. This leads to decreased business volumes and increased costs (such as transit costs) for exporters and, therefore, has a cascading effect on their overall growth prospects. Such variations in content restrictions need to be addressed and standardised to improve trade of relevant items.



Another challenge concerns ambiguities in the issuance of essential certificates (catch certificates, traceability certificates, etc.). A considerable share of the fishing vessels, as per the responses, are not properly registered; therefore, the government agencies have inadequate data and information on them. Therefore, traceability of products sourced by the concerned respondents is difficult, which sufficiently impedes the certification process.

Further, restrictions in certain states adversely affect exporters' compliance procedures. For instance, a manufacturer exporter indicated that the Kerala state government did not permit Vannamei culture. Vannamei shrimp is a principal marine export from India, and Kerala has considerable potential for Vannamei culture. However, due to restrictions, Vannamei shrimp must be sourced from other states, leading to multiple issues with traceability, antibiotic content, and more.

When enquired about the overall rationality of the conditionality aspects in the sector, approximately 67 per cent of the relevant respondents considered them reasonable.

Exhibit: Traceability Issues

One of the main factors that affect the marine exporters in certain regions of India is the local government regulations and the lack of proper systems to provide traceability information. Traceability has become a significant element of PSS in the marine sector, as the world on a whole is promoting sustainable fishing and aquaculture. Most of the states in India don't have adequate data about the shipping vessels that ply in its territorial waters or the region(s) these vessels access to fish. Therefore, most of the exporting companies who acquire raw materials from third parties face the issue of providing trustworthy traceability certificates.



Exhibit: Impediments in Vannamei Culture (Aquaculture)

Kerala is one of the states in India which has banned vannamei culture, even though aquaculture is prospering across the country. Despite the fact that Cochin and Quilon continue to be two of the main marine exporting regions, the ban has not been lifted. Many companies across Kerala does large scale exporting of aquaculture products and are forced to obtain these products from third parties in Andhra Pradesh, Telangana and Tamil Nadu.

The most pressing issues that this development leads to are in the areas of traceability and restricted material usage. Some of the exporters from Quilon and Cochin have faced issues in restricted content test by international clients and had their products returned, which led to large scale financial loss and damage to reputation.

Therefore, it can be discerned that there are limitations for exporting companies in getting proper inspection done. Further, many of the antibiotics (restricted contents) are not banned by the Indian government which makes these easily accessible to farmers.

To counter the aforementioned bottlenecks, certain firms have started the process of establishing multiple production units outside the state, which has translated to sufficient financial burden for these entities. There needs to be requisite revisions in government policies to stem this issue in the times to come.

Table 31: Major Challenges Posed by PSS– Marine

Challenges	Product Category(s) Dealt In	Percentage
Multiple certifications/audits issues	Frozen	57
Cost-related issues	Frozen/Chilled	43
Time-consuming processes	Frozen	14

Source: Based on the survey.

Among the respondent companies, around 14 per cent reported practical challenges in compliance procedures related to PSS. Among these entities, approximately 4 companies reported multiple audits by different organisations for the same products. Approximately 43 per cent of the relevant respondents cited cost-related issues, such as high initial costs, higher overall certification costs due to multiple certifications, and high certification fees per



container. Further, around 14 per cent of respondents flagged procedural delays, leading to shipment delays and associated losses.

Table 32: Incidence of Multiple PSS in Different Markets– Marine

PSS 1	Country (s)	PSS 2	Country (s)	Percentage of Relevant Respondents	Products
BRC Certification	Europe	BAP Certification	Thailand, China	50	Shrimp Blocks, Squids, Octopuses (Frozen Products)
BRC Certification	USA	SEDEX Certification (Social Audit)	UK	50	

Source: Based on the survey.

According to the responses, the prevalence of multiple standards for the same product has mainly been driven by clients. The table summarises the incidence of multiple standards being complied with for the same products in different markets. Around 2 companies among the respondents have had to comply with multiple standards across different markets. Of that set, the shares for specific combinations of PSS/certifications/audits are provided in the table.

Table 33: Instances of Denial of Entry into Markets– Marine

PSS/Certification	Product (s)	Country (s)	Proportion of Relevant Respondents (Percentage)
BRC	Shrimps (including processed), shrimp blocks, cuttlefishes, squids, octopuses, tuna fishes	Europe, USA	20
BAP	Shrimps, cuttlefishes, squids, other marine products (including frozen)	USA, Thailand, China	7
SEDEX (Social Audit)	Shrimps (including processed)	UK, USA, EU	5

Source: Based on the survey.

The table summarises the incidence of denial of market entry due to the lack of requisite standards/certifications, including the product variants, the countries in which such standards/certifications were required and the share of the respondent companies experiencing such denial. However, according to the responses, for most of the relevant companies (14 out of the respondent set faced denial of entry), this denial was an initial issue. These entities



subsequently complied with the compliance parameters and have consistently been acquiring orders since then.



Table 34: Compliance Areas for Obtaining PSS– Marine

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
BAP (Best Aquaculture Practices) Standards	Shrimps (including processed), cooked fishes and frozen products	Europe (including Russia and UK), USA, China, Middle East, Japan	11	9	7	11	2	2
BRC Global Standards	Cuttlefishes, squids, octopuses, shrimps (including processed), shrimp blocks and tuna fishes	EU, Japan, China, UAE, USA	27	11	18	20	5	2
Dolphin-Safe Certification	Tuna fishes							2
IFS (International Featured Standards)	Cuttlefishes, squids, octopuses		2			2		2



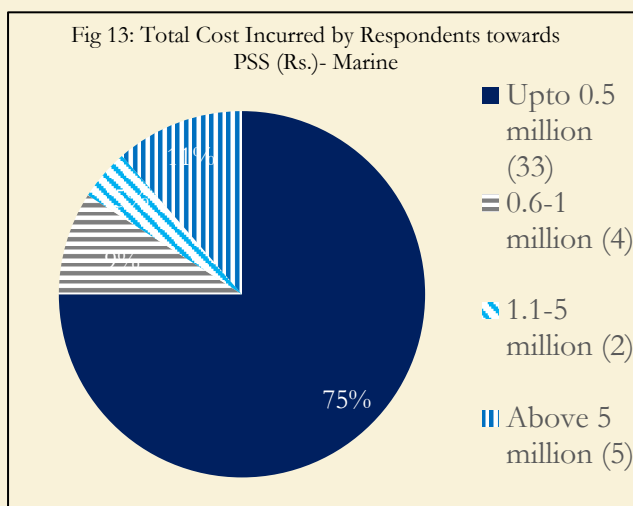
PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
ISO International Organization for Standardization) Standards (9001/14001, 22000)	Frozen fishes, frozen products (shrimps, cuttlefishes, squids, etc.), marine reprocessing items, prawns, sea fishes, shrimp blocks, octopuses	China, Japan, Middle East, Vietnam, EU, Taiwan, Singapore, France, UK, Japan, USA	36	32	41	48	7	
Audits								
Ethical Audits	Marine products	EU, USA		2		2		
Social Audits	Shrimp blocks, squids, octopuses, frozen marine products, shrimps	EU, China, UAE, Japan, USA	7	7	5	7		

Source: Based on the survey.

The table summarises the relevant PSS/audits, product categories, and countries/regions for which they apply, the compliance areas, and the percentage of the marine (fisheries) respondent set that abides by these compliance aspects.

3.1.5. Financial Aspects of PSS Compliance

3.1.5.1 Total Cost towards PSS



Of the respondent set analysed, the total cost towards PSS for around 75 per cent of the companies was Rs. 0.5 Mn. or less. Companies with total costs of Rs. 0.6-1 Mn., Rs. 1.1-5 Mn., and above Rs. 5 Mn. accounted for 9 per cent, 5 per cent, and 11 per cent of the sample, respectively.

Table 35: Comparison between Total Cost towards PSS- Size of companies– Marine

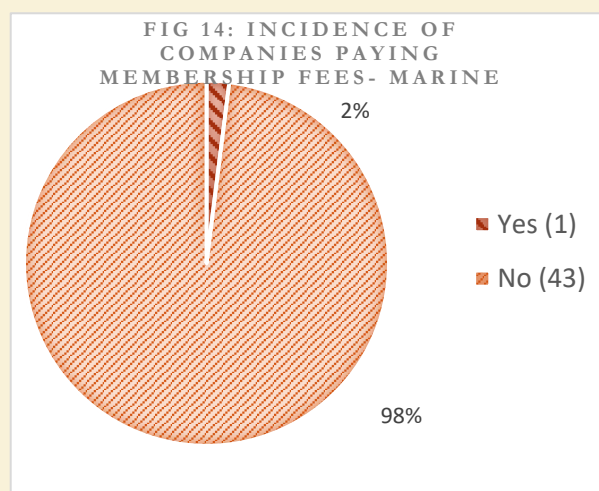
Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	12	13	8	0
0.6-1 Mn.	1	0	3	0
1.1-5 Mn.	0	0	2	0
Above 5 Mn.	2	2	1	0

Source: Based on the survey.

Among respondents in the marine sector, 12 large-sized companies had costs up to 0.5 Mn.; 13 medium-sized and 8 small-sized companies also incurred costs in the same range. Costs exceeding 5 Mn. were incurred by 2 large and 1 medium-sized companies, whereas 1 small-sized company also had to bear a high cost.

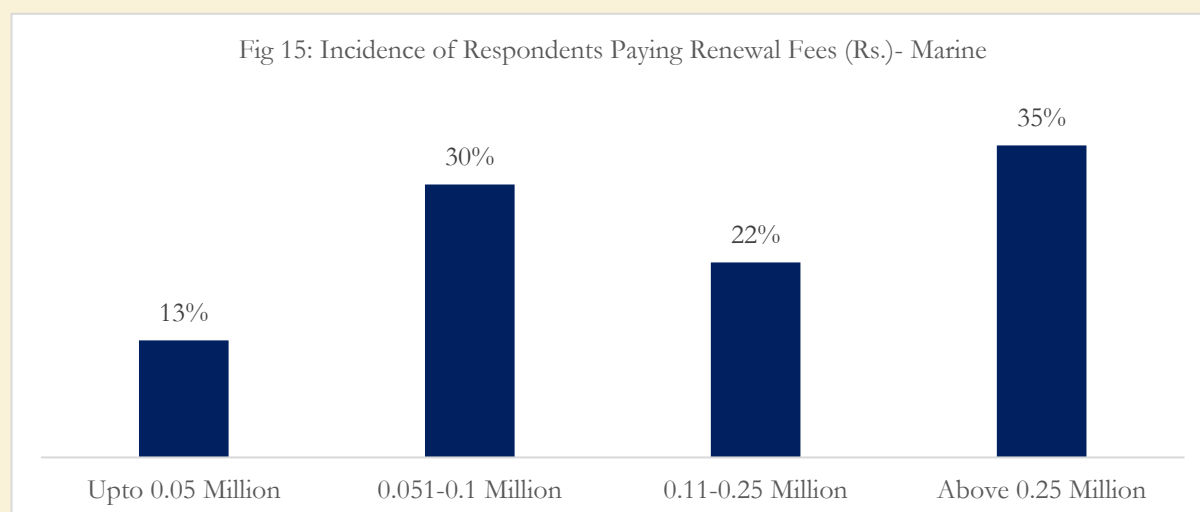
3.1.5.2 Incidence of Membership Fees

Among the marine (fisheries) respondents, only 2 per cent had to pay membership fees. Such requirements were not there for a majority (98 per cent) of the sample. From the low percentage of direct members, the prevalence of operations in non-equity mode may be gauged. One reason could be subcontracting, which is prevalent in the marine sector. Therefore, it may be inferred that there is further scope for increased company participation in the standard formulation process.



Source: Based on the survey.

3.1.5.3 Incidence of Renewal Fees– Marine



Source: Based on the survey.

Among the respondent companies, around 52 per cent had to pay annual renewal fees. The ranges of amounts incurred and the share of relevant respondents paying them have been depicted in the chart. For around 35 per cent of respondents, annual renewal fees exceeded Rs. 0.25 Mn.



Table 36: Cost Implications– Marine

PSS	Number of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(in RS. Mn.s)	In Lakhs		
Standards		0.15- 0.35	0.15-3.5	1-8	
BRC Global Standards	19	0.01-0.12	0.1-1.2	1-8	3
BAP (Best Aquaculture Practices) Standards	2	0.032-0.35	0.32-3.5	-	4
ISO (International Organization for Standardization) Standards	30	0.015-0.045	0.15-0.45	2-5	3.3
Dolphin-Safe Certification	1	0.05	0.5	-	-
Certifications		0.05-0.065	0.5-0.65		
FSMS (Food Safety Management System) Certification	1	0.05	0.5	-	-
ACC (Aquaculture Certification Council)	4	0.05-0.065	0.5-0.65	-	5
Audits		0.1-3	1-30	2-3	
Audits (Ethical/Social)	6	0.1-3	1-30	2-3	2.3

Source: Based on the survey.

The table summarises the annual cost implications for the respondent companies for various PSS compliance requirements, as well as the percentage increase in per-unit costs due to compliance, where applicable and information is available. As per the responses, the table captures the per-unit cost effect that the relevant standards are expected to have on an individual basis. However, when a firm complies with more than one standard, the per-unit price increase may not be cumulative, as some requirements (structural, procedural, etc.) of one standard may be similar to those of another standard it also complies with. For instance, if a certain firm complies with BRC and BAP standards, the resulting average increase in per-unit cost may not be 7 per cent (3 per cent for BRC and 4 per cent for BAP).



Table 37: Visits by Certifying Bodies/Agencies and Associated Costs– Marine

Heads	Percentage of Respondents	Range (In Rs. Thousands)
Travel	13	25-280
Accommodation	15	15-60
Visits	15	5.5-10
Testing	15	12-45
Miscellaneous	23	5-10

Source: Based on the survey.

Of the respondent companies, around 91 per cent confirmed that the certifying agencies/bodies visited their premises and informed that the visits were annual. The table summarises the heads under which visit-related expenses were incurred, the percentage of respondents who paid them, and the overall ranges of amounts paid for each head, as per the responses.

3.1.6. Perception Based Feedback

Table 38: Perception Regarding Role of PSS – Marine

Respondent Perception on the Role of PSS			
Positives	Respondents (Percentage)	Negatives	Respondents (Percentage)
Enhanced opportunities/accessibility/demand in international markets	40	Inflated cost of production	100
Increased acceptance and buyer trust	33		
Enhancements in customer retaining power	26		
Improvements in product quality	12		
Positive influence on brand image	7		
Increased awareness of competitive product standards	5		

From the respondent set, around 95 per cent of companies regarded the role of PSS in their firms as positive, and around 5 per cent recognised cost as a con. The remaining 5 per cent of respondents considered the role of PSS negative.

Table 38 summarises the general perception of compliance with private sustainability standards, as reported by the respondents, and ranks the parameters by the frequency of



feedback received. As can be observed, enhanced opportunities, accessibility, and demand in international markets are perceived by the respondents as the principal positive impact of PSS compliance, followed by increased buyer acceptance/trust and improved customer retention. Inflation in costs was the negative stated by the relevant respondents.

Table 39: Lacunae– Marine

Parameters	Percentage of Relevant Respondents
High investment issues (cost)	65
Maintenance and modification issues	25
Different demands by customers (multiple certifications)	25
Time consumption (delays)	15

Source: Based on the survey.

In order of importance (based on frequency of responses), around 65 per cent believed a high level of investment was required to address the lacuna in the compliance process, followed by issues related to sought modifications, impediments arising from the multiplicity of certifications, and time consumption/delays.

On being enquired about the most striking impediments, cost inflation, delays, and multiple certifications were again identified by the respondents as the major concerns.

Table 40: Adoption of PSS for Increased Domestic Sales– Marine

Affirmative (41 Per Cent of the Relevant Respondents)		Opposing (59 Per Cent of the Relevant Respondents)	
Reasons	Percentage	Reasons	Percentage
Improvements in product quality	67	Not necessary for the domestic markets	27
Improvements in food safety	11	Cost inflations	8
Domestic products matching international standards	11	Structural issues	4
Increase in awareness	6		
Improvements in stability	6		

Source: Based on the survey.

On enquiring of the relevant respondent set about PSS adoption for increased sales in domestic markets, 41 per cent responded in the affirmative, while the remaining 59 per cent opposed it. The major reasons for the opinions formed and the percentage of the respective respondent sets opining the same have been summarised in the table.



2.1.7. Key Highlights

Some of the key findings derived from the analysis of marine (fisheries) sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the marine (fisheries) companies, with around 60 per cent of the respondents dealing with them for a decade or less.
- With almost 64 per cent of the firms dealing in the semi-finished category of marine products, the impact can be considered to be significant in terms of both incidence of standards and compliance aspects.
- Increased shelf life was the principal product level improvement derived by the respondents due to compliance
- Improvements in quality of final products, better regulation of waste management and increased market access were the major benefits of adoption of PSS as per the respondents.
- Of the marine (fisheries) respondents, around 98 per cent confirmed increased exports post adoption of PSS and compliance with relevant standards.
- The respondents cited multiple certifications, audit issues and cost inflations as the major challenges in the compliance procedure.
- The incidence of multiple standards on the same product, as per the responses, is majorly influenced by clients and their requirements and not on the export destinations. Different clients may demand compliance with different standards in the same country, as per the responses.
- Around 32 per cent of the respondent companies faced denial of entry. However, such denial of entry was an initial issue, and order flow was maintained post-compliance with the relevant standards, as per the relevant respondents.
- The total cost towards PSS for around 75 per cent of the respondent companies was RS. 0.5 Mn. or less.
- Among the respondents, only 2 per cent paid membership fees, indicating the prevalence of sub-contracting and non-equity mode of operations.
- High cost factor was seen as the major lacunae by the respondents.
- Around 41 per cent of the relevant respondents supported the adoption of PSS in domestic markets, while the remaining 59 per cent did not see any benefits.
- Amongst the marine sector respondents, around 64% deal with semi-finished goods, which is comparatively high. This points to the need to address overreliance on semi-finished exports. To avoid the problem of standards playing on Marine exports, there should be a conscious shift to exports of finished products



3.2. Leather

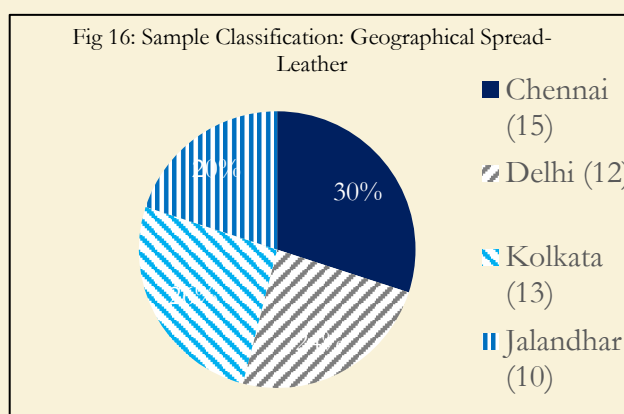
3.2.1. Overview

Leather is one of the most widely traded commodities worldwide, with demand driven in large part by the fashion industry. Footwear, garments, sports goods, the interior design industry and the automotive industry continue to be the main consumers of leather overall. (IBEF, Market analysis: Leather exports, 2016). India accounts for around 12.93 per cent of the world's hide/skin production and ranks second in footwear and garment production, with a 9 per cent market share in the international market. According to India Brand Equity Foundation, total leather and leather goods exports from India stood at around USD 4.72 billion during the period April 2016-January 2017. The major consumers of Indian leather have been the US (15.69 per cent), Germany (11.82 per cent), UK (10.85 per cent), Italy (6.61 per cent), Spain (5.27 per cent), France (5.02 per cent), Hong Kong (4.71 per cent), UAE (3.69 per cent), China (3.16 per cent), Netherlands (3.01 per cent), Belgium (1.78 per cent) and Australia (1.44 per cent). At 48.82 per cent, footwear (leather and non-leather) and footwear components accounted for the lion's share of leather exports in April 2016-January 2017, followed by leather goods and accessories with 23.37 per cent share and finished leather with 15.60 per cent share. South India accounted for about 30 per cent of the country's total leather exports, followed by the western region at 22 per cent. The eastern and northern regions accounted for 13 per cent and 12 per cent respectively. The country experienced a slowdown in its leather trade in 2015-16, with exports of leather and leather products at USD 5.85 billion, down 9.86 per cent from the previous fiscal's USD 6.49 billion. The European Union crisis was pointed out as one of the main reasons for this slump, as Europe is one of the largest consumers of Indian leather products.

3.2.2. Firm Details

3.2.2.1 Sample

Of the leather sample, around 30 per cent of companies were from Chennai, with Delhi, Kolkata and Jalandhar at 24 per cent, 26 per cent and 20 per cent, respectively.





Source: Based on the survey.

Table 41: Position of Sample Leather Companies in Global Value Chain- Leather

Product Category	Percentage of Sample
Raw Materials	2
Semi-finished Raw Materials	8
Intermediate	14
Semi-finished Intermediate	24
Finished	82

Source: Based on the survey.

Table 41 summarises how the sample leather companies cater to the global value chain. Of the leather sample, around 82 per cent dealt in finished goods. This indicates greater bargaining power among leather-sector respondents and a reduced impact of PSS and compliance on these firms.

3.2.2.2 Application and Scope of PSS

To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance, challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.

3.2.2.3 Costs

The survey focussed on financial aspects such as total costs towards PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost of individual standards, and the percentage increase in per-unit product price due to compliance, as per availability of information.

3.2.2.4 Adoption of PSS – Potential Gains

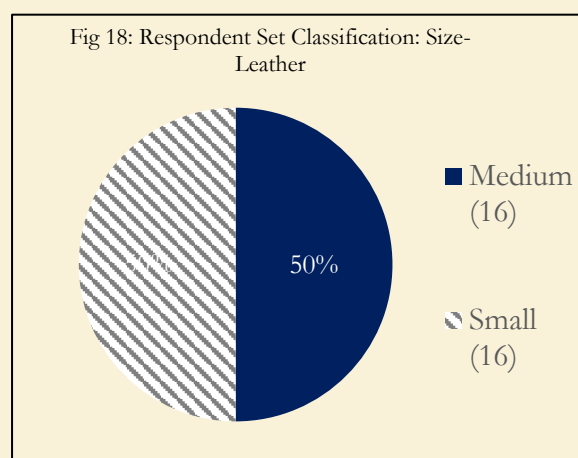
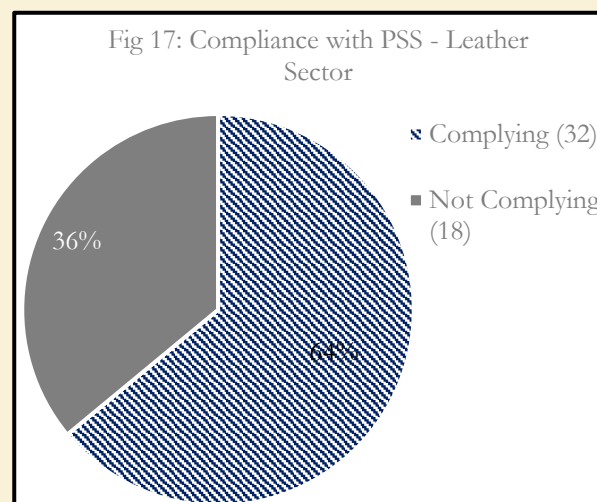
To assess the benefits derived from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focused on product-level improvements due to compliance.

3.2.3. Respondent Details

3.2.3.1 Share of Respondents in the Leather Sector

The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS, was 64 per cent for the leather sector. The remaining did not comply with any PSS, as per the responses received. This suggested that the leather sector had the fewest firms that complied with the PSS definition in this report. The fact that almost 82 per cent of the sample firms deal in finished products (see Table 41) may explain the relatively higher percentage of firms that do not have to comply with PSS (as per the parameters set for this study).

Source: Based on the survey.



3.2.3.2 Size-wise distribution of the Leather Sector Respondents

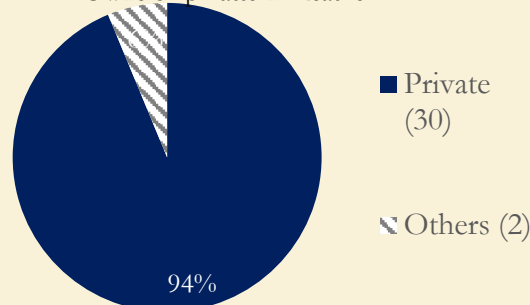
Of the respondent set, around 50 per cent were mid-sized companies, and the remaining 50 per cent were small-scale entities. Therefore, the leather sector is divided equally between medium and small firms, with none in the large segment.

Source: Based on the survey.

3.2.3.3 Ownership Pattern of the Leather Sector Respondents

Of the respondents, around 94 per cent were from the private sector. There were no public or partnership companies in the sample.

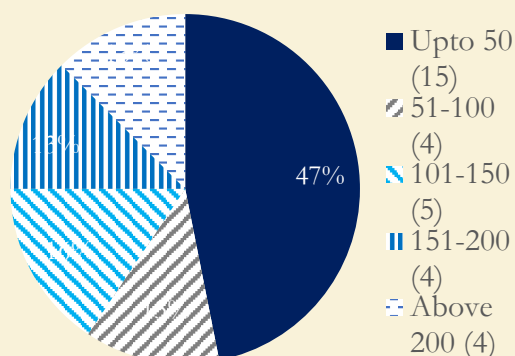
Fig 19: Respondent Set Classification: Ownership Pattern- Leather



Source: Based on the survey.

3.2.3.4 Employee Strength of the Leather Sector Respondents

Fig 20: Respondent Set Classification: Employee Strength- Leather



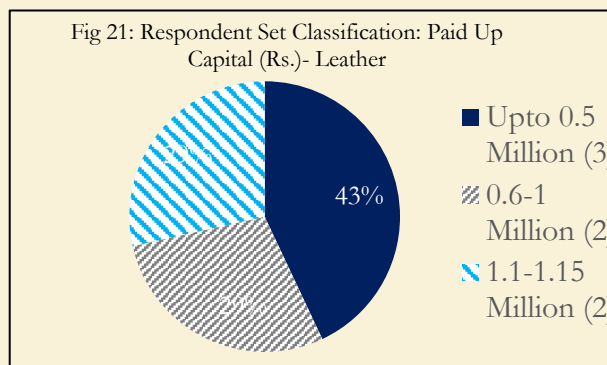
Of the respondents, 47 per cent of companies had an employee strength of 50 or fewer. The percentage of companies with 101-150 employees was 16. The remaining respondent set had an equal distribution of companies across the 51-100, 151-200, and more than 200 employee categories.

Source: Based on the survey



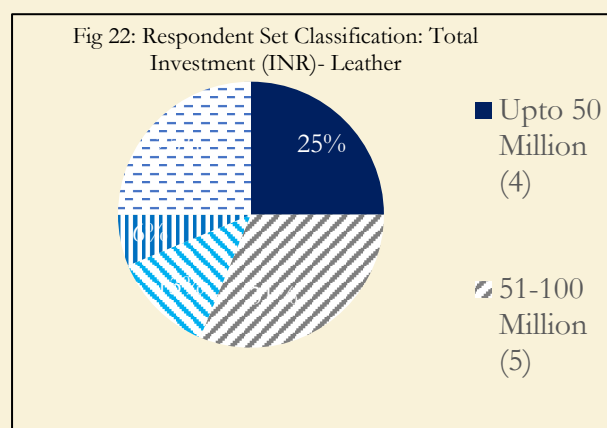
3.2.3.5 Paid-Up Capital of the Leather Sector Respondents

Around 43 per cent of the respondent companies reported paid-up capital of up to Rs. 0.05 Mn. Respondent companies with paid-up capital of Rs. 0.06-0.1 Mn. and Rs. 0.1-0.15 Mn. accounted for 29 per cent each.



Source: Based on the survey

3.2.3.6 Total Investment of the Leather Sector Respondents



Of the respondent companies, around 31 per cent reported total investment figures in the range RS. 51-100 Mn.. Companies for whom the metric was RS. Those with total investments of RS. 50 Mn. or less formed 25 per cent of the total respondents. 200 Mn. or more formed another 25 per cent.

More than half of the respondents had investments of up to Rs. 100 Mn.

Source: Based on the survey

Table 42: Products Handled by the Leather Sector Respondents- Leather

Broad Categories of Leather Products	
Sports items, accessories, finished leather and allied products, garments, footwear	
Product(s)	Percentage of Sample
Accessories (bags, belts and purses)	44%
Footwear	19%
Finished leather and allied products (including crafted products)	16%
Sports items (balls, gloves, etc.)	16%
Garments (including jackets)	13%

Source: Based on the survey



The leather sample covered sports items, accessories, finished leather (and allied products), garments, and footwear broadly. The table summarises the product variants dealt in by the sample companies along with respective percentages of the sample. Most of the leather products fell into the category in which consumer choices and preferences prevail. Therefore, the chances of private sustainability standards playing a greater role cannot be ruled out.

Table 43: Export Destinations of the Leather Sector Respondents- Leather

Export Destinations		
Countries/Regions	Share(Range)(Percentage)	Share (Average) (Percentage)
Asia [including East Asia (China, Hong Kong, Japan, Korea), SAARC countries and Vietnam]	10-60	24.42
Australia	15-40	28
North America (including USA and Canada)	15-35	25
Europe (including Denmark, UK, France, Germany, Italy, Netherlands, Poland, Portugal, Russia and Spain)	10-100	33.5
Middle East (including UAE and Saudi Arabia)	10-40	18.5
New Zealand	-	10.00
South America	-	15.00

Source: Based on the survey

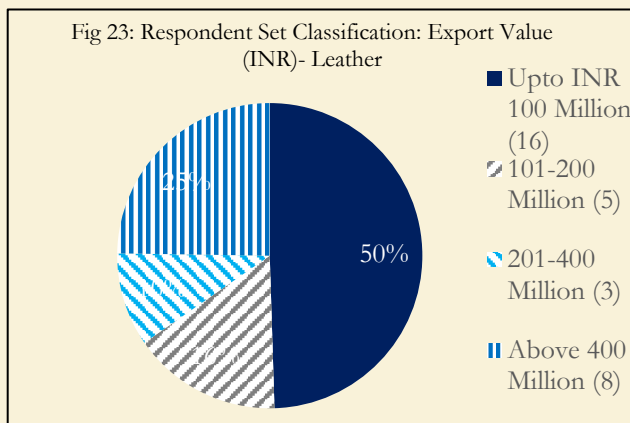
The table summarises the major importing countries/regions for the sample leather companies, as well as the ranges and average export shares to these countries by the respondent firms. As per the responses, Asian countries, Australia, North American countries, and European countries have been the major recipients of leather products from the firms enquired about.



3.2.3.7 Value of Exports by Respondents in the Leather Sector

Of the respondent set, around 50 per cent of the leather companies reported that the total export value for the last completed year was up to RS. 100 Mn.. Companies having annual export values of RS. 101-200 Mn., RS. 201-400 Mn. and above RS. 400 Mn. formed 16 per cent, 10 per cent and 25 per cent respectively.

Around 60 per cent of the leather respondents exported goods of up to Rs. 200 Mn. on the survey



Source: Based

Table 44: Share of Exports by the Respondents in the Leather Sector

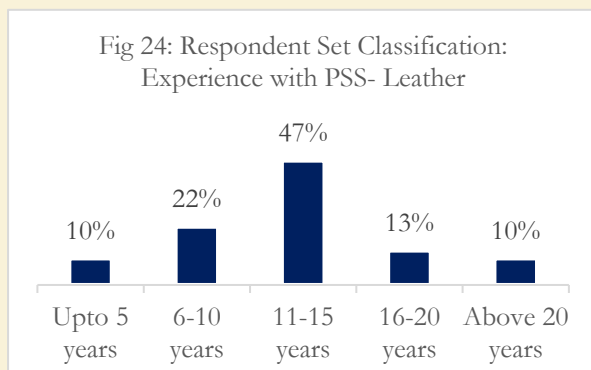
Share of Exports in Sales	Percentage of Sample
100 percent	10
76-99 per cent	26
50-75 per cent	46
30-49 per cent	10
21-29 per cent	7

Source: Based on the survey

The table summarises the ranges of the share of exports in sales and the corresponding percentages of respondents. For 10 per cent of the respondent companies in the leather sector, all sales were through exports. Companies with exports accounting for 50-75 per cent of total sales accounted for 46 per cent of the respondent set.



3.2.3.8 Experience with Private Sustainability Standards for Leather Sector Respondents



Source: Based on the survey

Of the respondent leather companies, 47 per cent have been complying with PSS for 11-15 years, while 22 per cent have been dealing in PSS for 6-10 years. Companies with considerable compliance experience, i.e., more than 20 years, accounted for 10 per cent of the respondent set.

It may be observed that for more than 75 per cent of respondents, compliance with PSS has been required for 15 years or less.



3.2.4. Incidence and Scope of Private Sustainability Standards

Table 45: Description of Standards- Leather

PSS Name	Products	Validity (Years)	Countries/Regions	Description
Standards				
SA8000 (Social Accountability)	Leather gloves, balls, footwear, bags, garments	1-2	Europe, USA, SAARC Countries	SA 800 Certification is a process through which individual companies (factories, farms, and other workplaces) and organisations undergo assessment by a third-party auditor. Third-party certification involves an independent assessment that confirms that specified requirements for a product, person, process, or management system have been met.
ISO (International Organization for Standardization) Standards (9000, 14001:2004, 14000)	All leather products	1	Clients from all countries	These standards are designed to help organisations ensure they meet the needs of customers and other stakeholders while complying with statutory and regulatory requirements for a product or program. It deals with the fundamentals of quality management systems.
Certifications				
SEDEX (Supplier Ethical Data Exchange)	Footwear, jackets, bags	1	USA, EU, Canada	SEDEX is a membership organisation for businesses committed to continuous improvement of the ethical performance of their supply chains. SEDEX enables member companies to efficiently manage the ethical and responsible practices of their global supply chains, generating transparency through data exchange.
Audits				
LWG (Leather Working Group)	Leather and allied products	1	UK	The LWG was formed as a collaboration between footwear brands and tanneries to assess tanners' compliance and environmental performance. It also aims to promote sustainable and appropriate environmental business practices within the footwear and leather industries.
BSCI Certificate (Business Social Compliance Initiative)	Leather purses, bags	1	As per client requirements	BSCI is an initiative of the Foreign Trade Association (FTA). All BSCI participants are also FTA members and share the FTA vision of "Free Trade. Sustainable Trade". The Business Social Compliance Initiative (BSCI) is a



				leading supply chain management system that helps companies drive social compliance and improvements in the factories and farms across their global supply chains.
Factory Audit and Social Audit (Intertek, Bureau Veritas)	All leather products	1	Europe, USA	Companies conduct Social Auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, sustainability, etc. are verified in the same.

Sources: BRIEF Primary Research, Literature Review and Centre for WTO Studies



3.2.4.1 Incidence of Multiple Standards

All the respondent companies in the leather sector had to deal with multiple standards.

3.2.4.2 Difficulties in Obtaining PSS

Based on the responses received, none of the sample leather companies encountered any issues in obtaining PSS certifications.

Table 46: Improvements in Products due to PSS Compliance- Leather

Improvements	Percentage of Sample
Overall improvements	50
Increased durability	25
No use of harmful chemicals	16
Water resistance	9

Source: Based on the survey

All respondent companies in the leather sector cited improvements in product quality resulting from compliance with relevant standards. From the respondent set, 16 per cent – dealing in footwear, accessories, garments, etc. reported that the usage of harmful chemicals such as chromium has completely stopped due to the advent of relevant standards. Around 25 per cent of respondents – dealing in accessories, footwear, etc. – reported that their products gained in durability, with increased sole strength, lace strength, colour fastness, etc. As reported by 9 per cent of respondents – dealing in footwear, accessories, sports items, etc. – their products had become more water-resistant.

Table 47: Structural Modifications Required- Leather

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Structural modifications (waste management plants, airflow systems, sewage plants, production unit, labs and testing areas)	63
	HVAC Systems and upgradation of machinery to reduce pollution	16
	Changes depending on certification demands, including security-related upgradation/modifications	21



Accounts and administration	Social audit demands	5
	Health insurances	5
Production process	Hygienic environment (production process, sewage plants and waste management)	32
	Improved production process, production machinery, quality of product	5
	Skilled labour, labour welfare (training and equal wages)	4
Marketing and sales	Changes in raw material procurement and distribution channels	12
	Improved market chains and installation of CRM	8

Source: Based on the survey

The assessment of structural modifications – if any – required to be made by the respondent companies with respect to four broad parameters, i.e. building/structural, accounts and administration, production process and marketing/sales, revealed that 60 per cent of the respondent set had to make such structural changes for compliance with relevant standards. The table details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes.

Infrastructure and equipment-level changes were required by more than 63 per cent of the relevant respondents. Other significant areas of change included security upgrades, hygiene and pollution reduction, and improvements in supply chain management.

Table 48: Benefits of Adoption- Leather

Benefits of Adopting PSS	
Parameter	Percentage of Sample
Better quality final product	100
Greater access to markets/companies	91
Better working condition	88
Regulation of waste generation	72
Confirmed business orders for a certain number of years	63
Exclusivity in terms of supplying to the client	54



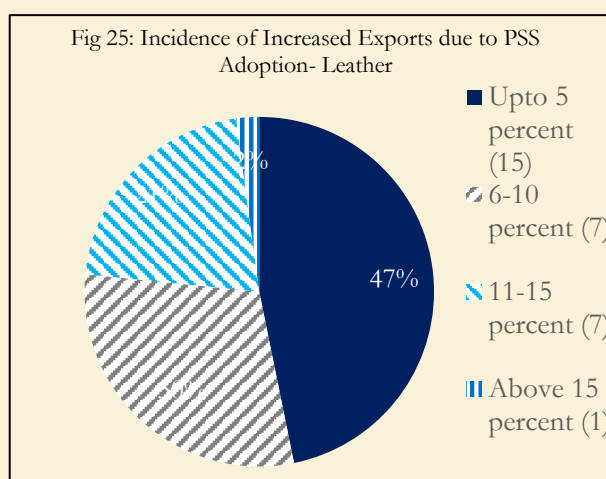
Streamlining the processes (like better resource/inventory management)	50
Promotion of alternative ways of production	19

Source: Based on the survey

Compliance with PSS resulted in various improvements, according to the respondent companies. Improvements in the quality of the products handled were the most cited, with all companies in the respondent set indicating this, followed by greater market access (91 per cent) and improvements in working conditions (88 per cent). The other benefits cited, in order of importance based on response frequency, included confirmed business orders, adequate regulation of waste generation, exclusivity in supplying clients, streamlining processes, and impetus to adopt alternative production methods.

3.2.4.3 Incidence of Increased Export Participation

All respondent leather manufacturer exporters confirmed increased exports post-adoption of PSS and compliance with relevant standards, indicating the importance thereof. For around 77 per cent of the sample, increase in overall exports was up to 10 per cent. Companies with export increases of 11-15 per cent and more than 15 per cent accounted for 21 per cent and 2 per cent of the respondent set, respectively.



Source: Based on the survey

Table 49: Incidence of Conditionality in PSS- Leather

Conditionality	Percentage of Respondents
Maintenance of proper working conditions	43
No child labour	29
No usage of harmful/banned chemicals	29

Source: Based on the survey



Around 16 per cent of the respondent companies reported that their business processes were affected by the conditionality aspects of relevant standards. Of this set of respondents, around 29 per cent indicated the stoppage of child labour as a major change. Complete restriction on harmful chemicals and maintenance of acceptable working conditions were the other changes indicated.

However, when enquired about the overall rationality of the conditionality aspects in the sector, the respondents opined that they were reasonable.

3.2.4.4 Major Challenges Posed by PSS

None of the respondent companies indicated any challenges associated with PSS.

3.2.4.5 Incidence of Multiple PSS in Different Markets

Respondents in the leather sector reported no instances of multiple PSS across different markets for the same product.

3.2.4.6 Instances of Denial of Entry into Markets

None of the respondent companies reported experiencing denial of market entry due to PSS.



Table 50: Compliance Areas for Obtaining PSS- Leather

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	others
Standards								
2. ISO (International Organization for Standardization) Standards (9000, 14001:2004, 14000)	Leather bags, belts, balls, footwear, garments, jackets, purses, rugby balls	Australia, UK, Europe, Denmark, China, Russia, USA, Hong Kong, Japan, SAARC Countries, Spain, Germany, Italy, France	56	59	66	69	3	3
SA-8000	Leather bags	USA	3	3	3	6		
Certifications								
SEDEX Certificate	Leather bags, footwear and jackets	Europe, Canada, UK	16	6	9	9		
Audits								
LWG	Leather and allied products	Europe	13	13	13	6	13	

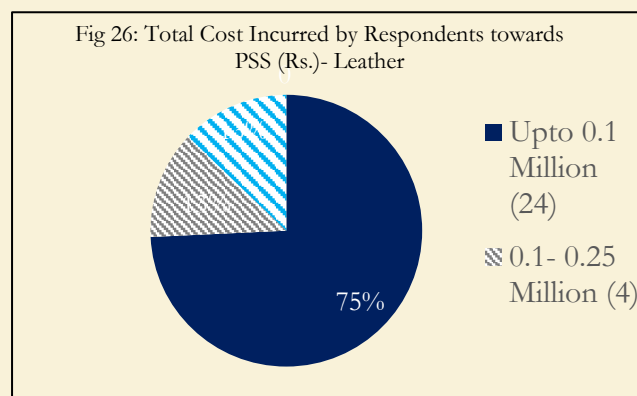
Source: Based on the survey



The table summarises the relevant PSS, product categories, and countries/regions for which they apply, the compliance areas, and the percentage of the leather sample that abides by these compliance aspects.

3.2.5. Financial Aspects of PSS Compliance

3.2.5.1 Total Cost towards PSS



Of the respondent set analysed, the total cost towards PSS for around 84 per cent of the companies was RS. 0.25 Mn. or less. Companies with total cost of RS. 0.25-1 Mn. and above RS. 1 Mn. formed 8 per cent each of the sample.

Source: Based on the survey

Table 51: Comparison between Total Cost towards PSS- Size of companies- Leather

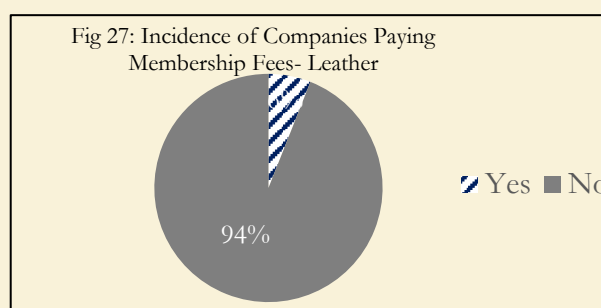
Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	0	16	16	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0

Source: Based on the survey

Among respondents in the leather sector, 16 medium- and small-sized companies had to spend up to 0.5 Mn towards PSS.

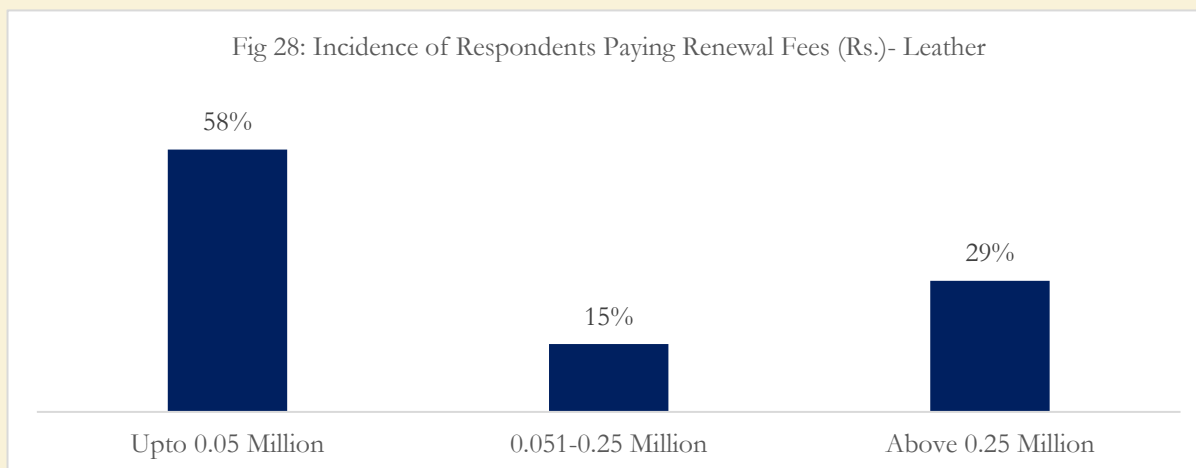
3.2.5.2 Incidence of Membership Fees

Only 6 per cent of the respondent leather companies had to pay membership fees. Such requirements were not there for a majority (94 per cent) of the respondents. This shows the insignificance of actual standardisation in the leather sector.



Source: Based on the survey

3.2.5.3 Incidence of Renewal Fees



Source: Based on the survey

According to the responses received, around 35 per cent of respondent companies had to pay annual renewal fees. The ranges of amounts incurred and the share of respondents who paid them are depicted in Figure 28. For about 29 per cent of respondents, the overall annual renewal fees exceeded Rs. 0.25 Mn. For more than half the relevant respondents, it was up to Rs. 0.05 Mn.

Table 52: Cost Implications- Leather

PSS Name	Number of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(in Mn's)	(in Rs. Lakhs)		
Standards		0.008-0.65	0.08-0.65	1-5	
SA 8000	6	0.01-0.035	0.1-0.35	-	2
ISO	41	0.008-0.065	0.08-0.65	1-5	2.7
Certifications		0.015-0.075	0.15-0.75		
SEDEX Certificate	5	0.015-0.075	0.15-0.75	-	-



Audits		0.02-0.6	0.2-6	0-10	
LWG	3	0.085-0.6	0.85-6	5-10	7.5
Factory Audit	4	0.02-0.29	0.2-2.9	0-10	10

Source: Based on the survey

Table 52 summarises the annual cost implications for the respondent companies for various PSS complied with, as well as the percentage increase in per-unit costs due to compliance, as applicable and where information is available. It can be observed that average price escalations due to compliance with relevant ISO standards can be up to 5 per cent. The impact of audits can include per-unit price escalations of up to 10 per cent.

Table 53: Visits by Certifying Bodies/Agencies and Associated Costs- Leather

Heads	Percentage of Respondents	Range (In Rs. Thousands)
Travel	7	35-65
Accommodation	4	10
Visits	7	25-35
Testing	4	20
Miscellaneous	4	5

Source: Based on the survey

All respondent companies confirmed that the certifying agencies/bodies visited their premises and stated that the visits were annual. The table summarises the heads under which visit-related expenses are incurred, the percentage of respondents who paid them, and the overall ranges of amounts paid for each head, as per the responses.

3.2.6. Perception Based Feedback

Table 54: Perception Regarding Role of PSS - Leather

Respondent Perception on the Role of PSS			
Positives	Respondents (Percentage)	Negatives	Respondents (Percentage)
Increased accessibility	50	Increased cost of production	100



Improvements in product quality	15		
Stable customer base/customer support	13		
Increased turnover	13		
Improvements in brand image	10		

Source: Based on the survey

Of the respondent companies, around 97 per cent regarded the role of PSS in their firms as positive. The remaining 3 per cent of the respondents considered the overall role of PSS to be negative.

Table 54 summarises the various positives and negatives of compliance, as reported by respondents, and ranks the parameters by the frequency of feedback received. As can be observed, increased accessibility in target markets is perceived by respondents as the principal positive impact of PSS compliance, followed by improvements in product quality, enhancements in brand image, stability in the customer base, greater cooperation, and increases in turnover. Inflation in cost was the only negative stated by the respondents.

Table 55: Lacunae- Leather

Parameters	Percentage of Sample
Cost inflations	50
Time consumption (delays)	50

Source: Based on the survey

Of the respondents, around 50 per cent believed that adverse effects on costs were the lacuna in the compliance process, with procedural delays being the other impediment reported.

When enquired about the most striking impediments, respondents again cited cost inflation and time-consuming processes as the major concerns.

Table 56: Adoption of PSS for Increased Domestic Sales- Leather

Affirmative (78 Per Cent of Sample)		Opposing (22 Per Cent of Sample)	
Reasons	Percentage	Reasons	Percentage
Improved quality of products	92	Low adaptability	86



Restricted use of harmful contents	12	Troublesome certification procedures	16
Improved market coverage	4		

Source: Based on the survey

When asked about adopting PSS to increase sales in domestic markets, 78 per cent responded affirmatively, while the remaining 22 per cent opposed it. The major reasons for the opinions formed and the percentage of the respective respondent sets opining the same have been summarised in the table. As can be observed, respondents who opine in the affirmative foresee considerable improvements in products sold domestically if PSS were adopted. On the other hand, for respondents who opposed adopting PSS in domestic markets, low adaptability and a perceived lack of synergy in implementing PSS were seen as the principal deterrents.

3.2.7. Key Highlights

Some of the key findings derived from the analysis of leather sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the companies in the sector, with around 79 per cent of the respondents dealing with them for one and a half decades or less.
- Increased durability and restricted use of chemicals on the products were the principal product-level improvements derived by the respondents due to compliance.
- Improvements in quality of final products and increased market access were the major benefits of adoption of PSS as per the respondents.
- All the leather sector respondents confirmed increased exports post adoption of PSS and compliance with relevant standards.
- In the leather sector, most of the respondent companies (82%) deal with finished goods.
- The incidence of multiple standards on the same product, as per the responses, is mainly influenced by clients and their requirements.
- There were no instances of denial of market entry reported by the respondents in the leather sector. The markets the respondent companies have been exporting to are Asia [including East Asia (China, Hong Kong, Japan and Korea), SAARC countries and Vietnam], Australia, North America (including USA and Canada), Europe (including Denmark, UK, France, Germany, Italy, Netherlands, Poland, Portugal, Russia and Spain), Middle East (including UAE and Saudi Arabia), New Zealand and South America. Denial of access to



these markets, specifically on the grounds of PSS, has not been experienced by the respondents, as reported.

- The total cost towards PSS for around 75 per cent of the respondent companies was Rs. 0.1 Mn. or less.
- Among the respondent leather companies, only 6% of the companies had to pay membership fees.
- High-cost factor and delays were seen as the major lacunae by the respondents.
- Around 78 per cent of the relevant respondents supported the adoption of PSS in domestic markets, while 22 per cent did not see any benefits.



3.3. Textiles

3.3.1. Overview

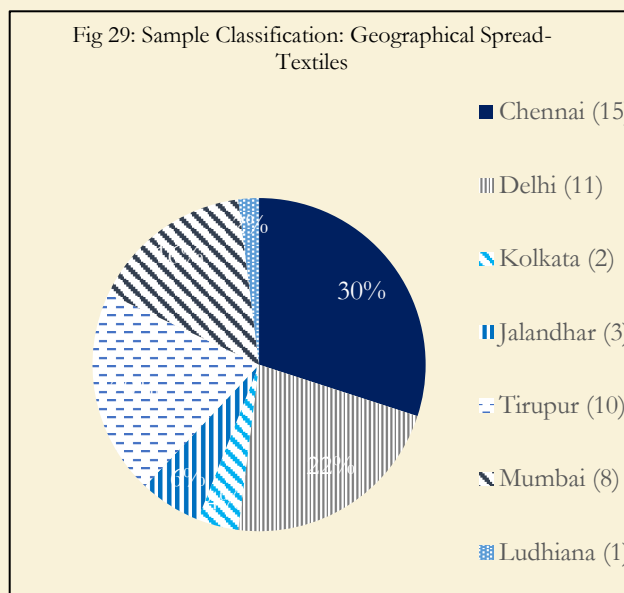
India's textile export sector is one of the largest contributors to the country's overall exports with a share of around 15 per cent. (Industry, 2016). The Indian textile industry has two broad segments, i.e. the unorganised sector (consisting of handloom, handicrafts and sericulture, which are operated on a small scale and through traditional tools and methods) and the organised sector (comprising the spinning, apparel and garments segment, which apply modern machinery and techniques such as economies of scale). The textile industry employs about 51 Mn. people directly and 68 Mn. people indirectly. India's overall textile exports during FY 2015-16 stood at USD 40 billion. (IBEF, Textile Sector Overview, 2016). According to IBEF, the Indian textiles industry is currently estimated at around USD 120 billion and is expected to reach USD 230 billion by 2020. The industry contributes approximately 4 per cent to India's Gross Domestic Product (GDP) and 14 per cent to the overall Index of Industrial Production (IIP). Indian khadi product sales increased by 33 per cent year-on-year to RS. 2,005 crores (USD 311.31 Mn.) in 2016-17 and are expected to exceed the Rs. 5,000 crore (USD 776.33 Mn.) sales target for 2018-19. Indian exports of locally made retail and lifestyle products grew at a Compound Annual Growth Rate (CAGR) of 10 per cent from 2013 to 2016, primarily driven by bedding, bath, and home decor products, as well as textiles. The Government of India targets textile and garment exports at USD 45 billion for 2017-18.



3.3.2. Firm Details

3.3.2.1 Sample

The textile sample comprised firms from Chennai (30 per cent) and Tirupur (20 per cent) in southern India, Delhi (22 per cent), Ludhiana (2 per cent) and Jalandhar (6 per cent) in northern India, Mumbai (16 per cent) in western India and Kolkata (4 per cent) in eastern India. Textile production is concentrated in southern India. Therefore, around 50 per cent of the textile sample was from clusters such as Chennai and Tirupur. Further, around 16 per cent of the sample was from Mumbai, another important destination for textile production and export.



Source: Based on the survey

Table 57: Position of Sample Textile Companies in Global Value Chain- Textiles

Product Category	Percentage of Sample
Raw Materials	-
Semi-finished Raw Materials	-
Intermediate	16
Semi-finished Intermediate	68
Finished	16

Source: Based on the survey

Table 57 summarises how the sample textile companies cater to the global value chain. Around 68 per cent of the sample companies dealt in semi-finished intermediate products, whereas those dealing in finished goods formed a mere 16 per cent of the sample. This overdependence on semi-finished intermediate exports can be seen as a possible premise towards increased impact of standards on the sector. Therefore, a shift towards increased export of finished goods may be necessary to minimise the adverse impact of standards, wherever applicable.



3.3.2.2 Application and Scope of PSS

To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance, challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.

3.3.2.3 Costs

The survey focussed on financial aspects such as total costs towards PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost of individual standards, and the percentage increase in per-unit product price due to compliance, as per the availability of information.

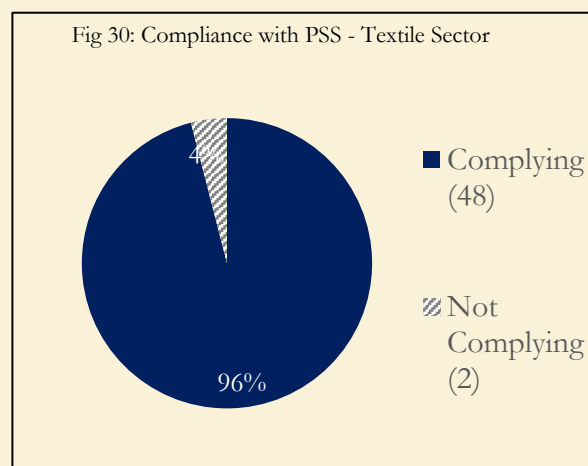
3.3.2.4 Adoption of PSS – Potential Gains

To assess the benefits derived from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focused on product-level improvements due to compliance.

3.3.3. Respondent Details

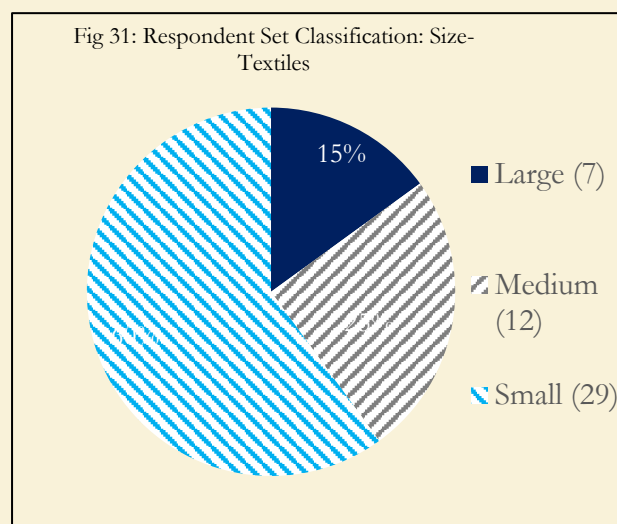
3.3.3.1 Share of Respondents in the Textile Sector

The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS, was 96 per cent for the textiles sector. The remaining did not comply with any PSS (per the criteria set for this study, as specified in the methodology section), based on the responses received. Therefore, 48 firms are taken up for further analysis.



Source: Based on the survey

3.3.3.2 Size-wise distribution of Textile Sector Respondents

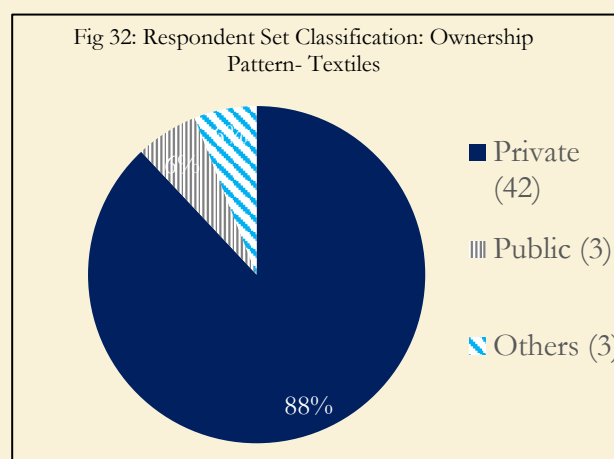


Source: Based on the survey

Of the textile respondents, around 60 per cent were small enterprises, with large and medium companies accounting for 15 per cent and 25 per cent, respectively. The responses from small enterprises dominated this sector.

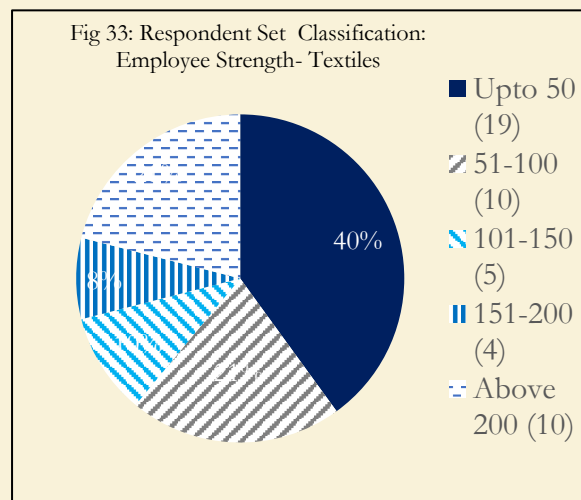
3.3.3.3 Ownership Pattern of Textile Sector Respondents

A majority, i.e., 88 per cent, of the respondent textile companies were in the private sector, with the share of public enterprises at 6 per cent. There were no partnership companies in the sample.



Source: Based on the survey

3.3.3.4 Employee Strength of the Textile Sector Respondents

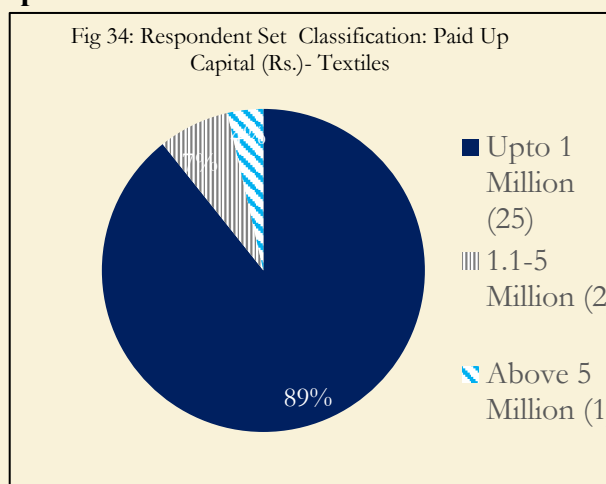


Companies with employee strength of up to 50 formed 40 per cent of the textile respondents' set; the proportion of companies with 51-100 employees, 101-150 employees, 151-200 employees and above 200 employees being 21 per cent, 10 per cent, 8 per cent and 21 per cent respectively.

Source: Based on the survey

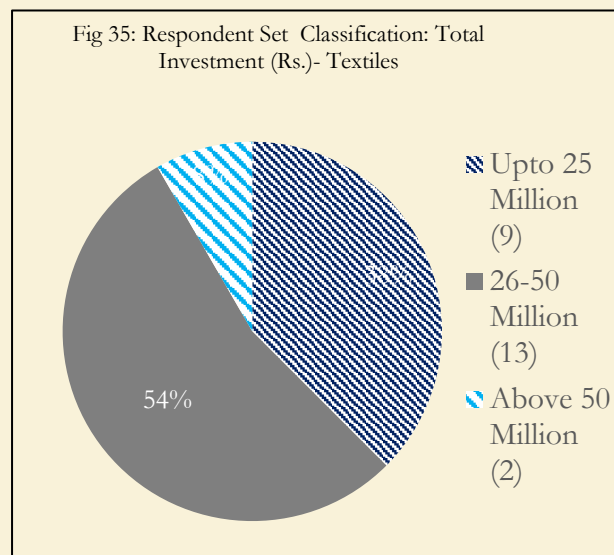
3.3.3.5 Paid Up Capital of Textile Sector Respondents

Around 89 per cent of the respondent companies reported paid-up capital of up to Rs. 1 Mn. Companies with paid-up capital of RS. 1.1-5 Mn. and above RS. 5 Mn. formed 7 per cent and 4 per cent of the respondents respectively. Therefore, the category of 1 Mn. paid-up-capital companies could have had a significant impact on the survey results.



Source: Based on the survey

3.3.3.6 Total Investment of Textile Sector Respondents



Around 38 per cent of the total respondents reported total investment figures of up to Rs. 25 Mn.. Companies with total investments of Rs. 26-50 Mn. and above Rs. 50 Mn. formed 38 per cent and 54 per cent of the respondents respectively.

Source: Based on the survey

Table 58: Products Handled by Textile Sector Respondents- Textiles

Broad Categories of Textiles Products	
Apparels/garments, fabrics, home textiles, woollen items, yarn	
Product(s)	Percentage of Sample
Apparels/garments (including beaded garments, printed garments, safety wear, sportswear, etc.)	94
Fabrics (including PU and PVC fabric)	14
Home Textiles	2
Woollens (including sweaters and caps)	4
Yarn	6

Source: Based on the survey

The textiles sample covered broadly apparel, garments, fabrics, woollen items, and yarn. The table summarises the product variants dealt in by the sample companies along with respective percentages of the sample. As can be seen from Table 39, a very high share of 94 per cent of respondents deal in apparel and garments. However, the overall sample comprises a high percentage (68 per cent) of firms dealing in semi-finished intermediate goods, compared with a minimal share (16 per cent) of firms dealing in finished products (see Table 38). This indicates a lower role for the respondent firms as standard setters.



Table 59: Export Destinations of Textile Sector Respondents

Export Destinations		
Countries/Regions	Share (Range) (Percentage)	Share (Average) (Percentage)
Australia	10-40	17.50
Canada	10-15	13.75
East Asia (Including China, Hong Kong, Japan, and South Korea)	10-40	18.75
Europe/Eurasia (including Netherlands, Italy, UK, Poland, Germany, France, Switzerland and Turkey)	10-80	26.20
Middle East and Gulf Countries (including UAE, Kuwait, Saudi Arabia and Qatar)	10-80	30.5
Singapore	-	5.00
South Africa	10-30	21.25
USA	10-70	28.86
Bangladesh	10-80	28.00
Latin America (including Brazil and Mexico)	10-20	15.00

Source: Based on the survey

The table summarises the major importing countries/regions for the respondent textile companies, as well as the ranges and average export shares to these countries. European and Eurasian countries, the Middle East and Gulf countries, South Africa, the USA, and Bangladesh were among the major markets for the respondent set.

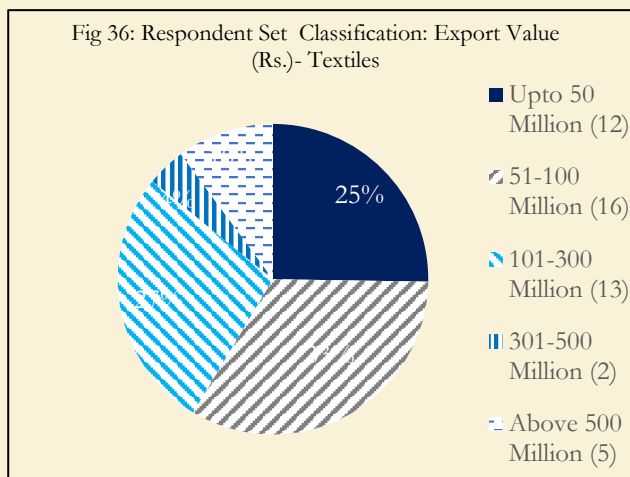


3.3.3.7 Value of Exports by Respondents in Textile Sector

For around 25 per cent of the respondent textile companies, the total export value – for the last completed year – was up to Rs. 50 Mn. Companies having annual export values of Rs. 51-100 Mn., Rs. 101-300 Mn., Rs. 301-500 Mn. and above Rs. 500 Mn. formed, respectively, 33 per cent, 27 per cent, 4 per cent, and 10 per cent of the sample.

For around 58 per cent of the respondent set, the value of yearly exports was up to Rs. 100 Mn.

Based on the survey



Source:

Table 60: Share of Exports by Respondents in Textile Sector

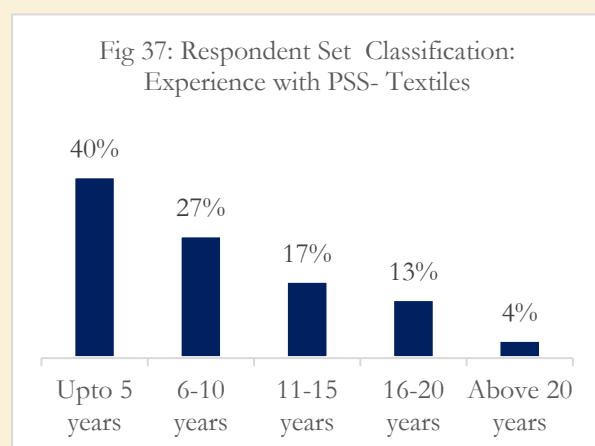
Share of Exports in Sales	Percentage of Sample
100 percent	23
76-99 per cent	38
50-75 per cent	17
30-49 per cent	10
21-29 per cent	13

Source: Based on the survey



The table summarises the ranges of the share of exports in sales and the corresponding percentages of respondents. For 23 per cent of the respondent companies in the textiles sample, all sales were through exports, as shown in Table 41. Given the presence of a strong domestic market for textiles (in places such as Tirupur), companies with more than 75 per cent of total

sales from exports accounted for around 60 per cent of the respondent set.



Experience with Private Sustainability Standards for Respondents in Textile Sector

PSS compliance has been a recent phenomenon for around 40 per cent of the sample textile companies, who have been complying with PSS for 5 years or less. The share of companies dealing in PSS for 6-10

years, 11-15 years, 16-20 years, and above 20 years was 27 per cent, 17 per cent, 13 per cent, and 4 per cent of the sample, respectively.

Source: Based on the survey

Companies with up to 10 years of experience with PSS formed close to 70 per cent of the respondent set.



3.3.4. Incidence and Scope of Private Sustainability Standards

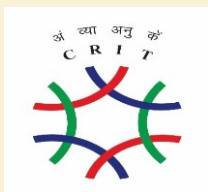
The respondent companies comply with several PSS, certifications, and associated audits, which are summarised in Table 61, along with the associated products, validity details, relevant countries, and broad descriptions of the standards/certifications/audits listed.

Table 61: Description of Standards- Textiles

PSS Name	Products	Validity (Years)	Countries/Regions	Description
BCI (Better Cotton Initiative)	Apparels, fabric and sweaters	1	Europe, USA	The Better Cotton Initiative (BCI) is a non-profit organisation that promotes better standards in cotton farming and practices across 24 countries. BCI aligns with the UN's goals to advance global water sustainability and sustainable agriculture. The initiative promotes the use of organic cotton by promoting the use of recycled cotton. It opposes the use of pesticides, fertilisers, and GMOs. BCI also promotes improved irrigation practices.
GOTS (Global Organic Textile Standards)	Apparels/garments, fabric, yarn, sweaters	1-3	USA, Europe, Australia, Canada, Japan, South Korea, Dubai, Hong Kong	The Global Organic Textile Standard (GOTS) is the leading textile processing standard worldwide for organic fibres. It includes ecological and social criteria backed up by independent certification of the entire textile supply chain.
SA-8000	Apparels	1-3	USA, Europe (including France), Australia, Canada	SA 800 Certification is a process through which individual companies (factories, farms, and other workplaces) and organisations undergo assessment by a third-party auditor. Third-party certification involves an independent assessment that confirms that



				specified requirements for a product, person, process, or management system have been met.
Fairtrade	Fabric, garments, sweaters	1	USA, Europe (including UK and Italy), Japan, China	The Fairtrade organisation forms a partnership between the consumer and the producer and aims to eliminate other third parties from the supply chain. Fairtrade promotes equality in the marketplace and puts the producer first by providing him with adequate access and fair market rates.
Walmart & Jones Apparel Group Certification	Garments	Per shipment basis	USA, EU	Compliance measures for Walmart & Jones Apparel Group required to obtain necessary certifications.
BSCI Certification (Business Social Compliance Initiative)	Apparels	3	USA, UK, France, Germany	BSCI supply chain management system is based on the ILO standards and encourages companies to improve their social performance by improving working conditions in factories and offices.
GRS Certificate (Global Recycled Standard Certificate)	Yarn	1	USA, Japan, South Korea, Europe	GRS certificate ensures that companies producing or selling recycled products adhere to environmental principles, social requirements, labelling and traceability.
ISO (International Organization for Standardization) Standards (9001:2008, 14004:2004)	Apparels/garments (including beaded garments, safety garments, etc.), fabric, sweaters	1-3	Europe (including Italy, France and Poland), USA UAE, Saudi Arabia Mexico, South Africa, Brazil, Canada, Australia, Hong Kong, Bangladesh, Japan, South Korea	ISO is a body that addresses quality management standards that an organisation needs to fulfil. It assesses an organisation's ability to meet customer and regulatory requirements, quality management system, etc. and provides guidelines for performance improvement.
Walt Disney Certification	Garments	1	EU, USA, UAE	Disney has developed its own International Labour Standard and holds its global suppliers accountable to all aspects of it, as a minimum requirement for conducting business with them. The core component



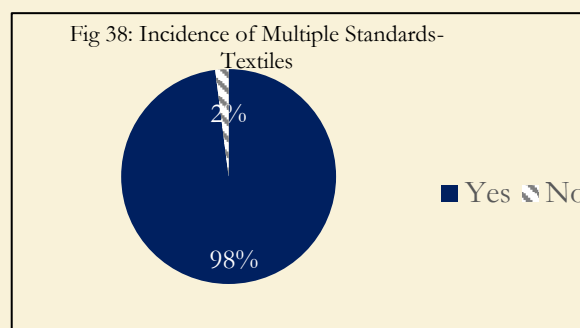
				of this standard is Disney's Code of Conduct for Manufacturers, which helps ensure that Disney merchandise is produced in a socially compliant manner.
OEKO-TEX	Apparels/ garments, fabric, yarn	1	Turkey, USA, Europe (including EU), Bangladesh, Hong Kong, Canada, Middle East, South Korea	OEKO-TEX is an independent testing and certification system for textile products that encompasses all stages of production (fibres, yarns, fabrics, and ready-to-use end products, including accessories) along the textile value chain. It evaluates the environmental friendliness of the production processes.
SGS Certification (Société Générale de Surveillance Certification)	Apparels and fabric	1-3	USA, Europe/Eurasia (including Turkey and France), Bangladesh, Canada, Australia, South Africa, UAE	SGS assesses and certifies manufacturers' production processes based on the requisite parameters.
WRAP (The Worldwide Responsible Apparel Production Principles)	Apparels	1-2	Europe (including UK), USA, Australia, UAE, Canada, Japan	They are core standards for production facilities participating in the WRAP Certification Program. The program's objective is to independently monitor and certify compliance with this socially responsible global manufacturing standard and to ensure that products are manufactured under lawful, humane, and ethical conditions. The WRAP principles include: - Compliance with laws and workplace regulations - Freedom of association and collective bargaining



				- Prohibition of harassment or abuse - Prohibition of discrimination - Prohibition of forced labour - Prohibition of child labour - Compensation and benefits - Hours of work - Health and safety - Customs compliance - Environment - Security
SEDEX (Supplier Ethical Data Exchange)	Footwear, jackets, bags	1	USA, EU, Canada	SEDEX is a membership organisation for businesses committed to continuous improvement of the ethical performance of their supply chains. SEDEX enables member companies to efficiently manage the ethical and responsible practices of their global supply chains, generating transparency through data exchange.
Social Auditing - Intertek	Garments	1	Europe	Social auditing assesses the quality of a facility, its procedures and systems through trained auditors. Intertek audits manufacturing facilities around the world, providing independent assessments of factory quality systems. They provide an independent view of a facility's ability to produce quality products consistently.

3.3.4.1 Incidence of Multiple Standards

A majority (98 per cent) of the textile respondents comprised companies that had to deal with multiple standards, i.e. more than one PSS. Companies that had to deal with only one standard accounted for the remaining 2 per cent of the sample.



Source: Based on the survey

3.3.4.2 Difficulties in Obtaining PSS

Based on the responses received, no textile companies reported bottlenecks in obtaining PSS certifications.

Table 62: Improvements in Products due to PSS Compliance- Textiles

Improvements	Percentage of Respondents
Increased durability	44
Eco-friendly and organic nature of products	26
Overall improvements in products	26
Improved consumer safety (restricted use of harmful content)	4

Source: Based on the survey.

The share of respondents citing improvements specific to product quality due to compliance with relevant standards was 54 per cent. Around 26 per cent of these respondents – dealing in apparels, fabrics, yarn, etc. – recognised that their products became more organic/eco-friendly as a result of adherence with relevant standards. 44 per cent of respondents – dealing in garments and fabrics – informed that their products gained in durability. 4 per cent of respondents—dealing in apparel—cited improvements in the safety aspects of their products; companies reporting overall improvements accounted for 26 per cent of respondents.



Table 63: Structural Modifications Required- Textiles

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Modifications/alterations in sewage plants, labs, ventilation systems and security systems	59
	Installation/changes in HVAC systems	23
	Installation of cooling equipment and other new machineries	5
	Modifications in production plants	14
Accounts and administration	Health Insurances	9
	Installation of new systems and software	27
	Installation of new documentation systems as well as changes in the existing according to social audit demands	36
Production process	Modifications in waste management system	32
	Introduction/maintenance of improved, sustainable and hygienic production processes	32
	Proper disposal of chemical waste	5
	Labour welfare and restricted use of old machinery	5
Marketing and sales	Modifications in PR policies	5
	Changes in raw material procurement	14
	Modifications in distribution channels and improvements in sales chains	36
	Changes with respect to the customer interface, i.e., installation of CRM software, introduction of new de-marketing techniques wherever necessary, etc.	18

Source: Based on the survey.

The assessment of structural modifications – if any – required to be made by the respondent companies with respect to four broad parameters, i.e. building/structural, accounts and administration, production process and marketing/sales, revealed that around 46 per cent of the overall respondent set had to ensure the same for PSS compliance. The table details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes. Modifications to sewage plants, labs, ventilation and security



systems; installation/modernisation of HVAC systems; improvements/digitisation of documentation procedures; hygienic processes/better waste management; and improvements in supply chain management (distribution channels, etc.) were among the principal structural changes identified by the respondents across the parameters mentioned.

Table 64: Benefits of Adoption- Textiles

Benefits of Adopting PSS	
Parameter	Percentage of Sample
Better quality final product	98
Regulation of waste generation	83
Streamlining the processes (like better resource/inventory management)	79
Confirmed business orders for a certain number of years	77
Exclusivity in terms of supplying to the clients	75
Greater access to markets/companies	75
Better working conditions	71
Promotion of alternative ways of production	46

Source: Based on the survey.

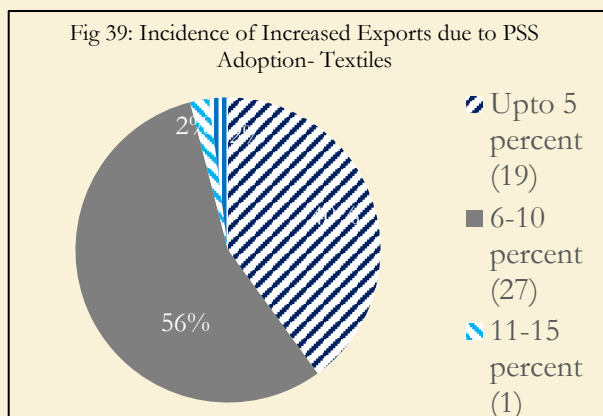
Compliance with PSS resulted in various improvements, according to the respondent companies. Improvements in quality aspects of the products handled came out to be the most cited improvement, with 98 per cent of the respondent firms indicating the same, followed, in order of importance, based on frequency of responses, by better regulation of waste generation, streamlined processes, increase in confirmed business orders, exclusive orders from clientele, increased market access, improved working conditions and promotion of alternate production techniques.



3.3.4.3 Incidence of Increased Export Participation

The entire set of textile manufacturer-exporters confirmed increased exports post-adoption of PSS and compliance with relevant standards, indicating the practical importance of these voluntary standards. For around 56 per cent of the respondents, the increase in overall exports was 6-10 per cent. Companies with export increases of up to 5 per cent accounted for 40 per cent, with those with increases of 11-15 per cent and more than 15 per cent each accounting for 2 per cent.

Source: Based on the survey.



3.3.4.4 Incidence of Conditionality in PSS

None of the respondent textile companies reported experiencing effects on their business processes due to the conditionality aspects of the relevant standards.

Table 65: Major Challenges Posed by PSS- Textiles

Challenges	Product Category(s) Dealt In	Percentage
Structural changes and modifications (buildings, production processes, machines)	Apparels, beaded garments, fabric (including PU fabric), yarn	68
Restrictions in hazardous contents and waste management	Apparels, fabrics, yarn	14
High-cost related issues	Fabrics, apparels/garments	14
Time-consuming process	Sweaters	5

Source: Based on the survey.

Around 13 of the sample companies indicated practical challenges faced in compliance procedures related to PSS. They indicated structural changes required for ISO, SGS, and Oeko-



Tex certifications. Stringent procedures regarding hazardous contents and waste management were reported primarily by respondents who comply with GOTS certification. Cost inflation was reported by respondents complying with BCI, SGS, and Fairtrade. Time-consuming processes were also reported by respondents requiring GOTS certification.

Table 66: Incidence of Multiple PSS in Different Markets- Textiles

PSS 1	Country(s)	PSS 2	Country(s)	Percentage of Respondents	Products
ISO 9001 Certification	USA, European Countries (including Italy and UK)	GOTS Certification	European Countries (including UK), USA	100	Sweater, Apparel and Garments (includes ladies' garments)

Source: Based on the survey.

Table 66 summarises the incidence of multiple standards – based on client demands – being complied with for textile products in different markets. Around 6 per cent of the respondent set had to comply with multiple standards in different markets for the same product. The table also indicates the share of the respondents reporting a particular combination of standards.

3.3.4.5 Instances of Denial of Entry into Markets

The respondent companies reported no instances of entry being denied into any specific markets due to PSS. On analysing the overall sample, it was observed that around 16 per cent of the companies contributed intermediate products to the global value chain, with 68 per cent exporting semi-finished intermediate products (Table 38). These firms cater to leading brands worldwide and, therefore, it may be assumed that they are conversant with the standards they must maintain. This brings down the extent of denial of market entry due to non-compliance.



Table 67: Compliance Areas for Obtaining PSS- Textiles

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
BCI	Apparels, Fabric, Sweater	Europe, USA	6	6				
BSCI	Apparel	USA, UK, France, Germany	2	2	2	2	2	
SA 8000	Apparels	USA, Europe (including France), Australia, Canada	4	4	4	4	4	
Fairtrade Certification	Fabric, Garments	USA, Europe (including UK and Italy), Japan, China			6			
GOTS CERTIFICATION	Apparels, Fabrics, Garments, Sweater, Yarn	USA, Europe, Australia, Canada, Japan, South Korea, Dubai, Hong Kong	12	12	4	4	12	
GRS Certificate	Yarn	USA, Japan, South Korea, Europe	2	2	2	2	2	
ISO (International Organization for Standardization) Standards (9001:2008, 14004:2004)	Apparels, Garments (includes safety, sports, beaded), Fabric, Sweater, Yarn	Europe (including Italy, France and Poland), USA	74	74	56	36	56	2
Certifications								
SEDEX Certification	Apparels, Garments	UAE, USA, EU (including UK, France and Germany)	6	6	6	4	4	2



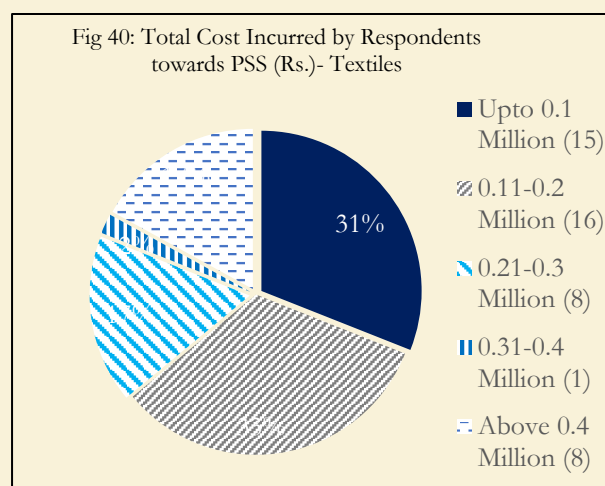
PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
SGS Certificate	Apparels, Home textiles	USA, Europe/Eurasia (including Turkey and France), Bangladesh, Canada, Australia, South Africa, UAE	6	6	6	6	4	
OEKO-TEX Certification	Apparels, Fabric, Yarn, Garments	Turkey, USA, Europe (including EU), Bangladesh, Hong Kong	8	10	8	8	10	
Walt Disney Certification	Garments	EU, USA, UAE	4		2			
WRAP Certification	Apparels	Europe (including UK), USA, Australia, UAE, Canada, Japan	12	12	12	12	12	

Source: Based on the survey.

Table 67 summarises the relevant PSS, product categories, and countries/regions to which they apply, the compliance areas, and the percentage of textile respondents who abide by these compliance aspects.

3.3.5. Financial Aspects of PSS Compliance

3.3.5.1 Total Cost towards PSS



Of the textile respondents analysed, the total cost towards PSS for around 31 per cent of the companies was Rs. 0.1 Mn. or less. Companies with total cost of Rs. 0.11-0.2 Mn., Rs. 0.21-0.3 Mn., Rs. 0.31-0.4 Mn. and above Rs. 0.4 Mn. formed, respectively, 33 per cent, 17 per cent, 2 per cent, and 17 per cent of the respondent set.

Source: Based on the survey.

Table 68: Comparison between Total Cost towards PSS- Size of companies- Textiles

Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	5	11	29	0
0.6-1 Mn.	1	0	0	0
1.1-5 Mn.	1	1	0	0
Above 5 Mn.	0	0	0	0

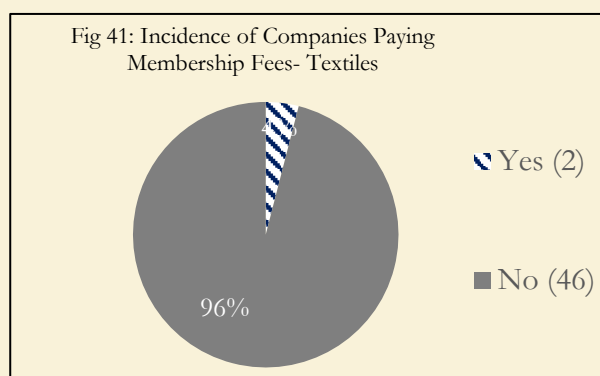
Source: Based on the survey.

Among the respondent companies, the majority had expenses of up to 0.5 Mn. 29 micro companies, 11 medium-sized companies, and 5 large companies fell into this category. The highest expense ranged from 1.1 Mn to 5 Mn, borne by 1 firm each in the large and medium sectors.



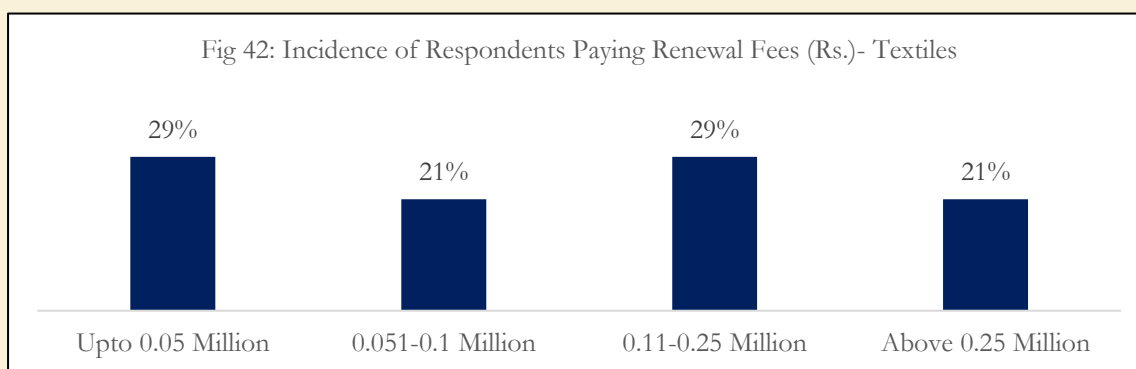
3.3.5.2 Incidence of Membership Fees

Only 4 per cent of the respondent textile companies had to pay membership fees. Such requirements were not there for a majority (96 per cent) of the sample. This is indicative of the prevalence of sub-contracting and minimal participation of firms in the formulation of standards.



Source: Based on the survey.

3.3.5.3 Incidence of Renewal Fees



Source: Based on the survey.

Based on the responses received, around 84 per cent of the sample companies had to pay annual renewal fees; the ranges of amounts incurred and the share of respondents paying them are depicted in the chart. For around 50 per cent of respondents, annual renewal fees were up to Rs. 0.1 Mn.

Table 69: Cost Implications- Textiles

PSS Name	Number of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(In RS. Mn.s)	(in Rs. Lack)		



Standards		0.01 to 0.2	0.1 to 2	0.02 to 5	8.38
Fairtrade	7	0.06-0.16	0.6-1.6	0.02-1	1.15
BCI Standards	4	0.07-0.3	0.7-3	0.02-5	1.8
BSCI Standards	1	0.032	0.32	0.5	0.32
Global Organic Textile Standards (GOTS)	12	0.03-0.2	0.3-2	0.02-5	0.7
GRS	1	0.085	0.85	2	0.85
ISO	38	0.01-0.065	0.1-0.65	0.02-5	0.29
SA-8000	3	0.1-0.15	1-1.5	0.5	1.27
Walmart & Jones Apparel Group Standards	1	0.2	2	0.5	2
Certifications		0.014 to 0.5	0.14 to 5	0.2 to 5	0.88
OEKO-TEX	5	0.03-0.08	0.3-0.8	1-5	0.62
SEDEX Certification	4	0.014-0.5	0.14-5	0.2-2	1.39
SGS Certification	6	0.018-0.2	0.18-2	0.2-2	0.58
WRAP Certification	8	0.032 to 0.15	0.32-1.5	0.2-0.6	0.9

Source: Based on the survey.

The table summarises the annual cost implications for the respondent companies for various PSS complied with, as well as the percentage increase in per-unit costs due to compliance, as applicable and based on the availability of information.

Table 70: Visits by Certifying Bodies/Agencies and Associated Costs- Textiles

Heads	Percentage of Respondents	Range (In Rs. Mn.s)	Range (In Rs. Lakhs)
Travel	13	0.01-0.065	0.1-0.65
Accommodation	98	0.015-0.15	0.15-1.5
Visits	15	0.005-0.032	0.05-3.2
Testing	72	0.015-0.2	0.15-2
Miscellaneous	19	0.006-0.035	0.06-0.35



Source: Based on the survey.

All the sample companies confirmed that the certifying agencies/bodies visited their premises, and around 88 per cent informed that the visits were annual. The table summarises the heads under which visit-related expenses were incurred, the percentage of respondents who paid them, and the overall ranges of amounts paid for each head, as per the responses. Expenses for accommodation, company visits, and testing procedures can be higher across categories, according to the responses.

3.3.6. Perception Based Feedback

Table 71: Perception Regarding Role of PSS - Textiles

Respondent Perception on the Role of PSS			
Positives	Respondents (Percentage)	Negatives	Respondents (Percentage)
Increased opportunities in/access to domestic and international markets	63	Time-consuming processes	100
Improved customer base/customer loyalty	22		
Increased eco-friendliness in products	9		
Overall improvements in product quality	7		

Source: Based on the survey.

Of the responses analysed, around 96 per cent of companies regarded the role of PSS in their firms as positive. The respondents indicated greater acceptability and, therefore, access to international markets post-compliance, owing to improvements in product quality, environmentally friendly production processes, and related factors. The remaining 4 per cent of respondents considered the role of PSS negative.

The table summarises the various positives and negatives of compliance, as reported by respondents, and ranks the parameters by the frequency of feedback received. As can be observed, increased accessibility in international and domestic markets is perceived by the respondents as the principal positive impact of PSS compliance, followed by improvements in



customer base and loyalty, overall improvements in product quality, and enhancements in the environmental aspects of products. Time-consuming processes, due to excessive formalities and changes, were the only negative cited by the relevant respondents.

Table 72: Lacunae- Textiles

Parameters	Percentage of Sample
High investments	67
Inflated costs	24
Time-consuming processes	10

Source: Based on the survey.

Of the respondents, around 67 per cent believed that high investments, especially one-time investment components, were the lacuna in the compliance process, followed by cost inflation and procedural delays.

When enquired about the most striking impediments, high investment values, transaction cost inflation (incurred in the certification process), and time-consuming processes were again identified by the respondents as the major concerns.

Table 73: Adoption of PSS for Increased Domestic Sales- Textiles

Affirmative (50 Per Cent of Sample)		Opposing (48 Per Cent of Sample)	
Reasons	Percentage	Reasons	Percentage
Improved quality of products	63	No overall requirement of PSS in local markets	17
Improvements in the standard of locally sold products	4	Increased burden on small-scale producers	13
		Cost issues	13

Source: Based on the survey.

When respondents were asked about adopting PSS to increase sales in domestic markets, 50 per cent responded in the affirmative, while the remaining 48 per cent opposed it. The major reasons for the opinions formed and the percentage of the respective respondent sets opining the same have been summarised in the table.



3.3.7. Key Highlights

Some of the key findings derived from the analysis of textiles sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the companies in the sector, with around 67 per cent of the respondents dealing with them for a decade or less.
- Increased durability and the eco-friendly and organic nature of the products were the principal product-level improvements derived by the respondents due to compliance.
- Improvements in quality of final products, better regulation of waste and increased market access were the major benefits of adoption of PSS as per the respondents.
- 54 per cent of the textiles sector respondents confirmed increased exports post adoption of PSS and compliance with relevant standards.
- Structural changes and modifications – as a part of ISO, SGS and Oeko-Tex certification procedures – were cited by 68 per cent of the relevant respondents, i.e. those who reported to have faced challenges, as the major challenges in the compliance procedure.
- The incidence of multiple standards on the same product, as per the responses, is majorly influenced by clients and their requirements.
- There were no instances of denial of market entry reported by the respondents in the textiles sector. Most of the respondents dealt in intermediate or semi-finished products, supplying leading brands and therefore governed by these players' preferences. The dearth of finished-goods suppliers is assumed to be the reason for the minimal instances of denial of entry in international markets.
- The total cost towards PSS for around 64 per cent of the respondent companies was RS. 0.2 Mn. or less.
- Among the respondent textile companies, only 4% of the companies had to pay membership fees.
- High-cost factor and initial investment were perceived to be the major lacunae by the respondents.
- Around 50 per cent of the relevant respondents supported the adoption of PSS in domestic markets, while 48 per cent did not see any benefits.
- Around 68% of respondents in the Textile sector deal with Semi-Intermediate goods.



3.4. Wood

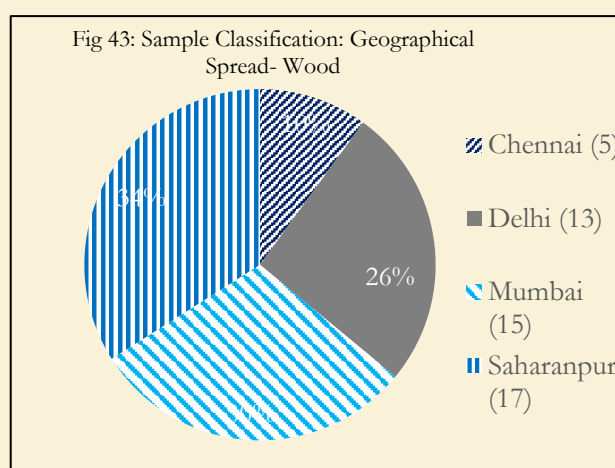
3.4.1. Overview

Wood products are one of the emerging export sectors in India, even as it remains a large-scale importer of wood in the global market. (IBEF, Wood Exports: Overview, 2016). The potential of converting wood into one of India's major export commodities has been recognised by the government, and policies focusing on sustainable development have been adopted to boost the export of wood products from India. Indian handicraft products made from wood continue to enjoy a large audience in the global markets. The handicrafts sector is important to the Indian economy, as it is a major employer and accounts for a significant share of the country's exports. (Industry, 2016). However, it has been a fragmented sector, with more than seven Mn. artisans and 67,000 export houses associated with it. According to IBEF, handicraft exports from India increased by 11.07 per cent year-on-year during April 2016-March 2017 to USD 3.66 billion, with the top destinations being the USA, the UK, the UAE, Germany, France, Latin American Countries (LAC), Italy, the Netherlands, Canada, and Australia. Processed wood and wooden items from India also enjoy considerable demand in the international markets.

3.4.2. Firm Details

3.4.2.1 Sample

The sample selected for analysing the incidence and impact of private sustainability standards in the wood products sector comprised entities from Chennai in the southern region of India, Mumbai in the western region and Delhi and Saharanpur in the northern region. The share of companies covered from these destinations is shown in the figure. The firms in the survey were largely (90 per cent) from the western and northern parts of India, with little presence in the southern states.



Source: Based on the survey.

Table 74: Position of Sample Wood Product Companies in the Global Value Chain- Wood

Product Category	Percentage of Sample
Raw Materials	-



Semi-finished Raw Materials	5
Intermediate	18
Semi-finished Intermediate	23
Finished	84

Source: Based on the survey.

Table 74 summarises how the sample wood product companies cater to the global value chain. The table also indicates that, in this sector, with 84 per cent of companies contributing finished goods to the global value chain, India has much higher bargaining power than in other sectors, where firms were seen to be operating at a lower level of product activity.

3.4.2.2 Application and Scope of PSS

To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance, challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.

3.4.2.3 Costs

The survey focussed on financial aspects such as total costs towards PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost of individual standards, and the percentage increase in per-unit product price due to compliance, as per the availability of information.

3.4.2.4 Adoption of PSS – Potential Gains

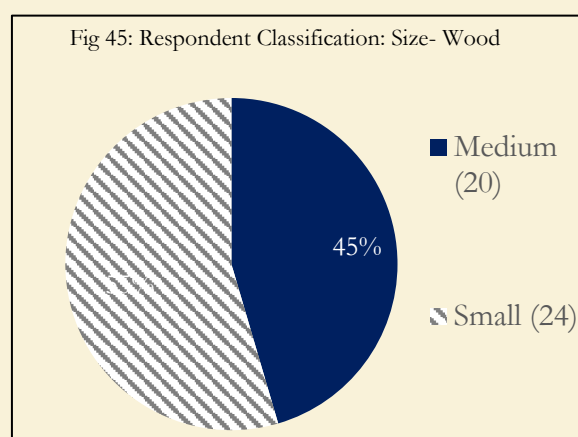
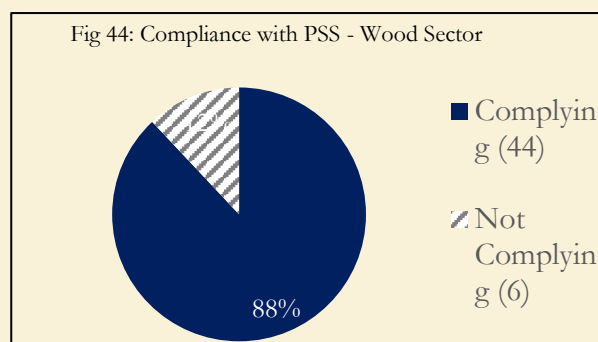
To assess the gains from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focussed on product-level improvements due to compliance.



3.4.3. Respondent Details

3.4.3.1 Share of Respondents in the Wood Products Sector

The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS, was 88 per cent for the wood products sector. The remaining did not comply with any PSS, as per the responses received. Therefore, according to the representative sample, around 88 per cent had to comply with private, voluntary standards with implications for sustainability (the areas under consideration for this study being environmental protection and animal welfare). Source: Based on the survey.



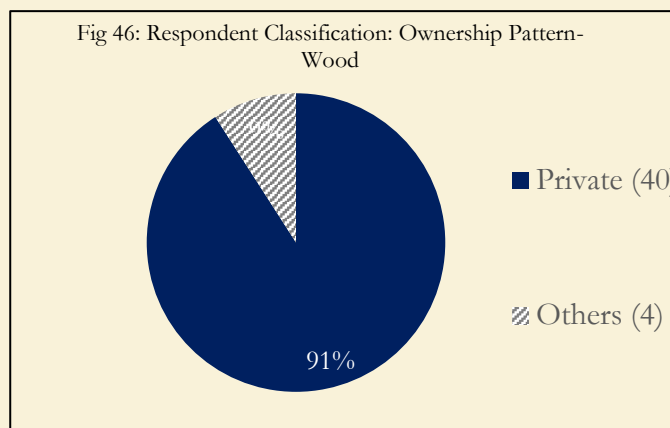
3.4.3.2 Size-wise distribution of the Wood Products Sector Respondents

Of the wood products respondent set, around 55 per cent were small companies, with 45 per cent medium-sized. The responses for this sector, therefore, are governed by medium and small players.

Source: Based on the survey.

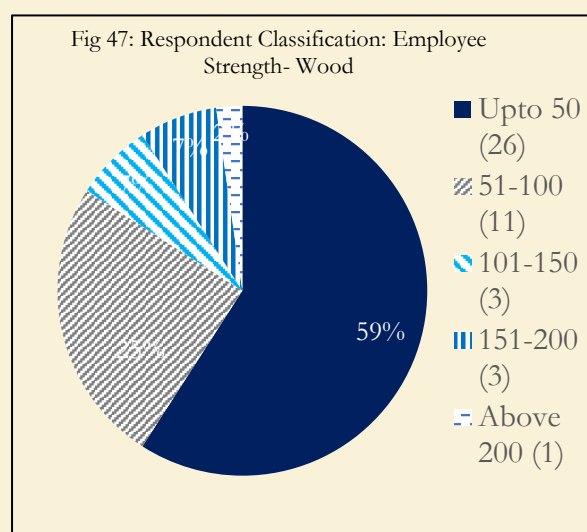
3.4.3.3 Ownership Pattern of the Wood Products Sector

A majority of the respondent companies, i.e. 91 per cent, were private entities. There were no partnership or public companies. Companies in categories other than these three accounted for 9 per cent of the respondent set. Therefore, for this sector, the responses henceforth will predominantly represent private-sector experience.



Source: Based on the survey.

3.4.3.4 Employee Strength of the Wood Products Sector Respondents



Companies with an employee strength of up to 50 accounted for 59 per cent of the respondent set. Companies with strengths between 51 and 100 employees accounted for 25 per cent of the respondents, while those with employee strengths in the ranges 101-150, 151-200, and 201-250 accounted for, respectively, 7 per cent, 7 per cent, and 2 per cent.

The respondent set, therefore, comprised mainly companies with up to 100 employees, with almost 85 per cent of respondents

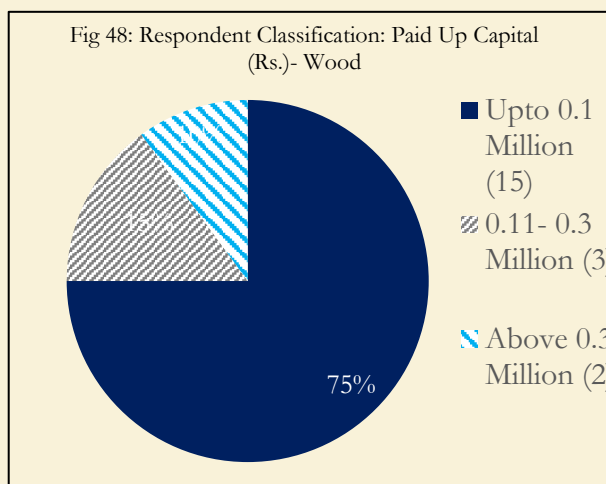
belonging to that category.

Source: Based on the survey.

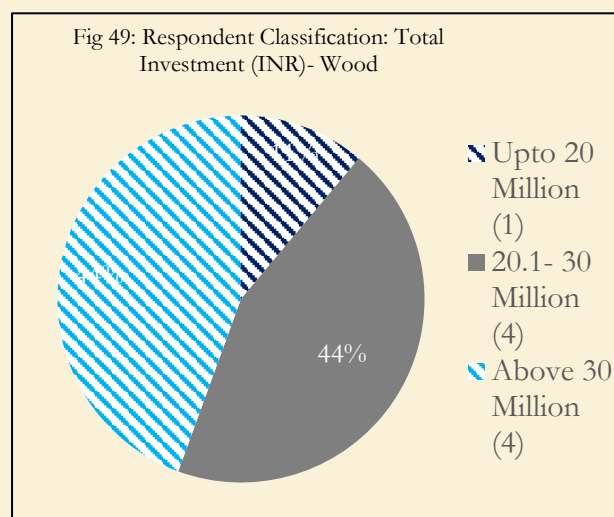
3.4.3.5 Paid-Up Capital in the Wood Products Sector

A considerable share of the responses received for the wood products sector – 75 per cent – indicated paid-up capital of up to Rs. 0.1 Mn. for the concerned companies. Companies with paid-up capital in the range Rs. 0.11-0.3 Mn. and above Rs. 0.3 Mn. formed 15 per cent and 10 per cent respectively.

With almost 90 per cent of the responses indicating up to Rs. 30 Mn. in total investments (figure 49), the amount generated from the primary market can be considered on the lower side for the respondent set. Source: Based on the survey.



3.4.3.6 Total Investment in the Wood Products Sector



Of the responses received, around 44 per cent of companies had total investment between RS. 20.1-30 Mn., and another 44 per cent above RS. 30 Mn. Firms with up to 20 Mn in investment accounted for 11 per cent of the responses.

Total investments of up to Rs. 30 Mn. were incurred by 89 per cent of the respondent set.

Source: Based on the survey.

Table 75: Products Handled by the Wood Product Sector Respondents- Wood

Broad Categories of Wood Products



Furniture, handicrafts, plywood, home décor and others	
Product(s)	Percentage of Respondents
Doors	7
Flooring	2
Furniture	55
Hardwood	16
Home décor products/kitchenware	16
Plywood	14
Handicrafts	66
Others (instruments, carvings, toys, statues, crates, etc.)	23

Source: Based on the survey.

The wood products respondent set dealt broadly in products such as furniture (bookstand, cabinet, stool, wood chair, tables, racks, etc.), handicrafts (bangles, candle stand, fruit basket, incense box, jewellery box, tissue box, wood ashtray and wooden boxes), kitchenware and home décor products (bookstand, frames, home décor, etc.). Products handled also included hardwood, doors, and other items (such as crates, musical instruments, temple chariots, veneers, wood carvings, statues, toys, etc.). The table summarises the product variants dealt in by the respondent companies, along with the percentages of respondents dealing in each. Furniture and handicrafts were the two major product categories addressed in the responses.

Table 76: Export Destinations for the Wood Product Sector Respondents- Wood

Export Destinations		
Countries/Regions	Share (Percentage) (Range)	Share (Percentage) (Average)
Mauritius	-	15.00
Asia (including China, Japan, Sri Lanka and Pakistan)	5-40	15.71
Europe (including UK, Finland, Denmark, Russia)	5-80	28.86
Middle East (including UAE, Turkey and Qatar)	5-100	46.21
USA	5-50	21.12

Source: Based on the survey.

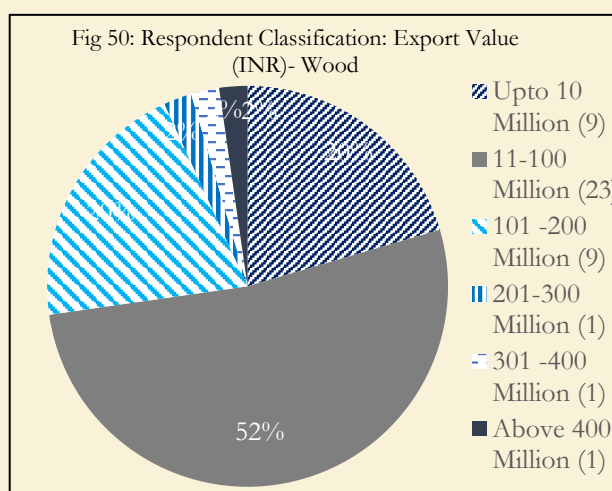


The table summarises the major importing countries/regions for the respondent companies, as well as the ranges and average shares of exports to these countries by these firms. Markets such as the Middle East, Europe, and the USA were major destinations for wood products, according to the responses.

3.4.3.7 Value of Exports by Respondents in the Wood Products Sector

For a considerable share of the respondent companies, i.e., 52 per cent, the total export value for the last completed year was in the range of RS. 11-100 Mn.. Companies having annual export values of up to RS. 10 Mn. formed 20 per cent of the respondent set, the share of those with export values of RS. 101-200 Mn. being another 20 per cent.

A majority of the wood sector respondents (~72 per cent) reported export values of up to Rs. 100 Mn.



Source: Based on the survey.

Table 77: Share of Exports in Wood Products Sector

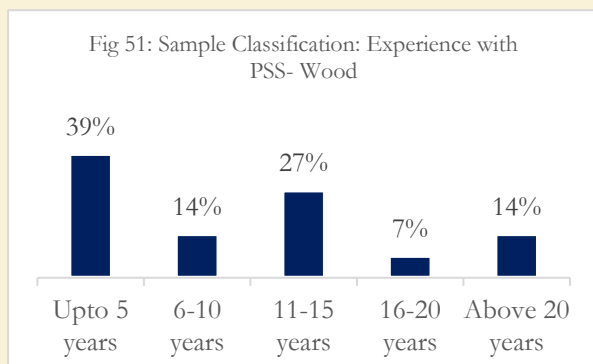
Share of Exports in Sales	Percentage of Respondents
76-99 per cent	26
50-75 per cent	5
30-49 per cent	24
21-29 per cent	17
Less than 20 per cent	29

Source: Based on the survey.

For none of the respondent companies was all sales through exports. Companies for which exports fell by 76-99 per cent of total sales accounted for 26 per cent of the respondent set. Companies whose exports were less than 20 per cent, 21-29 per cent, 30-49 per cent, and 50-75 per cent of total sales accounted for 29 per cent, 17 per cent, 24 per cent, and 5 per cent of the respondents, respectively.



3.4.3.8 Experience with Private Sustainability Standards for Wood Product Sector Respondents



PSS compliance has been a comparatively recent experience - dealing with such standards for a decade or less - for more than half the respondent companies. Companies with over 20 years of experience in such standards accounted for only 14 per cent of the respondent set. The companies seem to be

having mixed experiences in dealing with private standards issues.

Source: Based on the survey.



3.4.4. Incidence and Scope of Private Sustainability Standards

Table 78: Description of Standards- Wood

The respondent companies comply with a myriad of standards and obtain various certifications for clients globally. The following table lists the standards/certifications/audits that must be complied with, as per the responses received. It also summarises the associated products, validity details, relevant countries, and broad descriptions of these.

PSS Name	Products	Validity (Years)	Countries/Regions	Description
Standards				
ISO (International Organization for Standardization) Standards (9001:2008, 14001)	Boards, furniture, timber, floorings, pine wood products, tables, wood carvings, wood statues, plywood, pallets, temple chariots, hardwood	1-6	Europe, USA, UAE (including Saudi Arabia, Dubai), Iran, Turkey, Japan, Russia, South Asian Countries	ISO is a body that addresses quality management standards that an organisation needs to fulfil. It assesses an organisation's ability to meet customer and regulatory requirements, quality management system, etc. and provides guidelines for performance improvement.
VRIKSH (Timber Legality Assessment and Verification Standard)	Cabinets, frames, wood products (racks, carvings, boxes)	1	Europe	VRIKSH is a standard for verification of legality and legal origin of wood and wooden products. It is intended for entities who want to accurately track and



				make claims about the legal origin and transport of their products.
Certifications				
Chain of Custody (CoC) Certification	Wood flooring	1	USA	COC verifies whether FSC-certified material has been identified and separated from non-certified and non-controlled material as it makes its way along the supply chain from raw materials all the way through to the final product.
Supplier Ethical Data Exchange (SEDEX) Certification	Timber, wood products (statues, ashtrays and boxes)	2-5	USA, Canada, EU	SEDEX is a membership organisation for businesses committed to continuous improvement of the ethical performance of their supply chains. SEDEX enables member companies to efficiently manage the ethical and responsible practices of their global supply chains, generating transparency through data exchange.
Audits				
Social Audit's (Intertek, Bureau Veritas)	Jewellery boxes, pine wood products, timber, wood products (ashtrays, statues, boxes)	1	Europe, USA, Middle East	Companies conduct Social Auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, and sustainability are verified in this process.
Factory Audits (Intertek)	Jewellery boxes, tables	As per client	USA, Europe	A factory audit is a process aimed at assessing a facility's quality systems, workplace environment,



		requirements		and other capabilities in accordance with the client's standards.
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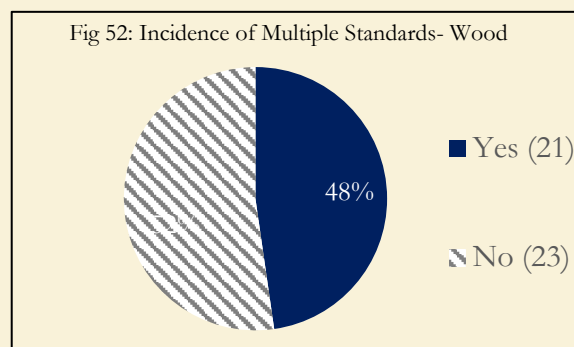
Sources: BRIEF Primary Research, Literature Review and Centre for WTO Studies, IIFT



3.4.4.1 Incidence of Multiple Standards

From the analysed set of wood products sector respondents, around 48 per cent had to comply with more than one standard for product variants and client requirements. The remaining 52 per cent of respondents reportedly complied with only one standard.

More than half of the responses regarding the incidence and implications of PSS pertained to only one standard.



Source: Based on the survey.

3.4.4.2 Difficulties in Obtaining PSS

None of the companies in the wood-product respondent set reportedly had difficulty obtaining the requisite certifications. A high share of companies dealing in finished goods (Table 57) may indicate greater involvement and bargaining power in the compliance procedure and, therefore, fewer difficulties in obtaining certifications.

Table 79: Improvements in Products due to PSS Compliance- Wood

Improvements	Percentage of Sample
Improved raw materials and procedures	57
Improved durability of products	45
Products more improved and sustainable in nature	18
Minimised risks of regulatory and environmental liabilities	2

Source: Based on the survey.

All companies in the respondent set cited improvements in product quality resulting from compliance with relevant standards. Among the respondents, around 57 per cent of companies – dealing in home décor, hardwood, plywood, handicrafts, and furniture products – reported that compliance with PSS has gradually improved the quality of the raw materials they use and the production processes they adopt. As per 45 per cent of the respondents – dealing in furniture, home décor, handicrafts, timber, and plywood – the adoption of PSS has increased the durability of their products. Further, around 18 per cent of the respondent companies – dealing in home décor, furniture, hardwood, etc. – reported that their products became more improved and more sustainable. The fact that PSS minimises the risk of regulatory and



environmental liabilities on their products was cited by 2 per cent of the respondent set, who dealt in wooden flooring, etc. Therefore, it may be inferred that for a considerable share of the respondent set, the compliance aspects related to PSS had resulted in improved product quality, operational aspects, etc., thereby increasing acceptance.

Table 80: Structural Modifications Required- Wood

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Airflow system modifications	13
	Changes in HVAC system	6
	Factory structure modifications	19
	Security enhancements	13
Accounts and administration	Installation of new systems and software	25
	Changes according to social auditing demands	13
Production process	Changes in existing production processes	31
	Introduction of new machinery/relocation of existing machinery	19
	Labour related modifications (deployment of skilled labour, limitations in number of workers at the production department, etc.)	13
	Streamlined waste management operations/hygienic processes	50
Marketing and sales	Changes in raw material procurement	13
	Management of distribution channel according to buyer demands	13
	Improvements in sales chain	6

Source: Based on the survey.

The analytical exercise included the assessment of structural modifications – if any – required of the respondents across four broad parameters: building/structural, accounts and administration, production process, and marketing/sales. Around 36 per cent of the respondents set analysed reported the incidence of structural changes that had to be made within the specified parameters for compliance with standards. The table details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes. Improvements in waste management processes and hygiene-related



practices, production streamlining, installation of new systems, and software upgradation were among the areas across the chosen parameters where changes were sought most.

Table 81: Benefits of Adoption- Wood

Benefits of Adopting PSS	
Parameter	Percentage of Sample
Better quality final products	88
Greater access to markets/companies	83
Exclusivity in terms of supplying to clients	73
Confirmed business orders for a certain number of years	71
Regulation of waste generation	63
Better working conditions	61
Streamlining the processes (like better resource/inventory management)	29
Promotion of alternative ways of production	15

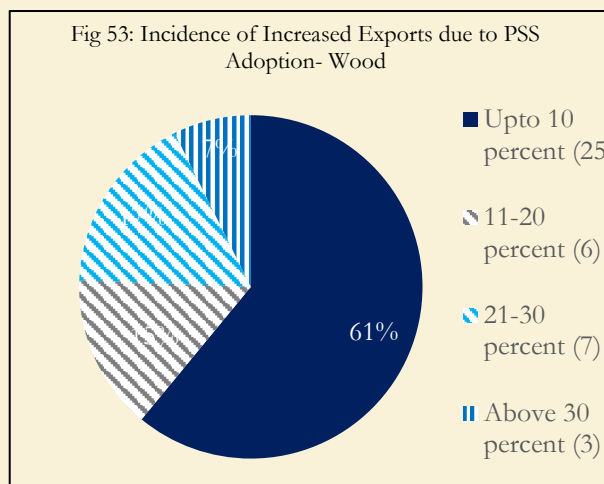
Source: Based on the survey.

The fact that compliance with PSS entails overall improvements was acknowledged by 93 per cent of the respondent companies. Among these relevant respondents, around 88 per cent reported improvements in product quality. Around 83 per cent of the relevant companies reportedly gained greater access to international markets. Exclusivity in supplying clients was reported by 73 per cent of the relevant respondents. The other benefits derived, in order of importance based on response frequency, included confirmed business orders, better regulation of waste management, improved working conditions, streamlined processes, and impetus for alternative production techniques.

3.4.4.3 Incidence of Increased Export Participation

A majority (93 per cent) of respondent wood product companies confirmed increased exports following the adoption of PSS and compliance with relevant standards, thereby indicating the impact of such standards despite their voluntary nature. For around 61 per cent of these respondents, exports increased by up to 10 per cent, while for another 15 per cent, exports increased by 11-20 per cent. Substantial growth in the metric, i.e. in the range 21-30 per cent and above 30 per cent, was experienced by 17 per cent and 7 per cent of the respondents, respectively.

Source: Based on the survey.



3.4.4.4 Incidence of Conditionality in PSS

None of the companies in the wood products respondent set experienced any conditionality for compliance with relevant standards.

Table 82: Major Challenges Posed by PSS- Wood

Challenges	Product Category(s) Dealt In	Percentage
Limitations in exports	Furniture	33
Cost-related issues	Home Décor	67

Source: Based on the survey.

In the survey, 3 of the respondent companies indicated practical challenges faced in compliance procedures related to PSS. Among these respondents, around 67 per cent reported high costs, such as high initial costs, escalated overall certification costs due to multiple certifications, and high certification fees per container. Around 33 per cent of the respondents flagged limitations in export processes.



3.4.4.5 Incidence of Multiple PSS in Different Markets

There were no cases of multiple PSS for the same product across different markets, as reported by respondents in the wood product sector. This indicates minimal instances of multiple standards and associated procedural and cost implications driven by client demands in the sector.

Table 83: Instances of Denial of Entry into Markets- Wood

PSS/Certification	Product (s)	Country (s)	Proportion of Respondents (Percentage)
VRIKSH (Timber Legality Assessment and Verification Standard)	Racks, frames, carvings, cabinets, boxes	Europe	20

Source: Based on the survey.

The table summarises the incidence of denial of market entry due to the lack of requisite certifications, including the product variants, the countries in which such certifications were required, and the share of the overall respondent set experiencing such denial.



Table 84: Compliance Areas for Obtaining PSS- Wood

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
ISO 14001	Boards, wood floorings	UAE	5		5			
ISO 9000	Jewellery boxes, pine wood products, table tops, timber, wooden ashtrays, wooden furniture, wooden statues	Europe, USA, UAE	32					
ISO 9001	Boards, furniture, jewellery boxes, pallets, plywood, temple chariots, timber, wooden boxes	Europe, Russia, Middle East, US	36		27	2		
Certifications								



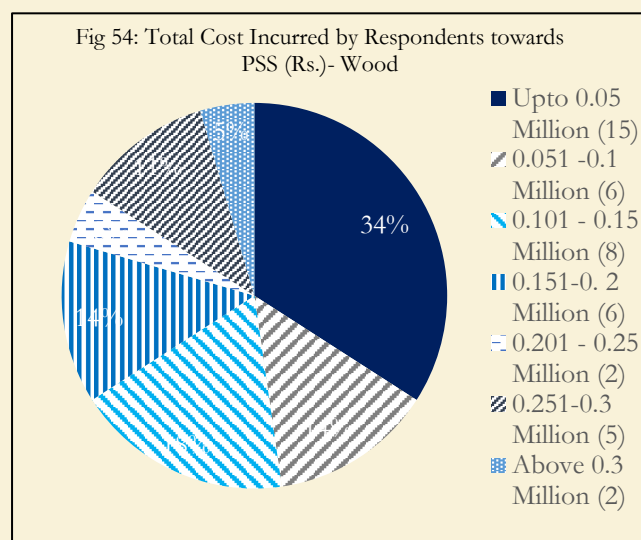
PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Supplier Ethical Data Exchange (SEDEX) Certification	Timber, wooden ashtrays, wooden statues	USA, EU	9	9		9		9
Audits								
Social Audits (by SGS, Intertek, etc.)	Jewellery boxes	USA, EU	5	5	5			

Source: Based on the survey.

The table summarises the relevant PSS, product categories, and countries/regions for which they apply, the compliance areas, and the percentage of the wood product respondent set that abides by these compliance aspects.

3.4.5. Financial Aspects of PSS Compliance

3.4.5.1 Total Cost towards PSS



Among the respondent set, the total cost of PSS for around 34 per cent of the companies was up to RS. 0.05 Mn.. Companies incurring total costs of RS. 0.051-0.1 Mn., RS. 0.101-0.15 Mn., RS. 0.151-0.2 Mn., RS. 0.201-0.25 Mn., RS. 0.251-0.3 Mn. and above RS. 0.3 Mn. formed 14 per cent, 18 per cent, 14 per cent, 11 per cent, 5 per cent, 11 per cent, and 5 per cent of the respondent set, respectively.

Source: Based on the survey.

Table 85: Comparison between Total Cost towards PSS- Size of companies- Wood

Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	0	20	24	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0

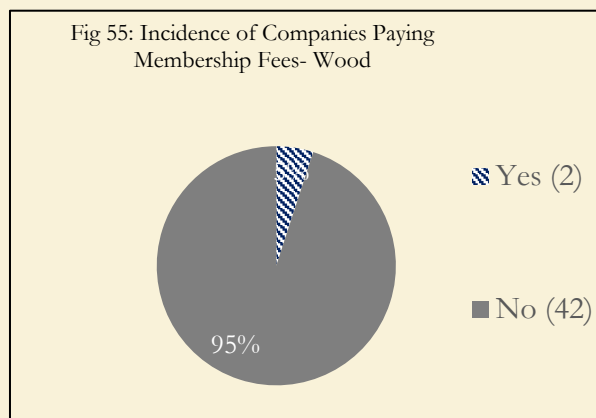
Source: Based on the survey.

According to the survey, the total cost for PSS was up to 0.5 Mn. 24 small-sized companies and 20 medium-sized companies reported that their total cost fell within this range.



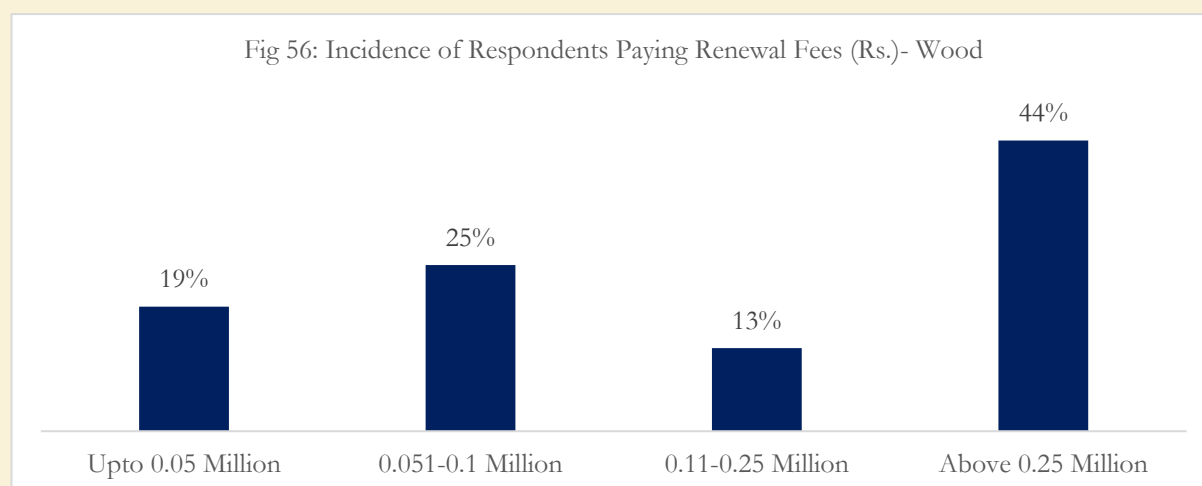
3.4.5.2 Incidence of Membership Fees

Among the respondent wood product companies, 5 per cent reportedly had to pay membership fees. Such requirements were not there for 95 per cent of the companies in the respondent set, indicating the presence of sub-contracting in the sector.



Source: Based on the survey.

3.4.5.3 Incidence of Renewal Fees



Source: Based on the survey.

Around 36 per cent of the respondent companies had to pay annual renewal fees. The ranges of amounts incurred and the share of relevant respondents paying them have been depicted in the chart. For around 44 per cent of respondents, annual renewal fees were up to Rs. 0.1 Mn.



Table 86: Cost Implications- Wood

The table summarises the annual cost implications for the respondent companies for various

PSS	No. of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(RS. Mn.s)	In Lakhs		
Standards		0.013- 0.15	0.13-1.5	0.1- 5	
VRIKSH	6	0.125-0.15	1.25- 1.5	0.2-1	0.5
ISO 14001	7	0.013-0.04	0.13-0.4	0.1-0.8	0.4
ISO 9000	13	0.045-0.08	0.45-0.8	0.1-0.5	0.25
ISO 9001	26	0.005-0.15	0.05-1.5	0.1-5	0.83
Certifications		0.06- 0.15	0.6- 1.5	0.02- 1.5	
Chain of Custody Certification	1	0.06	0.6	-	0.6
SEDEX Certification	5	0.08-0.15	0.8-1.5	0.02-1.5	0.62
Audits		0.05- 0.15	0.5- 1.5	0.2- 1.5	
Social Audits (Intertek, Bureau Veritas)	9	0.05-0.15	0.5-1.5	0.2-1.5	0.89
Factory Audits (Intertek)	1	0.06	0.6	-	0.2

PSS compliance requirements, as well as the percentage increase in per-unit costs due to compliance, where applicable and information is available. As can be observed, the ISO 9001 standard, SEDEX certification, and social audits are among the compliance areas that have the greatest impact on per-unit cost.

Table 87: Visits by Certifying Bodies/Agencies and Associated Costs- Wood

Heads	Percentage of Respondents	Range (In Rs. Thousands)
Travel	-	-
Accommodation	7	55-80
Visits	9	15-50
Testing	11	6-75
Miscellaneous	11	15-22

Source: Based on the survey.



Among the respondent companies, around 82 per cent confirmed that the certifying agencies/bodies visited their premises, and all these companies informed that the visits were annual. The table summarises the heads under which visit-related expenses are incurred, the percentage of relevant respondents paying them, and the overall ranges of amounts paid under each head, as per the responses. According to the responses, accommodation is consistently a major expense for the visits.

3.4.6. Perception Based Feedback

Table 88: Perception Regarding Role of PSS - Wood

Respondent Perception on the Role of PSS			
Positives	Respondents (Percentage)	Negatives	Respondents (Percentage)
Positive influence on brand image/public perception	51	Limitations in exporting	67
Improvements in product quality and durability	15	High certification costs	67
Enhanced opportunities/accessibility/demand in international markets	15		
Minimising the risk of regulatory and environmental liabilities/fines	7		
Reduction in operating costs (through avoidance of undue consumption of resources)	5		

Source: Based on the survey.

From the analysed set of respondents, around 93 per cent of companies regarded the role of PSS in their firms as positive. Table 70 summarises the various benefits of compliance, as reported by the relevant respondents, and ranks the parameters by the frequency of feedback received. As can be observed, improvements in brand image and perception-related aspects are perceived as the principal positive impact of PSS compliance by the concerned respondents, followed by improvements in product quality, enhanced opportunities/accessibility, minimised



risks associated with environmental compliance, and reductions in overall operating costs. Limitations in exports and cost implications were the two areas highlighted by the 7 per cent of respondents who considered the overall effect of PSS compliance negative.

Table 89: Lacunae

Parameters	Percentage of Sample
High certification costs	50
Limitations in exporting	33
High initial investments for social audits (by SGS, Intratek, etc.)	17
High investments for testing machines	17
Time-taking processes	17

Source: Based on the survey.

From the responses received on this parameter, around 50 per cent indicated high cost of certification as the lacuna in the process of compliance, followed, in order of importance (based on frequency of responses), by limitations to export, high initial investments for social audits, high investment for testing machines and delays.

On being enquired about the most striking impediment, overall limitations in exporting were flagged. The relevant respondents, with major concerns, also highlighted cost inflation and high investment costs.

Table 90: Adoption of PSS for Increased Domestic Sales- Wood

Affirmative (57 Per Cent of Sample)		Opposing (43 Per Cent of Sample)	
Reasons	Percentage	Reasons	Percentage
Improvements in product quality	96	No necessity for the domestic markets	84
Improvements in competitiveness of products	24	Increased costs	11
Improvements in product longevity	4	Increased burden on small-scale producers	5

Source: Based on the survey.



When respondents were asked whether they would adopt PSS to increase sales in domestic markets, 57 per cent said yes. In comparison, the remaining 43 per cent opposed it, indicating mixed perceptions amongst the respondents on this parameter. The major reasons for the opinions formed and the percentage of the respective respondent sets opining the same have been summarised in the table.

3.4.7. Key Highlights

Some of the key findings derived from the analysis of wood sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the companies in the sector, with around 53 per cent of the respondents dealing with them for a decade or less.
- Improved raw materials, procedures, and quality of the products were the principal product level improvements derived by the respondents due to compliance.
- Improvements in quality of final products and increased market access were the major benefits of adoption of PSS as per the respondents.
- About 93 per cent of the wood sector respondents confirmed increased exports post adoption of PSS and compliance with relevant standards.
- The respondents cited limitations in export and cost-related issues as the major challenges in the compliance procedure.
- The incidence of multiple standards on the same product, as per the responses, is mainly influenced by clients and their requirements.
- Approximately 20 per cent of respondent companies were denied market entry into certain markets due to PSS in the wood sector.
- Around 84% of the total respondents in the wood sector deal with finished products.
- The total cost towards PSS for around 80 per cent of the respondent companies was Rs. 2 Mn. or less, which is on the lower side.
- Among the respondent wood companies, 5 per cent had to pay membership fees. Such requirements were not there for any of the companies in the respondent set.
- High certification cost was seen as the major lacunae by the respondents.
- Around 57 per cent of the relevant respondents supported the adoption of PSS in domestic markets, while the remaining 43 per cent did not see any benefits.



3.5. Food Processing

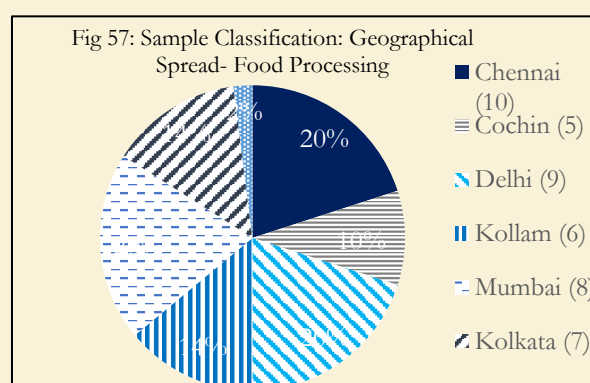
3.5.1. Overview

The food-processing sector is one of the largest sectors in India in terms of production, growth, domestic consumption and exports. It covers a wide range of products, including vegetables, spices, meat and poultry, milk and milk products, alcoholic beverages, fisheries, plantations, grain processing, cashew, and more. (Industry, 2016). According to the Agricultural and Processed Food Products Export Development Authority (APEDA), India's exports of processed food were to the tune of RS. 26,067.64 crore in 2015-16, which included products such as mango pulp (RS. 796.17 crore), dried and preserved vegetables (RS. 914.21 crore), other processed fruits and vegetables (RS. 2,900.33 crore), pulses (RS. 1,603.22 crore), groundnuts (RS. 4,046.05 crore), guar gum (RS. 3,233.87 crore), jaggery and confectionary (RS. 1,289.26 crore), cocoa products (RS. 1,266.99 crore), cereal preparations (RS. 3,341.31 crore), alcoholic and non-alcoholic beverages (RS. 2,005.13 crore) and miscellaneous preparations (RS. 2,593.49 crore) (APEDA, 2016). India's strategic position gives its food processing sector access to leading markets including the USA, Europe, the Middle East, Japan, Singapore, Thailand, Malaysia and Korea. According to the India Brand Equity Foundation (IBEF), during FY 2011–16, India's exports of processed food and related products (including animal products) grew at a CAGR of 11.74 per cent, reaching USD 16.2 billion, with the main export destinations being the Middle East and Southeast Asia. (IBEF, Overview: Food processing Exports, 2016)

3.5.2. Firm Details

3.5.2.1 Sample

The sample selected for analysing the incidence and impact of private sustainability standards in the food processing sector comprised entities from Chennai, Cochin, and Kollam in the southern region of India; Mumbai in the western region; Delhi and Ludhiana in the northern region; and Kolkata in the eastern region. The share of companies covered from these destinations is shown in Figure 57.



Source: Based on the survey.



Table 91: Position of Sample Food Processing Companies in the Global Value Chain- Food Processing

Product Category	Percentage of Sample
Raw Materials	2
Semi-finished Raw Materials	4
Intermediate	12
Semi-finished Intermediate	58
Finished	66

Source: Based on the survey.

Of the sample analysed, around 66 per cent of the companies dealt in finished products and 58 per cent in semi-finished intermediate products. Although there have been considerable finished goods exports, the share of intermediate and semi-finished goods from around 70 per cent of the sample companies is also substantial, indicating a significant impact on both standards and compliance. Firms dealing in raw materials, semi-finished raw materials, and intermediate products accounted for 2 per cent, 4 per cent, and 12 per cent of the sample, respectively.

3.5.2.2 Application and Scope of PSS

To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance, challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.

3.5.2.3 Costs

The survey focused on financial aspects such as total costs towards PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost of individual standards, and the percentage increase in per-unit product price due to compliance, as per the availability of information.

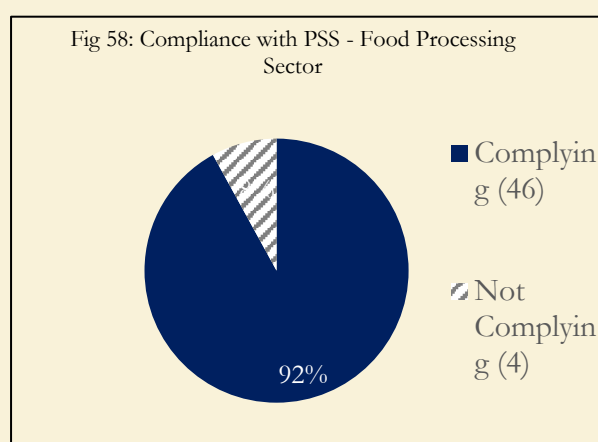


3.5.2.4 Adoption of PSS – Potential Gains

To assess the benefits derived from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focussed on product level improvements due to compliance.

3.5.3. Respondent Details

3.5.3.1 Share of Respondents in the Food Processing Sector



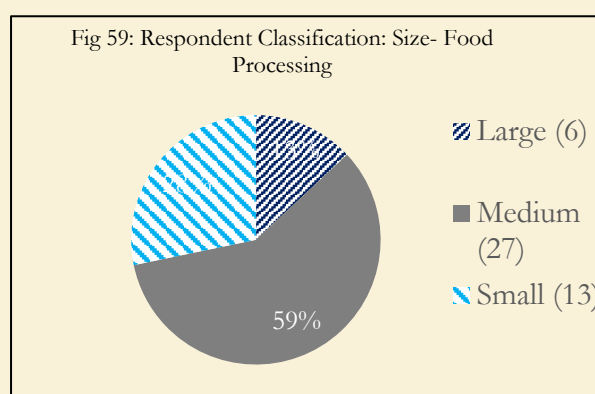
The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS, was 92 per cent for the food processing sector. The remaining did not comply with any PSS (according to the parameters finalised for the study, viz. standards that were private, voluntary, and had implications in sustainability areas such as environmental protection and labour welfare), as per the responses received.

Source: Based on the survey.

3.5.3.2 Size-wise Distribution of the Food Processing Sector Respondents

In the food processing respondent set, around 59 per cent were mid-sized companies, with small and large companies accounting for 28 per cent and 13 per cent, respectively.

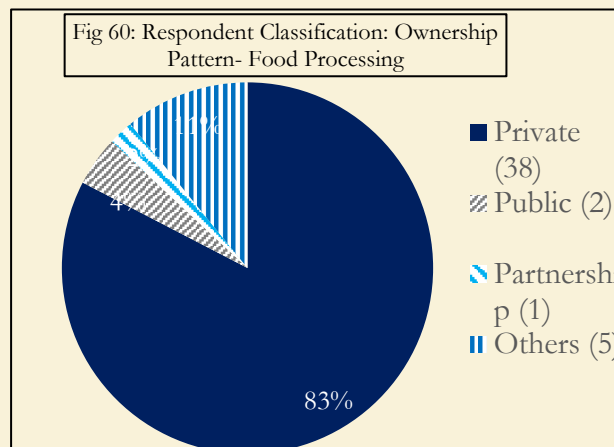
Medium-sized companies accounted for more than half of the respondent set.



Source: Based on the survey.

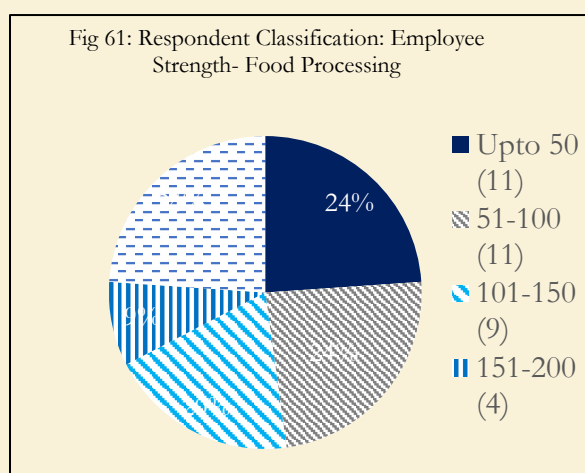
3.5.3.3 Ownership Pattern of the Food Processing Sector Respondents

A majority of the respondent companies, i.e. 83 per cent, were private entities. Public companies accounted for 4 per cent, and partnership companies for 2 per cent of the respondent set. Around 11 per cent of the companies belonged to categories other than these three.



Source: Based on the survey.

3.5.3.4 Employee Strength of the Food Processing Sector Respondents



100.

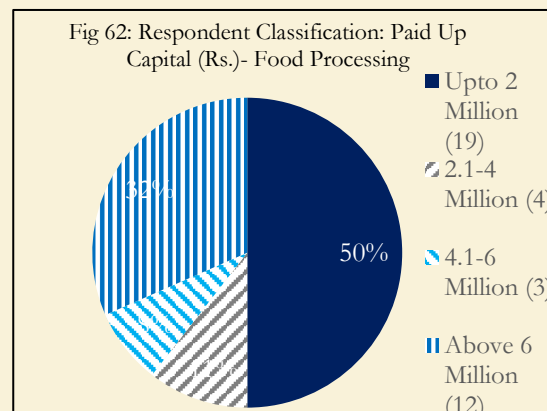
Companies with an employee strength of up to 50 accounted for 24 per cent of the respondent set. Entities with 51-100 employees accounted for another 24 per cent, while those with employee strengths of 101-150, 151-200, and above 200 accounted for 20 per cent, 9 per cent, and 4 per cent of the respondents, respectively.

Around half the respondent set comprised companies with employee strength of up to 100.

Source: Based on the survey.

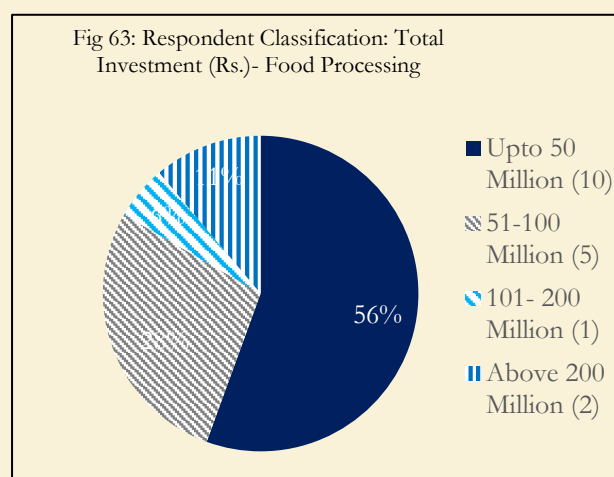
3.5.3.5 Paid-Up Capital in the Food Processing Sector

Around half the respondent companies for the food-processing sector had paid-up capital of up to Rs. 2 Mn. Companies with paid-up capital in the range Rs. 2.1-4 Mn., Rs. 4.1-6 Mn. and above Rs. 6 Mn. formed 11 per cent, 8 per cent and 32 per cent of the respondent set respectively.



Source: Based on the survey.

3.5.3.6 Total Investment by the Food Processing Sector Respondents



Of the respondent companies, more than half (around 56 per cent) had total investments of up to Rs. 50 Mn. Firms with investments of Rs. 51-100 Mn., Rs. 101-200 Mn., and above Rs. 200 Mn. formed 28 per cent, 6 per cent and 11 per cent of the respondent set respectively.

Companies with total investment of up to Rs. 100 Mn. formed the majority of the respondent set.

Source: Based on the survey.

Table 92: Products Handled by the Food Processing Sector Respondents- Food Processing

Broad Categories of Food Processing Products	
Agro processed products, processed food, meat, spices, frozen and packed products, organic and preserved foods	
Product(s)	Percentage of Respondents
Acetic acid	2
Agro processed products	2
Biscuits and confectionaries	2
Brine	2
Buffalo meat products	4



Broad Categories of Food Processing Products	
Agro processed products, processed food, meat, spices, frozen and packed products, organic and preserved foods	
Product(s)	Percentage of Respondents
Cashew	13
Cherries, whole tomatoes, jalapeños, onions and baby corn	2
Dry fruits	2
Food products	4
Frozen seafood	2
Fruit concentrate (including fruit pulp)	11
Grains	2
Oilseeds	4
Petrochemical products	2
Pickle	7
Poppadums	2
Preserved food	2
Processed food	2
Rice (including sevai)	15
Snacks (jams, RTS beverages, vinegar, ketchup)	4
Soup	2
Soya products (frozen and non-frozen)	4
Spices (including oils)	20
Sugar	2
Tea (including black tea and green tea)	15
Vinegar	2

Source: Based on the survey.

The food processing respondent set dealt broadly in meat (buffalo meat products), organic products (vegetables and fruits), processed foods (biscuits, confectionery, soup, sugar, tea, etc.), frozen foods (seafood, ready-to-eat materials, etc.), and preserved foodstuffs. Table 92 summarises the product variants dealt in by the respondent companies along with the percentages of the respondent set dealing in them.

Table 93: Export Destinations for the Food Processing Sector Respondents- Food Processing

Export Destinations		
Countries/Regions	Share (Range) (Percentage)	Share (Average) (Percentage)

Africa	15-70	31.67
Asia (including SAARC countries: Bangladesh, Sri Lanka, Nepal and Afghanistan, Malaysia, Japan, China, Vietnam, and Singapore)	10-80	29.00
Australia	10-25	17.14
Europe (including UK, France, Germany, Russia, Poland, Portugal, Spain and Sweden)	10-40	24.88
Middle East (including Turkey, Iraq, Iran and UAE)	10-60	25.38
Chile	-	15.00
North America (including USA and Canada)	10-50	26.72

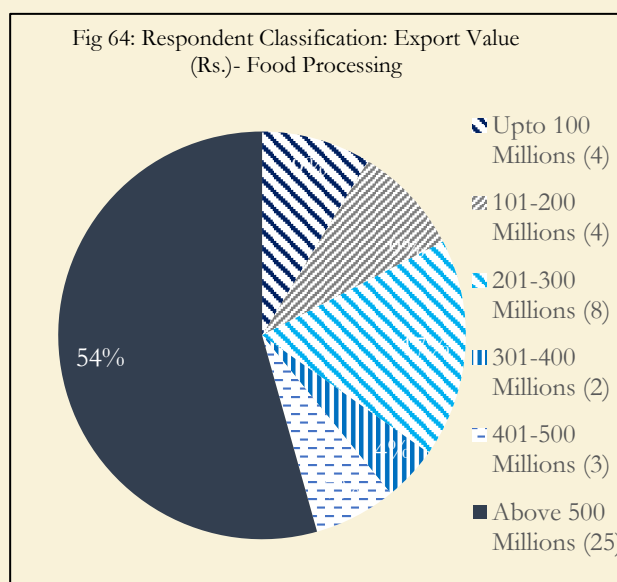
Source: Based on the survey.

Table 93 summarises the major importing countries/regions for the respondent companies, as well as the ranges and average export shares to these countries. As can be observed, Africa, Asia (including SAARC countries), Europe, the Middle East, and North America (mainly the USA and Canada) are among the major markets served by the respondent set.

3.5.3.7 Value of Exports by Respondents in the Food Processing Sector

For a considerable share of the respondent companies, i.e., 54 per cent, the total export value for the last completed year was above Rs. 500 Mn. Companies having annual export values of up to Rs. 100 Mn. and Rs. 101-200 Mn. formed 9 per cent of the respondent set each, the share of those with export values of Rs. 201-300 Mn., Rs. 301-400 Mn. and Rs. 401-500 Mn. being 17 per cent, 4 per cent and 7 per cent respectively.

A majority of respondents in the food processing sector reported exports exceeding Rs. 500 Mn.



Source: Based on the survey.

Table 94: Share of Exports in Food Processing Sector

Share of Exports in Sales	Percentage of Respondents
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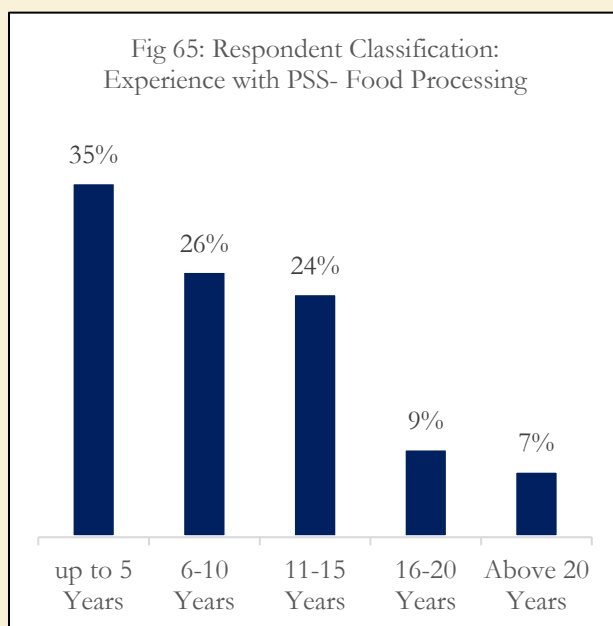
100 percent	17
76-99 per cent	63
51-75 per cent	2
31-50 per cent	11
21-30 per cent	7

Source: Based on the survey.

For around 17 per cent of the respondent companies, the entire sales were through exports. Companies for which exports fell by 76-99 per cent of total sales accounted for 63 per cent of the respondent set. Companies with export shares in the ranges 21-30 per cent, 31-50 per cent, and 51-75 per cent accounted for 7 per cent, 11 per cent, and 2 per cent of the respondent set, respectively.

As can be observed, for around 80 per cent of respondents, exports accounted for more than 75 per cent of overall sales.

3.5.3.8 Experience with Private Sustainability Standards



The concept of compliance with PSS has gained ground in recent years, with around 61 per cent of respondent companies having dealt with them for a decade or less. Companies with over 20 years of experience in such standards accounted for only 7 per cent of the respondent set.

Around 35 per cent of respondents in the food processing sector have been dealing with PSS for 5 years or less, indicating low levels of experience with PSS so far.

Source: Based on the survey.

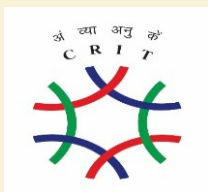


3.5.4. Incidence and Scope of Private Sustainability Standards

Globally, the respondent companies comply with a myriad of standards and obtain various certifications for clients. Table 79 lists the standards/certifications/audits required to be complied with as per the responses received. It also summarises the associated products, validity details, relevant countries, and broad descriptions of these.

Table 95: Description of Standards/Certifications/Audits- Food Processing

Private Sustainability Standards	Product	Validity	Countries	Description
Standards				
Natural (Association of Food Industries)	Cashew	Per Shipment	USA, European Countries	Natural standards are set by AFI, an inspection body that restricts the use of artificial ingredients in food products at any stage of manufacturing and sale. Naturals tries to promote the use of organic commodities in the market.
BAP (Best Aquaculture Practices) Standards	Frozen seafood, pickles, Soup,	1	Japan, Spain, China	BAP is a combination of certain farm-raised seafood certification standards developed by the Global Aquaculture Alliance. It is one of the world's most comprehensive third-party certification systems for aquaculture facilities, addressing all key elements of responsible aquaculture, including environmental responsibility, social responsibility, food safety, animal welfare, and traceability.
BRC Global Standards	Cashew, Frozen seafood, pickle, soup, Poppadums, Rice, Pickle, Soya products, Vinegar, Acetic Acid, Brine, Cherries, Whole Tomatoes, Jalapenos, Onions and Baby Corn, Spices	1	European countries, USA, SAARC Countries, Japan, Spain, China, Singapore, Middle East	BRC is a Global Food Safety Initiative (GFSI)- benchmarked food safety standard covering food safety and the management of product quality in food packaging and processing operations. BRC is aimed at promoting best practices and improving supply standards and consistency. It also tries to create a system that eliminates multiple buyer audits and supports the retailer's objectives at all levels.
ISO (International Organization for Standardization) Standards (9001:2000, 22000:2005, 9001:2008, 3720)	Frozen Seafood, Pickle, Soup, Pickles, Fruit Pulp, Fruit Concentrate, Poppadums, Rice Sevai, Pickle, Tea, Vinegar, Acetic	1-3	Afghanistan, Iraq, Iran, European countries, Middle East, USA, Japan, Spain, China, Asian Countries,	ISO standards are designed to help organisations ensure they meet the needs of customers and other stakeholders while complying with statutory and regulatory requirements for a product or program. It deals with the fundamentals of quality management systems.



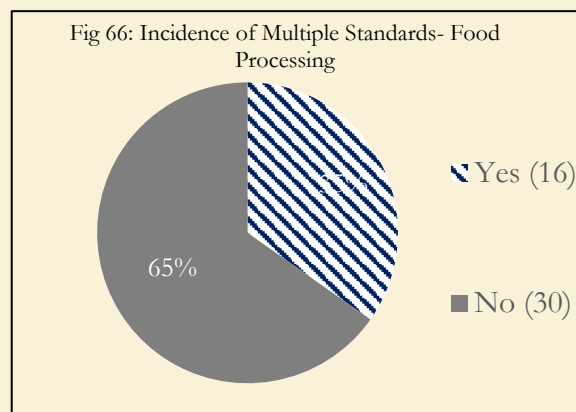
	Acid, Brine, Cherries, Whole Tomatoes, Jalapenos, Onions and Baby Corn			
Certifications				
Inspectorate Griffith Certification	Rice	1	-	The Griffith Inspectorate provides quality assurance services regarding food safety and environmental and social responsibilities.
Intertek Certification	Rice	1	Iran, Iraq, Germany, Africa	Intertek provides various certifications to companies, with social auditing being the most prominent one. Companies conduct social auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, sustainability, etc. are verified in the same.
Bureau Veritas Certification	Rice	1	Iran, Iraq, Germany, Africa	Bureau Veritas offers a wide range of certification services to help an organisation meet growing requirements and higher standards in Quality, Food Safety, Environment, and Social Responsibility.
Audits				
Social Audits (Intertek, Bureau Veritas)	Cashew, Spices	1	European countries, USA, SAARC Countries, Japan, Spain, China, Singapore, Middle East, Russia, Chile, Germany	Companies conduct Social Auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, sustainability, etc. are verified in the same.

Source: Based on the survey.

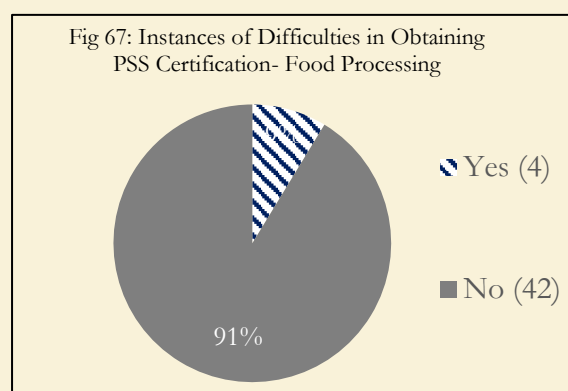


3.5.4.1 Incidence of Multiple Standards

Of the food-processing sector respondents analysed, around 35 per cent had to comply with multiple standards for product variants and client requirements. The remaining 65 per cent reportedly complied with only one standard. Therefore, for a considerable share of the respondent food processing firms, the procedural and cost implications of PSS were determined by only one relevant standard.



Source: Based on the survey.



Source: Based on the survey.

3.5.4.2 Difficulties in Obtaining PSS

Of the respondent set, around 91 per cent of entities did not face difficulties obtaining requisite certifications—the remaining 9 per cent reported process- and cost-related impediments.

Table 96: Improvements in Products due to PSS Compliance- Food Processing

Improvements	Percentage Respondents	of
Reduced chemical usage and hygienic production	54	
Proper labelling/ingredient and nutrition-related information	30	
Measurement of moisture content/pesticide residue/contamination	11	
Improved manufacturing/processing standards/product quality	9	
Increased shelf life of products	9	
Customer retention due to transparency in information about products	7	

Source: Based on the survey.

All respondents reported improvements in product quality due to compliance with relevant standards, indicating the substantial impact of PSS on their product lines. Around 54 per cent of the respondent companies – dealing in snacks, beverages, fruit pulp, spices, dry fruits, oil seeds, onions, etc. – reported that compliance with standards has led to reduced chemical usage



and more hygienic production. As per 30 per cent of the respondents – dealing in processed foods, frozen seafood, buffalo meat, acetic acid, vinegar, etc. – more detailed and labelled nutritional and ingredients-related information was available. Around 11 per cent of the respondent companies deal in rice, rice products, and grains. – reported that measurement of moisture content/pesticides residue/contamination became easier. An equal proportion of 9 per cent of the respondents dealing in tea, spices, biscuits and confectionery, cashews, etc., reported improved manufacturing and product quality, along with increased shelf life of the products. Around 7 per cent reported an increase in customer retention due to greater information transparency. Therefore, it may be inferred that for a considerable share of the respondent set, compliance aspects related to PSS have resulted in enhanced product quality and, thereby, increased acceptance.

Table 97: Structural Modifications Required- Food Processing

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Alterations in sewage/waste management plans	24
	Modifications in building structure	45
	Changes in lab settings	14
	Changes in Heating, Ventilation and Air Conditioning (HVAC) systems	14
	Periodic demand-based modifications (according to social audits, etc.)	10
Accounts and administration	Changes according to demands of social auditing	69
	Health insurance coverage for staff	7
Production process	Modifications for improving/maintaining product quality	33
	Creating hygienic environment (including commissioning of chemical disposal plant)	88
	Labour related modifications (number, wages, etc.)	29
Marketing and sales	Improved sales chain, distribution chain and market chain	21
	Installation of CRM and evolved PR policy	24
	New techniques for de-marketing	2
	Change in raw material procurement	7

Source: Based on the survey.

The analytical exercise included the assessment of structural modifications – if any – required of the respondent companies across four broad parameters: building/structural, accounts and administration, production process, and marketing/sales. Around 91 per cent of the respondent set analysed reported instances of structural changes that had to be made within the specified parameters to comply with standards. The table details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes.



As can be observed, building structure modifications, changes with respect to product quality, creation of hygienic processes, workforce-related modifications, including strength and wages paid, CRM/PR policy, etc., were among the major areas that experienced modifications as per the responses.

Table 98: Benefits of Adoption- Food Processing

Benefits of Adopting PSS	
Parameter	Percentage of Respondents
Better quality final products	100
Confirmed business orders for a certain number of years	91
Better working condition	80
Streamlining the processes (like better resource/inventory management)	80
Greater access to markets/companies	80
Exclusivity in terms of supplying to the client	65
Regulation of waste generation	52
Promotion of alternative ways of production	48

Source: Based on the survey.

All respondent companies acknowledged that compliance with PSS entails various improvements. All respondents reported improvements in quality for their products. Confirmed business opportunities from existing clients were received by 91 per cent of the respondents, and around 80 per cent of the companies gained greater access to international markets. Around 80 per cent of respondent companies reported improved streamlining of procedural aspects due to compliance. Greater market access and exclusivity were reported as benefits by 80 per cent and 65 per cent of respondents, respectively. Increased regulation and management of waste was reported by 52 per cent of the companies. Other benefits reported by respondents included better working conditions and adequate promotion of alternative means of production. All the benefits listed were reported to have been realised by close to or more than half of the respondents.



3.5.4.3 Incidence of Increased Export Participation

Among the respondent food processing companies, around 78 per cent reported increased exports following the adoption of PSS and compliance with relevant standards, underscoring the importance of such compliance. Among these relevant respondents, 72 per cent reported an increase in exports of up to 10 per cent. For around 19 per cent of these respondents, the increase in exports was 11-20 per cent. Substantial growth in the metric, i.e. in the range 21-30 per cent and above 30 per cent, was experienced by 6 per cent and 3 per cent of the relevant respondents, respectively.

Source: Based on the survey.

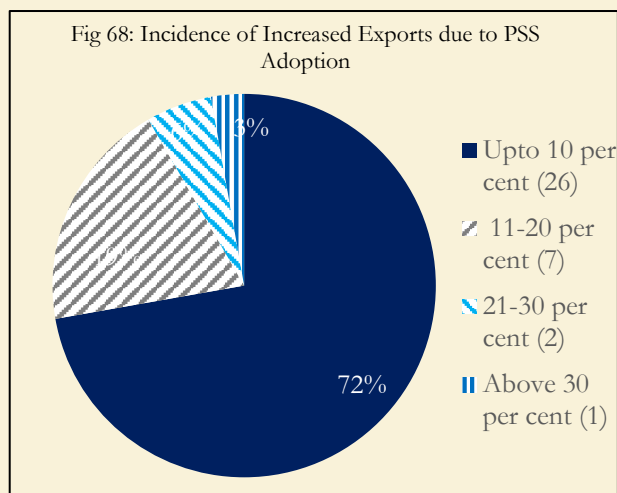


Table 99: Incidence of Conditionality in PSS- Food Processing

Conditionality	Percentage of Respondents
Eco-friendly and sustainable products/production processes	100
Hygienic working conditions/ waste management	83
Labour equity and welfare	50

Source: Based on the survey.

Around 13 per cent of the respondent companies reported effects on their business processes due to the conditionality aspects of relevant standards.

The most frequently reported aspect of conditionality concerned environment-friendly and sustainable products/production processes, with all relevant respondents indicating the same. Around 83 per cent of respondents pointed out hygienic working conditions/waste management and 50 per cent mentioned labour equity and welfare as areas wherein the incidence of conditionality is experienced.

When enquired about the overall rationality of the conditionality aspects in the sector, all respondents believed they were reasonable.



Table 100: Major Challenges Posed by PSS- Food Processing

Challenges	Product Category(s) Dealt In	Percentage
Structural changes	All products (including rice, agrochemical products, buffalo meat etc.)	86
Varied demands by customers	Biscuits and confectionaries	14

Source: Based on the survey.

Among the respondents, 7 companies reported practical challenges in compliance procedures related to PSS. Among these respondents, around 86 per cent reported that clients demanded structural changes or modifications. Entities that flagged various customer demands accounted for 14 per cent of the relevant respondents.

3.5.4.4 Incidence of Multiple PSS in Different Markets

No cases of multiple PSS on the same product across different markets were observed among the food processing sector respondent set. Complexities across client-driven compliance aspects for the same product in different markets appear to be minimal in the sector, as per the responses received.

Table 101: Instances of Denial of Entry into Markets- Food Processing

PSS/Certification	Product (s)	Country (s)	Proportion of Relevant Respondents (Percentage)
BRC Global Standards	Vinegar, Acetic Acid, Brine, Cherries, Whole Tomatoes, Jalapenos, Onions and Baby Corn	Germany	100

Source: Based on the survey.

The table shows the incidence of denial of market entry due to the lack of requisite certifications, including the product variants, the countries in which such certifications were required and the share of relevant respondents experiencing such denial. However, according to the recorded responses, for most of the relevant companies, such denial of entry was an initial issue.



Table 102: Compliance Areas for Obtaining PSS- Food Processing

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
Natural (Association of Food Industries)	Cashew	USA, European Countries	2					
BAP (Best Aquaculture Practices) Standards	Frozen seafood, pickle, soup	Japan, Spain, China	2	2	2	2	2	
BRC Global Standards	Spices, cashew, frozen seafood, pickles, soup, poppadums, rice sewai, rice, soya products (frozen and non-frozen), vinegar, acetic acid, brine, cherries, whole tomatoes, jalapenos, onions and baby corn	USA, European countries, Canada, Australia, Gulf Countries, SAARC Countries, Singapore, China, Japan	33	20	28	20	11	4
ISO (International Organization for Standardization) Standards (9001:2000, 22000:2005, 9001:2008, 3720)	Vinegar, acetic acid, brine, cherries, whole tomatoes, jalapenos, onions and baby corn, snacks, fruit pulp and concentrate, frozen seafood, pickle, soup, Poppadums, rice sewai, preserved food, spices, rice, cashew, soya product (frozen &	Iraq, Iran, European countries, Middle East, USA, Japan, Spain, China, Asian Countries, North America, Canada, Australia, Africa, Russia	70	59	63	59	37	13



		non-frozen), buffalo meat, tea, medicines							
Certifications									
Inspectorate Certification	Griffith	Rice	-	2	2	2	2	2	
Intertek Certification		Rice	Iran, Iraq, Germany, Africa	2	2	2	2	2	
Bureau Certification	Veritas	Rice	Iran, Iraq, Germany, Africa	2	2	2	2	2	

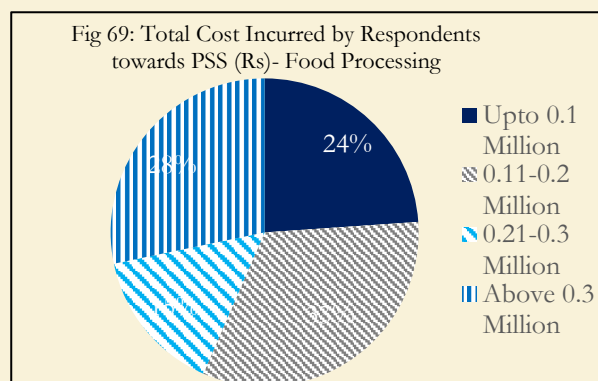
Source: Based on the survey.

The table summarises the relevant PSS, product categories, and countries/regions to which they apply, the compliance areas, and the percentage of food-processing respondents who comply with these aspects.

3.5.5. Financial Aspects of PSS Compliance

3.5.5.1 Total Cost towards PSS

From the analysed set of respondents, the total cost of PSS for around 33 per cent of the companies was between Rs. 0.11 Mn and 0.2 Mn. Companies with total cost up to Rs. 0.1 Mn., Rs. 0.21-0.3 Mn. and above Rs. 0.3 Mn. formed 24 per cent, 15 per cent and 28 per cent of the respondent set respectively.



Source: Based on the survey.

Table 103: Comparison between Total Cost towards PSS- Size of companies- Food Processing

Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	6	27	13	0
0.6-1 Mn.	0	0	0	0
1.1-5 Mn.	0	0	0	0
Above 5 Mn.	0	0	0	0

Source: Based on the survey.

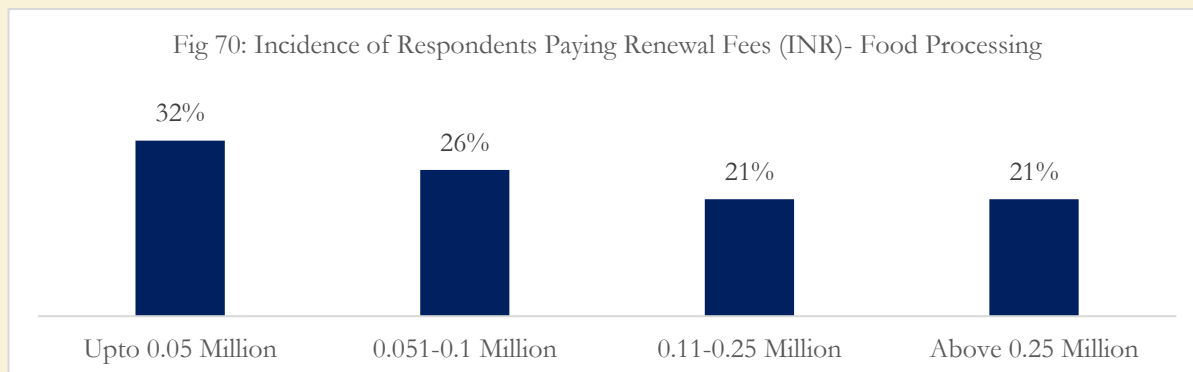
In the food processing sector, all companies had to incur a total cost of less than 0.5 Mn. There were 27 medium companies, 6 large companies, and 13 small companies in this category.

3.5.5.2 Incidence of Membership Fees

Among the respondent food processing companies, none had to pay membership fees, indicating the prevalence of subcontracting in the sector. The potential for increased participation of food processing companies in the formulation of standards can also be gauged.



3.5.5.3 Incidence of Renewal Fees



Source: Based on the survey.

Around 41 per cent of the respondent companies had to pay annual renewal fees. The ranges of amounts incurred and the share of relevant respondents paying them have been depicted in the chart. For approximately 58 per cent of the relevant respondents, the annual renewal fees payable were less than 0.1 Mn.

Table 104: Cost Implications- Food Processing

PSS	Number of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(Rs. Mn.s)	(Rs. Lakhs)		
Standards		0.008-0.1	0.08-1	2-5	
BAP (Best Aquaculture Practices) Standards	1	0.008	0.08		0.8
Natural (Association of Food Industries)	1	0.022	0.22		0.22
BRC Global Standards	12	0.02-0.1	0.2-1	2-5	3.6
Certifications		0.012-0.15	0.12-1.5	2-5	
Inspectorate Griffith Certification	1	0.012	0.12		0.12
Intertek Certification	1	0.035	0.35		0.35
ISO Certification	43	0.015-0.15	0.15-1.5	2-5	4.18
Audits		0.035-0.075	0.35-0.75		
Bureau Veritas Certification	1	0.035	0.35		0.35
Social Audits	1	0.075	0.75		0.75

Source: Based on the survey.



The table summarises the annual cost implications for the respondent companies for various PSS compliance requirements, as well as the percentage increase in per-unit product price due to compliance, where applicable and information is available. It can be observed that the implications on per-unit cost are comparatively higher for BRC Global Standards and ISO standards, as per the responses received.

Table 105: Visits by Certifying Bodies/Agencies and Associated Costs- Food Processing

Heads	Percentage of Respondents	Range (In Rs. Thousands)
Travel	11	10-22
Accommodation	13	5-45
Visits	33	12-65
Testing	33	20-45
Miscellaneous	24	5-25

Source: Based on the survey.

Among the respondent companies, around 98 per cent confirmed that the certifying agencies/bodies visited their premises and around 83 per cent informed that the visits were annual. The table summarises the heads under which visit-related expenses are incurred, the percentage of respondents paying them, and the overall ranges of amounts paid under each head, as per the responses. A third of the respondents indicated visits and testing were among the more expensive parameters.

3.5.6. Perception Based Feedback

Table 106: Perception Regarding Role of PSS- Food Processing

Positives	Respondents (Percentage)
Improved market access and more opportunities internationally	70
Increased export demand, requirement in the field and stable markets	11
Betterment in quality of products	15
Improved brand image and customer trust internationally	9

Source: Based on the survey.



Of the respondent set analysed, all companies viewed PSS's role within their firms positively. Table 89 summarises the various benefits of compliance, as reported by the respondents, and ranks the parameters by the frequency of feedback received. As can be observed, enhanced opportunities and accessibility in international markets are perceived as the principal positive impact of PSS compliance, with around 70 per cent of respondents in the food processing sector indicating this, followed by improvements in product quality.

Table 107: Lacunae- Food Processing

Parameters	Percentage of Relevant Respondents
Multiple certification issues	67
High investment issues (cost)	58
Delay by certifying agencies	17

Source: Based on the survey.

From the responses received, around 67 per cent believed that the requirement of multiple certifications was a pressing issue. Cost issues were flagged as the principal lacuna by 58 per cent of the relevant respondents, followed by delays in certification processes.

On being enquired about the most striking impediments, cost inflation, delays, and multiple certifications were again identified by the relevant respondents as the major concerns.

Table 108: Adoption of PSS for Increased Domestic Sales- Food Processing

Affirmative (63 Per Cent of Respondents)		Opposing (37 Per Cent of Respondents)	
Reasons	Percentage	Reasons	Percentage
Improves product quality	83	Not necessary for the domestic market	94
Less use of harmful chemicals and safer products in the local market	14	Time-consuming processes	12
Improves competition	7	Increased costs	6

Source: Based on the survey.

When respondents were asked whether they would adopt PSS to increase sales in domestic markets, 63 per cent said yes, while the remaining 37 per cent said no. The major reasons for



the opinions formed and the percentage of the respective respondent sets opining the same have been summarised in the table. Improvements in product quality would be the principal benefit of adopting PSS in domestic markets, as perceived by a considerable section of respondents who welcomed such adoption.

3.5.7. Key Highlights

Some of the key findings derived from the analysis of food processing sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the food processing companies, with around 61 per cent of the respondents dealing with them for a decade or less.
- Reduced chemical usage and hygienic production were the principal product level improvements observed by the respondents due to compliance.
- Better quality products and confirmed business were the major benefits of adoption of PSS as per the respondents.
- Among the food processing respondents, around 78 per cent confirmed increased exports post adoption of PSS and compliance with relevant standards.
- The respondents cited structural changes and varied demands by customers as the major challenges in the compliance procedure.
- The total cost incurred towards PSS for around 28 per cent of respondent companies was above RS. 0.3 Mn.
- Among the respondent food processing companies, no companies had to pay membership fees.
- Cost inflation, delays and multiple certifications were reported by the respondents as the most striking lacunae.
- Around 63 per cent of the respondents supported the adoption of PSS in domestic markets, while the remaining 37 per cent opposed it.
- In the food processing sector, most of the respondent companies dealt in semi-finished and finished goods, with the count being 58 and 66, respectively.



3.6. Chemicals and Pharmaceuticals

3.6.1. Overview

India is the third-largest pharmaceutical market in the world by value and the eleventh-largest by volume. It has established itself as a global manufacturing and research hub. A large raw material base and a skilled workforce give the industry a definite competitive advantage. The Indian pharmaceutical industry is expected to grow at a compound annual growth rate (CAGR) of 22.4 per cent to touch US\$ 55 billion by 2020, from US\$ 20 billion in 2015 (IBEF, Indian Pharmaceutical exports: Overview, 2017)

According to IBEF, Basic chemicals and their related products (petrochemicals, fertilisers, paints, varnishes, glass, perfumes, toiletries, pharmaceuticals, etc.) constitute a significant part of the Indian economy. Among the most diversified industrial sectors, the chemicals sector encompasses more than 70,000 commercial products. In April-December 2016, total Foreign Direct Investments (FDI) in chemicals (excluding fertilisers) stood at US\$ 783 Mn. Cumulative FDI until December 2016 from April 2000 was US\$ 12.683 billion.

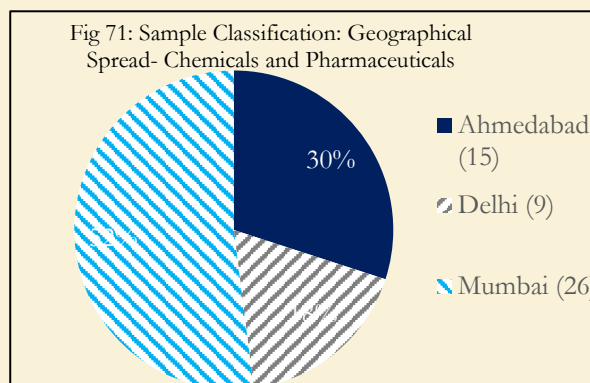
India is the sixth-largest producer of chemicals globally and the third-largest producer in Asia by output. The country ranks third globally in agrochemical production and contributes around 16 per cent to global dyestuff and dye intermediate production. (IBEF, Overview: Chemicals, 2017). Total exports of dyes and dye intermediates, organic and inorganic chemicals, including agrochemicals, cosmetics and toiletries, essential oils, incense sticks, and castor oil, stood at US\$8.72 billion (provisional) in April-December 2016. As in the case of the pharmaceutical sector, exports from India stood at US\$ 16.4 billion in 2016-17, and are expected to reach US\$ 20 billion by the year 2020 (IBEF, Overview: Chemicals, 2017).



3.6.2. Firm Details

3.6.2.1 Sample

The sample selected for analysing the incidence and impact of private sustainability standards in the chemicals and pharmaceuticals sector comprised entities from Mumbai and Ahmedabad in the western region of India and Delhi in the northern region. The share of companies covered from these destinations is shown in Figure 71.



Source: Based on the survey.

Table 109: Position of Sample Chemical and Pharmaceutical companies in Global Value Chain

Product Category	Percentage of Sample
Raw Materials	38
Semi-finished Raw Materials	8
Intermediate	10
Semi-finished Intermediate	18
Finished	22

Source: Based on the survey.

Table 109 summarises how the sample chemical and pharmaceutical companies cater to the global value chain. With only 22 per cent of the sample dealing in finished goods in the global value chain, the impact of PSS and associated compliance is expected to be significant. A need for a shift towards increased exports of finished goods can therefore be gauged.

3.6.2.2 Application and Scope of PSS

To understand the application and scope of PSS, the respondent set was enquired on aspects such as the various standards/certifications/audits complied with, the countries and product variants they were relevant for, validity details, difficulties in obtaining PSS, incidence of multiple standards in different markets, increase in export participation due to compliance,



challenges, cases of denial due to failure of compliance and also the perception on introduction of PSS in domestic markets among others.

3.6.2.3 Costs

The survey focussed on financial aspects such as total costs for PSS, incidence of membership fees, incidence of renewal fees, expenditure related to visits by certifying bodies/agencies, annual cost per individual standard, and the percentage increase in per-unit product price due to compliance, as per the availability of information.

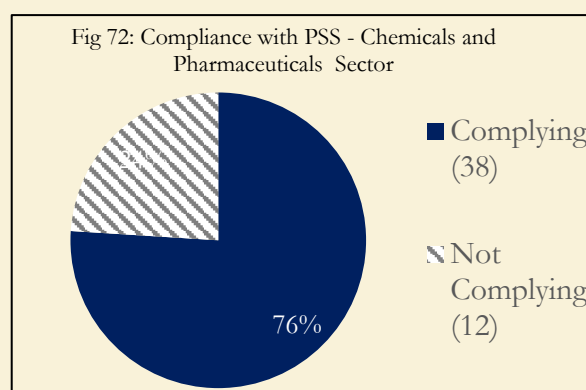
3.6.2.4 Adoption of PSS – Potential Gains

To assess the benefits derived from the adoption of PSS, the respondents were asked about parameters such as quality aspects of the final product, confirmed business orders, exclusivity as a supplier, streamlined processes, improvements in working conditions, better regulation of waste management, a fillip to alternative modes of production, and greater market access. The responses were ranked by frequency. The survey also focused on product-level improvements due to compliance.

3.6.3. Respondent Details

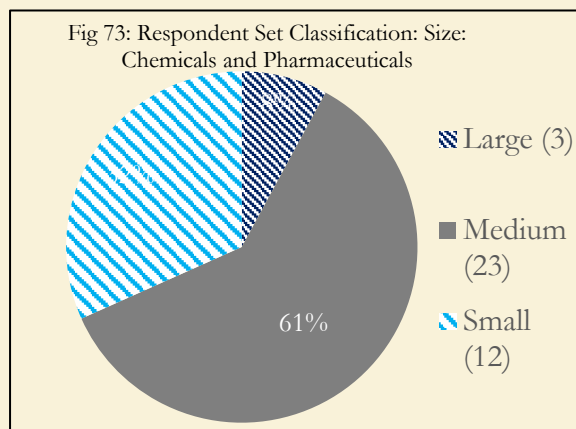
3.6.3.1 Share of Respondents in the Chemicals and Pharmaceuticals Sector

The share of respondents, i.e. the proportion of companies – from the sample covered – dealing in PSS (as per the criteria adopted for this study), was 76 per cent for the chemicals and pharmaceuticals sector. The remaining did not comply with any PSS, as per the responses received.



Source: Based on the survey.

3.6.3.2 Size-wise distribution in Chemicals and Pharmaceutical Sector



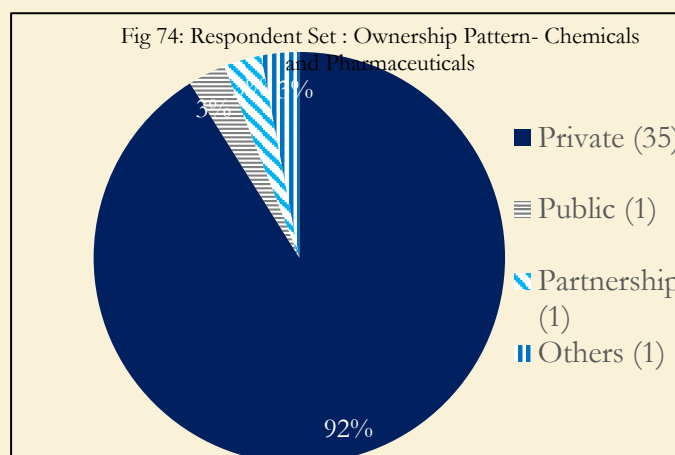
Of the chemical and pharmaceutical sector respondent set, around 61 per cent were mid-sized companies, with small and large companies accounting for 32 per cent and 8 per cent, respectively.

Medium-scale companies formed the majority of the chemicals and pharmaceuticals respondent set.

Source: Based on the survey.

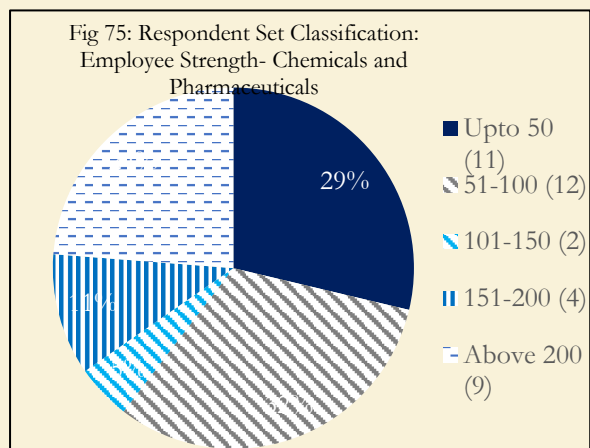
3.6.3.3 Ownership Pattern in Chemical and Pharmaceutical Sector

The majority of the respondent companies, i.e. 92 per cent, were private entities. Partnership companies and public companies were 3 per cent. 3 per cent of the companies also belonged to categories other than these three.



Source: Based on the survey

3.6.3.4 Employee Strength of the Chemical and Pharmaceutical Sector Respondents



Companies with an employee strength of up to 50 accounted for 29 per cent of the respondent set. Companies with strengths between 51 and 100 employees formed 32 per cent of the sample, while those with strengths in the ranges 101-150, 151-200, and above 200 formed, respectively, 5 per cent, 11 per cent, and 24 per cent of the sample.

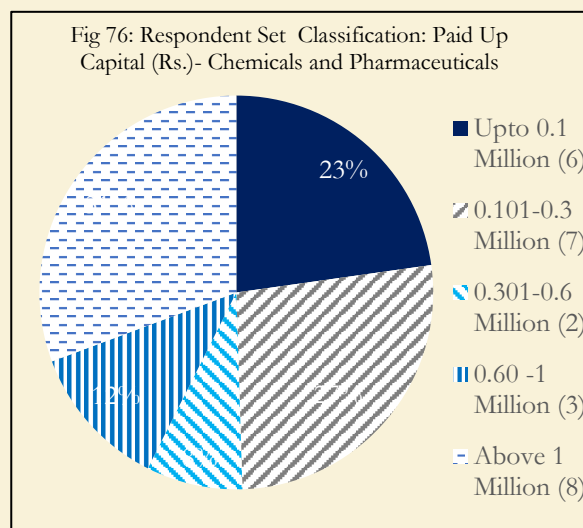
More than 60 per cent of the respondent set comprised companies having employee

strength of up to 100.

Source: Based on the survey

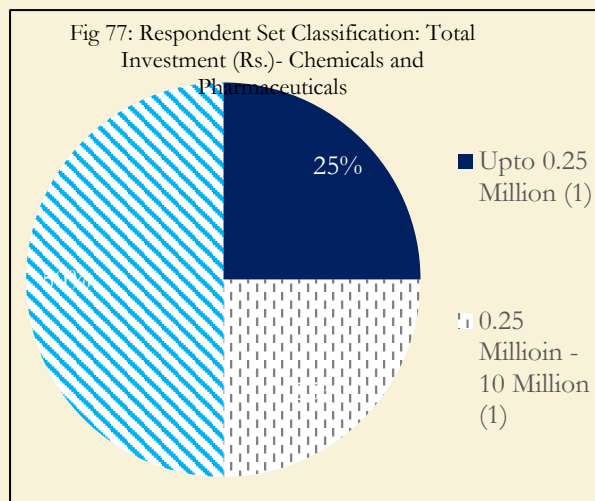
3.6.3.5 Paid-Up Capital of the Chemical and Pharmaceutical Sector Respondents

More than half of the respondent companies in the chemical and pharmaceutical sector – 50 per cent – had paid-up capital of up to Rs. 0.3 Mn. Companies with paid-up capital in the range Rs. 0.301-0.6 Mn., Rs. 0.601-1 Mn. and above Rs. 1 Mn. formed 8 per cent, 12 per cent and 31 per cent of the respondent set respectively.



Source: Based on the survey

3.6.3.6 Total Investment of the Chemical and Pharmaceutical Sector Respondents



Of the respondent companies, the majority, i.e. around 50 per cent, had total investment above Rs. 10 Mn. Firms with up to Rs. 0.25 Mn. and Rs. 0.25- 10 Mn. formed 25 per cent each of the respondent set respectively.

Source: Based on the survey

Table 110: Products Handled by Chemical and Pharmaceutical Sector Respondents

Broad Categories of Chemicals and Pharmaceuticals Products	
Cancer medicine, chemicals, dyes, fertilisers, medicines and pharmaceutical products	
Product(s)	Percentage of Respondents
Active Pharmaceutical Ingredient (API)	47
Anti-cancer medicines	11
Medicines (oncological)	3
Chemicals	29
Chemicals (potassium chloride)	3
Chemicals (phosphorus derivatives)	3
Chemicals (pigment paste)	3
Chemicals (sulphur)	3
Chemicals (syntans, fat liquors)	3
Textile chemicals (nitrocellulose)	3
Dyes and chemicals	39
Fertilizers	3
Antibiotics	3
Gastroenterology and gynaecology medicines	3
Medicines	5
Food colour	3
Hotel amenities	3
Lubricants	3
Minerals	3
Personal care products	3
Pigment paste	3
Wellness products	3

Source: Based on the survey



The chemical and pharmaceutical respondent set covered cancer medicines (APIs, oncology medicines, etc.), Chemicals (sulphur, potassium chloride, phosphorus, etc.), dyes, fertilisers, medicines (antibiotics, medicines for gastroenterology and gynaecology, etc.), and pharmaceutical products broadly. The table summarises the product variants dealt in by the respondent companies, along with the percentages of respondents dealing in each. Active Pharmaceutical Ingredients (APIs), chemicals, and dyes were the products the respondents dealt in most, according to their responses.

Table 111: Export Destinations of Chemical and Pharmaceutical Sector Respondents

Export Destinations		
Countries/Regions	Share (Range)(Percentage)	Share (Average) (Percentage)
Africa	20-60	31.43
Asia (Apart from Middle East & SAARC Countries)	4-40	26.54
Europe (Apart from UK)	5- 51	21
Latin America	5-25	13.63
Middle East (including UAE, Turkey and Qatar)	10-80	32.78
SAARC	15-40	28.34
UK	15-40	28.13
USA	10-60	32.42

Source: Based on the survey

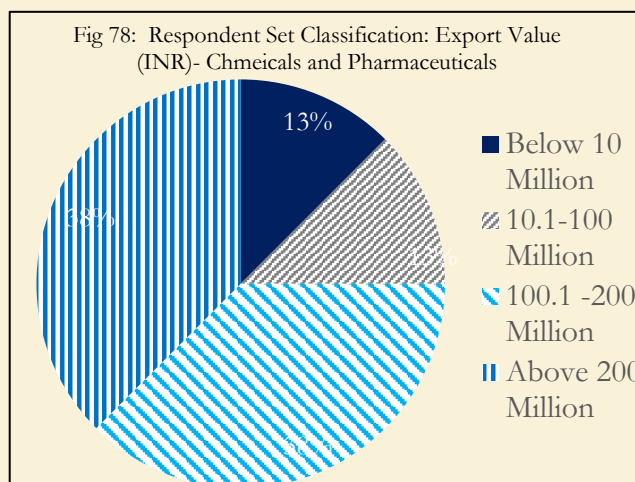
The table summarises the major importing countries/regions for the sample companies, as well as the ranges and average export shares to these countries by the respondent firms.



Table 112: Value of Exports of Chemical and Pharmaceutical Sector Respondents

For a considerable share of the respondent companies, i.e., 38 per cent, the total export value for the last completed year was above 200 Mn. Companies having annual export values in the range below RS. 10 Mn., RS. 10.1-100 Mn. and 100.1-200 Mn. formed 13, 13 and 38 per cent of the respondent set respectively.

For about three-fourths of the respondent set, export value exceeded Rs. 100 Mn.



Source: Based on the survey

Table 113: Share of Exports of Chemical and Pharmaceutical Sector Respondents

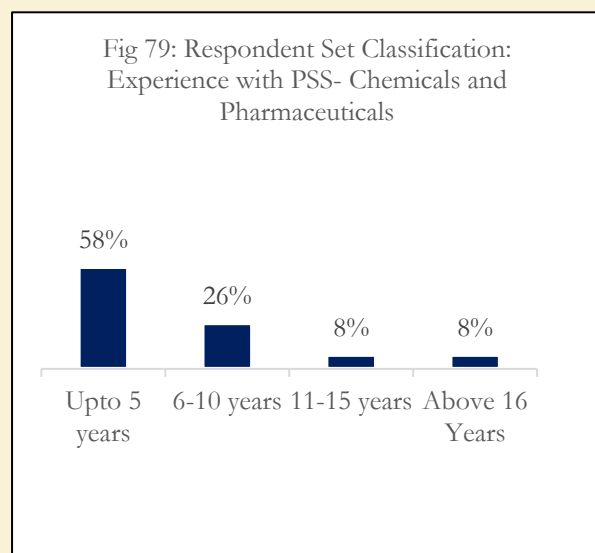
Share of Exports in Sales	Percentage of Respondents
100 per cent	46
76-99 per cent	35
51-75 per cent	9
31-50 per cent	7
21-30 per cent	4

Source: Based on the survey

For around 46 per cent of the respondent companies, the entire sales were through exports. Respondent companies for which exports fell in the range 76-99 per cent of total sales formed 35 per cent of the sample, and for companies that fell in the range 21-30 per cent, 31-50 per cent and 51-75 per cent were 4 per cent, 7 per cent and 9 per cent, respectively. As can be observed, for a considerable share of the respondent set, i.e., 81 per cent, exports accounted for more than 75 per cent of overall sales.



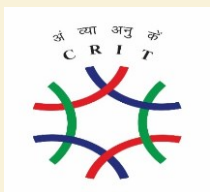
3.6.3.7. Experience with Private Sustainability Standards for Chemical and Pharmaceutical Sector Respondents



The concept of compliance with PSS has gained ground in recent years, with around 82 per cent of the sample companies dealing with them for a decade or less. Companies with over 20 years of experience in such standards accounted for only 8 per cent of the respondent set.

With close to 60 per cent of respondent companies having dealt with PSS for 5 years or less, it may be inferred that compliance with such standards is a relatively new development in the sector.

Source: Based on the survey



3.6.4. Incidence and Scope of Private Sustainability Standards

The respondent companies comply with a myriad of standards and obtain various certifications for clients across various international markets. The following table lists the standards/certifications that must be complied with, as per the responses received. It also summarises the associated products, validity details, relevant countries, and broad descriptions of these.

Table 114: Description of Standards- Chemicals and Pharmaceuticals

PSS Name	Products	Validity (Years)	Countries/Regions	Description
Standards				
Bluesign System	Dyes and chemicals	1	SAARC Countries	The Bluesign system is an organisation that promotes sustainable production. It eliminates harmful substances from the beginning of the manufacturing process and sets and enforces standards for environmentally friendly, safe production.
GOTS	Dyes and chemicals, medicines	1	USA	The Global Organic Textile Standard (GOTS) is the worldwide leading textile processing standard for organic fibres. It includes ecological and social criteria backed up by independent certification of the entire textile supply chain.
ISO Standards (14001:2004, 9001:2008)	(API) Active pharmaceutical ingredients, dyes and chemicals	1-3	SAARC Countries, UK, UAE, USA, South Africa, Canada, Latin America, Thailand, Philippines, Vietnam, Africa, Middle East, Europe	ISO is a body that addresses quality management standards that an organisation needs to fulfil. It assesses the organisation's ability to meet customer, regulatory, and quality management system requirements, and provides guidelines for performance improvement.
Certifications				

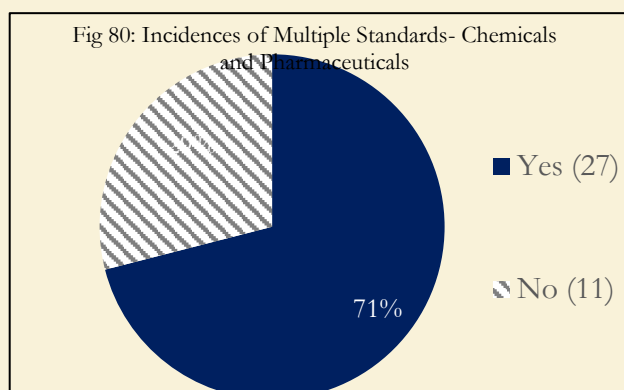


OEKO- TEX	Dyes and chemicals	1	Bangladesh	It is an international testing and certification body that limits the use of certain harmful elements and chemicals in products such as threads and fabrics. The law does not formally forbid these chemical substances.
Audits				
Intertek	Sulphur	1	Sri Lanka	Intertek provides various certifications to companies, with social auditing being the most prominent one. Companies conduct social auditing to assess the conditions of factories and other production units. Major factors such as the economic situation, environmental friendliness, labour equity and standards, sustainability, etc. are verified in the same.
<i>Sources: BRIEF Primary Research, Literature Review and Centre for WTO Studies, IIFT.</i>				

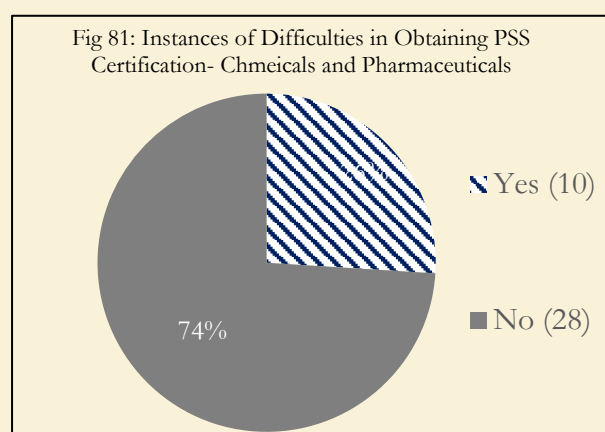
3.6.4.1 Incidence of Multiple Standards

Of the chemicals and pharmaceuticals sector respondent set analysed, around 71 per cent had to comply with multiple standards for product variants and client requirements. The remaining 29 per cent reportedly complied with only one standard.

The share of respondents complying with more than one standard is therefore considerable in the chemicals and pharmaceuticals sector.
Source: Based on the survey



3.6.4.2 Difficulties in Obtaining PSS



The majority (74 per cent) of the respondents did not face any difficulties in obtaining PSS and requisite certifications. The remaining 26 per cent reported procedural bottlenecks, market restrictions and cost-related impediments.

Source: Based on the survey

Table 115: Improvements in Products due to PSS Compliance- Chemicals and Pharmaceuticals

Improvements	Percentage of Sample
Increases durability and quality	41
Improves safety, keeping the product free of harmful chemicals	31
Controlled environment conditions and hygienic standards	14

Source: Based on the survey



Around 41 per cent of respondent companies reported that PSS has increased the quality and shelf life of their products. Approximately 14 per cent of companies reported that PSS compliance led to improved environmental conditions and hygiene, whereas 31 per cent reported that their products became safer due to the ban on harmful chemicals. Therefore, it may be inferred that for a considerable share of the respondent set, the compliance aspects related to PSS have resulted in enhanced product quality/durability and reductions in harmful content, thereby increasing acceptance.

Table 116: Structural Modifications Required- Chemicals and Pharmaceuticals

Parameters	Changes	Percentage of Relevant Respondents
Building/structural	Alterations of waste management plants and labs	17%
	Alterations according to buyer demands	14%
	Change in HVAC system	3%
	Production plant modifications (including security modifications)	34%
	Machinery modification	7%
	Adding new systems and software and new systems for documentation	7%
Accounts and administration	Health insurance for all staffs	3%
	Social auditing demands changes	7%
Production processes	Better packaging process	3%
	Improved quality of products	7%
	Better quality machinery and improvement in the production unit	14%
	Hygienic waste management system and environment	17%
	Equal wages for employees	3%
	Hygienic production process, Skilled labour, limited workers in the production department, do not use hazardous chemicals, do not use old machinery	3%
Marketing and sales	Changing PR policy	3%
	Changes in raw material procurement	7%
	Improve market chain	3%
	Installations of CRMS	3%

Source: Based on the survey

The analytical exercise included the assessment of structural modifications – if any – required of the respondent companies with respect to four broad parameters, i.e., building/structural, accounts and administration, production process, and marketing/sales. Around 76 per cent of the respondent sets analysed reported instances of structural changes that had to be made within



the specified parameters to comply with standards. Table 116 details the changes in the specified parameters that had to be made and the percentage of relevant respondents who had to make the same changes. Alterations to waste management systems, modifications to production plants, and improvements to machinery/equipment were among the principal changes sought across parameters.

Table 117: Benefits of Adoption- Chemicals and Pharmaceuticals

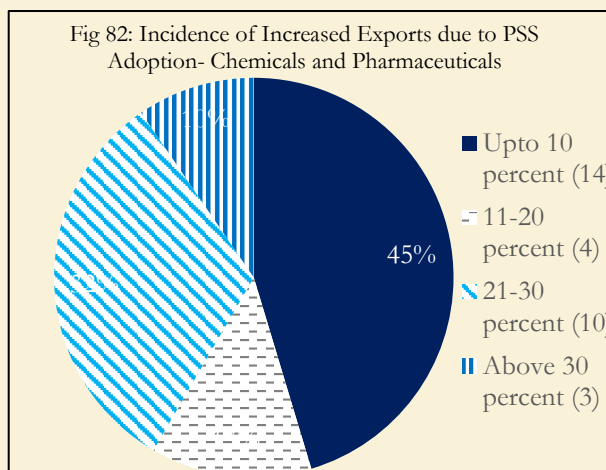
Benefits of Adopting PSS	
Parameter	Percentage of Respondents
Greater access to markets/companies	97%
Promotion of alternative ways of production	92%
Confirmed business orders for a certain number of years	76%
Exclusivity in terms of supplying to the client	63%
Better quality final products	58%
Better working condition	37%
Regulation of waste generation	34%
Streamlining the processes (like better resource/inventory management)	21%

Source: Based on the survey

All respondent companies acknowledged that compliance with PSS entails various improvements, indicating consensus among respondents on PSS's overall positive impact. All respondent companies reported improvements in product quality. Confirmed business opportunities from existing clients were received by 76 per cent of the respondents, and around 97 per cent of the respondent companies gained greater access to international markets. Around 21 per cent of the respondent pharmaceutical and chemical companies reported improved streamlining of procedural aspects due to compliance. Increased regulation and management of waste was reported by 34 per cent of the companies. Other benefits reported by the respondent set included opportunities to become exclusive suppliers, better working conditions, and adequate promotion of alternative means of production.

3.6.4.3 Incidence of Increased Export Participation

A majority (88 per cent) of the respondent chemical and pharmaceutical companies confirmed increased exports post-adoption of PSS and compliance with relevant standards, emphasising the practical importance of such voluntary standards. For around 45 per cent of the respondent set, exports increased by up to 10 per cent, while for another 13 per cent, exports increased by 11-20 per cent. Substantial growth in the metric, i.e., in the range of 21-30 per cent, was experienced by 32 per cent, and above 30 per cent by 10 per cent of the respondents. For close to 60 per cent of respondent companies, export growth was up to 20 per cent.



3.6.4.4 Incidence of Conditionality in PSS

None of the respondent companies reported experiencing effects on their business due to the different conditionality aspects of the private standards under consideration.

Table 118: Major Challenges Posed by PSS- Chemicals and Pharmaceuticals

Challenges	Product Category(s) Dealt In	Percentage
Structural Changes	API, Anti-Cancer Medicines, Dyes, Oncology Medicines, Lubricants	47
Varied demands by customers	API, Dyes and Chemicals	27
Time-Consuming Process	API, Dyes and Chemicals	27



Source: Based on the survey

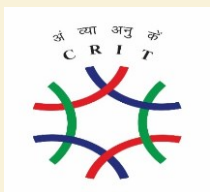
Around 15 of the respondent companies indicated practical challenges faced in compliance procedures related to PSS. Among these respondents, around 47 per cent reported that clients demanded structural changes/modifications. Around 27 per cent of the respondents flagged various customer demands. Further, 31 per cent of companies in the respondent set cited time-consuming certification processes as a major hurdle.

Table 119: Incidence of Multiple PSS in Different Markets- Chemicals and Pharmaceuticals

Products:					
PSS 1	Country (s)	PSS 2	Country (s)	Percentage of Respondents	Products
GOTS Certificate	USA	Blue sign Certification	Bangladesh	100	Dyes, Chemicals

Source: Based on the survey

Table 119 summarises the incidence of multiple standards being complied with for the same products in different markets as per client demands. Around 11 of the overall respondents have had to comply with multiple standards across different markets, a higher proportion than in the other sectors under study. The table also indicates the share of the respondents reporting a particular combination of standards.

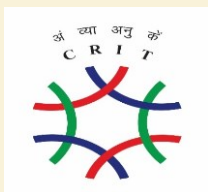


3.6.4.5 Instances of Denial of Entry into Markets

Respondents in the chemicals and pharmaceuticals sector reported no instances of denial of market entry.

Table 120: Compliance Areas for Obtaining PSS- Chemicals and Pharmaceuticals

PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
Standards								
Blue sign Standard	DYES AND CHEMICALS	SAARC	8	6	4	4		
GOTS	DYES AND CHEMICALS, Medicines	USA	18	18	12	12	12	
ISO 9001: 2008	(API) Active pharmaceutical ingredient	USA, UK, Europe	8	8	6	6	6	
ISO 14001: 2004	(API) Active pharmaceutical ingredient	Europe		2				
ISO 9001	Cancer Medicines, Chemicals	Latin America, Thailand, Philippines, Vietnam,	14	10	2	2	2	



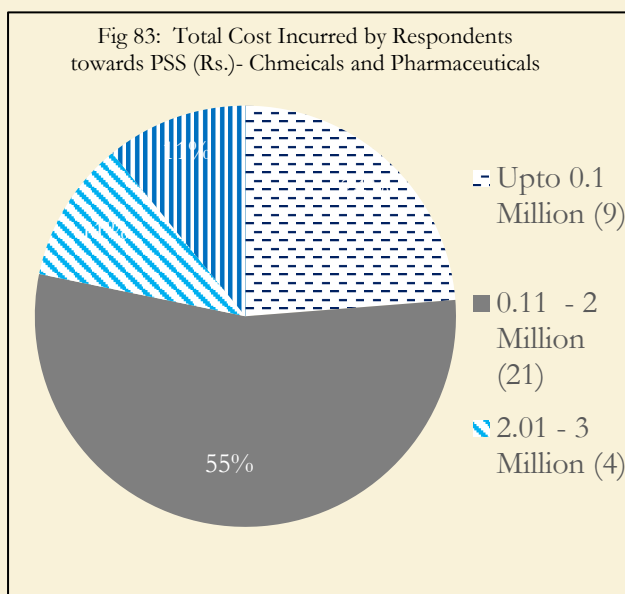
PSS Name	Product (s)	Country (s)	Areas of Compliance (Percentage)					
			Production Process	Labour Welfare	Environmental Compliance	Hygiene Measures	Electricity Conservation	Others
		Africa, Middle East, Europe						
ISO 9002	DYES AND CHEMICALS, Pharmaceutical Product	SAARC, Europe, Africa, Middle East	8	6				
ISO	(API) Active pharmaceutical ingredient, DYES AND CHEMICALS	SAARC, UK, UAE	12	10	8	8	2	
Certifications								
OEKO - TEX	DYES AND CHEMICALS	Bangladesh	4	4				
Audits								
Intertek	Sulphur	Sri Lanka	2	2	2	2	2	

Source: Based on the survey

The table summarises the relevant PSS, product categories, and countries/regions for which they apply, the compliance areas, and the percentage of the chemical and pharmaceutical respondent set that abides by these compliance aspects.

3.6.5. Financial Aspects of PSS Compliance

3.6.5.1 Total Cost towards PSS



Of the respondent set analysed, the total cost of PSS for around 55 per cent of the companies ranged from Rs. 0.11 Mn to Rs. 2 Mn. Companies incurring total cost up to Rs. 0.1 Mn., Rs. 2.1-3 Mn. and above Rs. 3 Mn. formed 24 per cent and 11 per cent each, respectively.

Source: Based on the survey

Table 121: Comparison between Total Cost towards PSS- Size of companies- Chemicals and Pharmaceuticals

Cost	Large	Medium	Small	Micro
Up to 0.5 Mn.	2	10	7	0
0.6-1 Mn.	0	2	1	0
1.1-5 Mn.	1	11	4	0
Above 5 Mn.	0	0	0	0

Source: Based on the survey

In the Chemicals and Pharmaceuticals sector, around 11 medium-sized companies incurred a total cost of up to 5 Mn. Whereas 7 small-sized and 10 medium-sized companies incurred costs of up to 0.5 Mn.

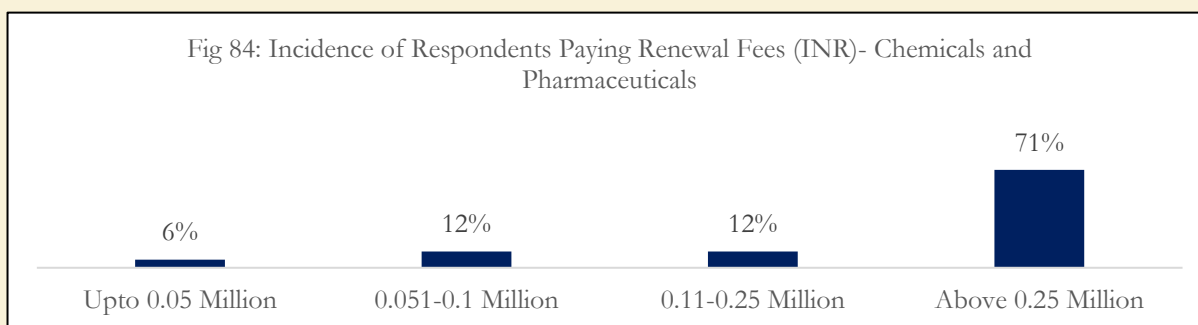
3.6.5.2 Incidence of Membership Fees

Among the respondent food processing companies, no companies had to pay membership fees. Such requirements were not present for any of the companies in the respondent set, indicating subcontracting and a lack of participation by these companies in the PSS formulation process.



3.6.5.3 Incidence of Renewal Fees

Around 45 per cent of the sample companies had to pay annual renewal fees. The ranges of amounts incurred and the share of respondents who paid them are depicted in Figure 84. For around 71 per cent of respondents, the annual renewal fees exceeded 0.25 Mn.



Source: Based on the survey

Table 122: Cost Implications- Chemicals and Pharmaceuticals

PSS	Number of Firms	Annual Cost		Percentage Increase in Per Unit Product Price due to Compliance (Range)	Percentage Increase in Per Unit Product Price due to Compliance (Average)
		(Rs. Mn.s)	Rs Lakhs		
Standards		0.006-2.36	0.06-23.6	0.5-10	
Blue sign Certification	9	3.11	31.1	5-10	6.45
GOTS	10	2.36	23.6	5-15	10.12
ISO 14001: 2004 Certificate	1	0.006	0.06	1	
ISO 9001:2008 Certificate	3	0.05	0.5	0.5 - 0.6	0.54
ISO-9001	4	0.07	0.7	0.6 – 2	1.03
ISO 9001:2008 Certificate	3	0.025	0.25	0.5	0.54
Certifications		1.5	15	10	
OEKO TEX	3	1.5	15	10	10
Audits		0.2	2		
Intertek certificate	1	0.2	2	-	-

Source: Based on the survey



Table 122 summarises the annual cost implications for respondent companies for various PSS complied with, as well as the percentage increase in per-unit costs due to compliance, based on the availability of information.

Table 123: Visits by Certifying Bodies/Agencies and Associated Costs- Chemicals and Pharmaceuticals

Heads	Percentage of Respondents	Range (In RS. Thousands)
Travel	-	-
Accommodation	98	40-150
Visits	8	12-30
Testing	14	10-150
Miscellaneous	-	-

Source: Based on the survey

As per the responses, 98 per cent of the respondent companies confirmed that the certifying agencies/bodies visited their premises and around 92 per cent informed that the visits were annual. Table 123 summarises the heads under which visit-related expenses are incurred, the percentage of respondents who paid them, and the overall ranges of amounts paid for each head, as per the responses. Accommodation and testing were among the most frequently reported expenditure areas by respondents.

3.6.6. Perception Based Feedback

Table 124: Perception Regarding Role of PSS - Chemicals and Pharmaceuticals

Respondent Perception on the Role of PSS			
Positives	Respondents (Percentage)	Negatives	Respondents (Percentage)
Improved product quality	39	Certifications issues	3
Increased accessibility	3		
Better work environment	3		
Improves brand image	3		
Clean and hygienic conditions	3		



Controlled conditions	environmental	3	
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Source: Based on the survey

Of the respondent set analysed, 98 per cent of companies regarded the role of PSS in their firms as positive. Table 108 summarises the various benefits of compliance, as reported by the respondents, and ranks the parameters by the frequency of feedback received. As can be observed, the respondents perceive improvements in various product quality aspects as the principal positive impact of PSS compliance, followed by increased buyer acceptance/trust and improvements in customer retention, clean and hygienic conditions, brand image, etc.

Table 125: Lacunae- Chemicals and Pharmaceuticals

Parameters	Percentage of Sample
High-cost related issues	47
Time-consuming processes	22
Market entry restrictions	22
Increase in quality checks	11

Source: Based on the survey

Of the responses, around 47 per cent believed that high cost was the major lacuna in the compliance process, followed, in order of importance (based on response frequency), by procedural delays, market entry restrictions, and an increased number of quality checks.

When enquired about the most striking impediments, respondents again cited cost inflation, delays, and market entry restrictions as their major concerns.

Table 126: Reasons for Product Sustainability- Chemicals and Pharmaceuticals

Parameters	Percentage of Respondents
------------	---------------------------



Rules and regulations and all mandatory standards strictly followed	42
Restricted use of harmful chemicals	38
Production methods to meet high health standards and better machineries	21
High quality of products maintained	13

Source: Based on the survey

On enquiring of the respondent companies about the factors that made their respective products sustainable – in terms of continued demand and acceptability – it was found that around 38 per cent of the respondents believed that not using any harmful contents made their products acceptable in target markets. Hygiene factors, due to compliance with regulatory requirements, well-managed production processes, high product quality, and better technology, were other factors indicated by the respondents.

Table 127: Adoption of PSS for Increased Domestic Sales- Chemicals and Pharmaceuticals

Affirmative (78 Per Cent of Sample)		Opposing (22 Per Cent of Sample)	
Reasons	Percentage	Reasons	Percentage
Improves product quality	67	Increases cost	50
Ban on harmful chemicals used in production	27	Time-taking process	50
Provides more access	7		

Source: Based on the survey

When asked about PSS adoption in domestic markets, 78 per cent responded affirmatively, while the remaining 22 per cent opposed it. The major reasons for the opinions formed, and the percentages of the respective respondent sets expressing them, have been summarised in Table 127. Improved product quality was seen as the major advantage of adopting PSS in domestic sales. Cost factors and procedural delays were identified as the major deterrents by respondents opposing the introduction of PSS in domestic markets.



3.6.7. Key Highlights

Some of the key findings derived from the analysis of chemicals and pharmaceuticals sector responses have been summarised below:

- PSS is a relatively new phenomenon for most of the companies in the sector, with around 84 per cent of the respondents dealing with them for a decade or less.
- Increased durability and quality of the products were the principal product-level improvements derived by the respondents due to compliance.
- Improvements in quality of final products, greater relationship with customers and hence more confirmed orders and increased market access were the major benefits of adoption of PSS as per the respondents.
- 88 per cent of the chemical and pharmaceutical respondents confirmed increased exports post adoption of PSS and compliance with relevant standards.
- The respondents cited structural changes and varied demands by customers as the major challenges in the compliance procedure.
- The incidence of multiple standards on the same product, as per the responses, is majorly influenced by clients and their requirements.
- There were no instances of denial of market entry reported by the respondents in the Chemicals and Pharmaceutical sector.
- The total cost towards PSS for around 79 per cent of the respondent companies was RS. 2 Mn. or less.
- Among the respondent food processing companies, no companies had to pay membership fees. Such requirements were not there for any of the companies in the sample.
- High-cost factor was seen as the major lacunae by the respondents.
- Around 78 per cent of the relevant respondents supported the adoption of PSS in domestic markets, while the remaining 22 per cent did not see any benefits.
- Around 38% of the respondents in the chemicals and pharmaceutical sectors deal with raw materials, and it points to the importance of promoting production and trade of finished goods in the sector.



4. Recommendations

Recommendations	Rationale
Need for standardisation of compliance requirements.	PSS and associated compliance aspects are highly driven by client needs, as per the responses received. Such client requirements can differ even when clients are from the same country/region. This frequently leads exporters to build separate production plants for specific buyers, as complying with multiple certifications in a single plant becomes infeasible. The different requirements for various PSS/certifications and associated audits often cannot be met in one or two plants, as this can lead to time-consuming and costly processes. However, based on qualitative feedback from the ground, the development of additional infrastructure also sufficiently pressurises exporters and discourages small- and medium-scale exporters. To avoid these consequences, further deliberation on the standardisation of compliance requirements is imperative.
Need for proper systems to provide traceability information.	Most of the states in India lack systems for generating adequate data about the shipping vessels that ply in their territorial waters or the region(s) these vessels access to fish. Therefore, most exporting companies that acquire raw materials from third parties face the challenge of providing trustworthy traceability certificates. Hence, information systems are necessary to store relevant information.
Need for synchronisation between internationally accepted standards and Indian testing policies.	Many restricted contents under international standards are not banned in India, leading to their use. This often leads to the rejection of Indian exports in major international destinations, which in turn results in inflated costs for the exporter. To encourage exports, there is a need for synchronisation of Indian policies on testing and restrictions on chemicals, antibiotics, etc., vis-à-vis international benchmarks, so that transaction and transportation costs for the exporters can be lowered.
Need for more technical workshops on PSS.	It has been observed that manufacturer-exporters are not fully aware of the private sustainability standards relevant to their respective sectors. They are conversant with the compliance requirements (and related certifications) and adhere to them to ensure retention/expansion of business. More workshops on private sustainability standards are therefore a requirement.



Development of institutional capacity to facilitate traceability	It has been observed that traceability issues are a major concern for exporters, particularly in the marine sector. There is a lack of reliable data on the number of fishing vessels that are available and active, making it difficult to provide viable traceability certificates for the goods. A cell/system that facilitates the same shall go a long way toward streamlining traceability-related processes.
Need to promote export of finished products to lessen the adverse impacts of PSS.	There should be a gradual shift towards catering to global value chains with finished goods. Currently, an overreliance on intermediate and semi-finished exports is evident across many sectors, with significant impacts on both standards and compliance. Increased finished goods exports are imperative across sectors to increase firms' bargaining power, ensure greater participation in standard formulation, and help mitigate the adverse effects of compliance.



Annexure I

Table: Geographical Spread of Respondent Companies

State/Sector	Food Processing	Textiles	Leather	Chemicals and Pharmaceuticals	Wood	Marine (Fisheries)	Total
Delhi	9	11	9	8	13	0	55
NCR	9	11	9	8	13		55
Maharashtra		8	0	16	15	9	68
Mumbai	8	8		16	15	9	68
Kerala	9	0	0	0	0	16	30
Alleppey						2	4
Aroor						1	1
Cochin	5					9	16
Kollam	4					4	9
Tamil Nadu	10	15	2	0	3	10	66
Chennai	10	15	2		3	10	56
Tiruppur		10					10
Punjab	1	3	8	0	0	0	15
Ludhiana	1	0					2
Jalandhar		3	8				13
Uttar Pradesh	0	0	0	0	13	0	17
Saharanpur					13		17
Gujarat	0	0	0	14	0	0	15
Ahmedabad				14			15
West Bengal	9	1	13	0	0	9	34
Kolkata	9	1	13			9	34
Respondent Set (Total)	46	48	32	38	44	44	252



Detailed Summary

Background and purpose

Commissioned by the Trade Policy Division, Department of Commerce, Government of India, and prepared by the Centre for WTO Studies (CWS), IIFT, this study (commissioned 20 May 2017; completed 15 December 2017) examines the rise of private sustainability standards (PSS) and the concerns they raise for India's exports and domestic industry. Over seven decades of GATT/WTO liberalisation have driven tariffs down, but non-tariff measures—technical regulations and standards in particular have risen in their place. Market access is now shaped more by production and product standards than by tariffs or conventional non-tariff barriers. As a major exporter of agricultural and labour-intensive goods, India has a direct stake in this shift. The report is organised in three parts: a legal and conceptual analysis, an assessment of global trends against India's socio-economic realities, and a primary survey of 300 firms across six sectors.

Part I — Legal and conceptual analysis

The WTO's TBT and SPS Agreements discipline standards set by governments and quasi-governmental bodies, but their scope does not extend to standards set by private entities. This leaves PSS, voluntary, industry-driven standards that target sustainability metrics such as the environment and labour, largely developed in developed-country markets, without a clear international legal framework to discipline them. Though voluntary in law, strong buyer and consumer preference has rendered PSS de facto mandatory for market access. Their design can also present a distorted picture of sustainability and tilt trade toward domestic producers, as the “food miles” controversy over air-freighted Kenyan flowers illustrated. Producers in developing countries, particularly SMEs, struggle to comply yet have little choice but to do so.

The foremost obstacle is definitional: PSS are neither defined nor recognised under the two Agreements, and they proliferate with overlapping objectives across sectors. The study recommends establishing Working Groups under the TBT and SPS Committees, but discussing PSS outside the Agreements' framework, and only after resolving the Agreements' own transparency issues. It argues the WTO, as a consensus-based and publicly funded forum, is more appropriate than the MNC-dominated ISO. It calls for a “bridge” connecting standard-takers and standard-makers, with the Department of Commerce mapping the standards de facto imposed on Indian exporters and raising firm awareness. Because India's participation in



standard-setting is virtually absent, the government should serve as a surrogate in these bodies' decision-making without incurring fees, and India should align with like-minded developing countries to press for a WTO framework.

Part II — Global trends and India's socio-economic realities

Since the early 1980s, trade policymaking in industrial economies has shifted from price-based instruments such as tariffs towards public policy measures, including the SPS and TBT regulations, and, increasingly, private standards. The WTO's two-decade effort to harmonise mandatory standards has effectively stalled amid this proliferation, leaving compliance governed by market forces and third-party auditors. The understanding underpinning today's PSS traces to United Nations "soft law" from the 1970s and 1980s; these standards have gradually drifted from voluntary status towards a quasi-mandatory character. Of roughly 621–624¹³⁸ private standards analysed, about 82 per cent originate in industrial countries, posing a disproportionate challenge for India's geographically dispersed exporters. India currently has no nodal agency or registry to record and analyse the standards operating in its markets.

A recurring concern is the uneven application of Sustainable Development Goal 12: standards regulate production processes and products but leave consumption untouched, imposing producer-centric costs on developing countries without a balancing discipline. The study recommends a transparent inter-ministerial mechanism for information-sharing across finance, labour, health, environment and commerce; a national registry or nodal agency, preferably housed in a research institution with data-analysis capacity, to track PS and PSS and assess their impact; and active participation in review and standard-setting, together with the development of India-specific standards (following the FSSAI "green dot" model) and the regionalisation of standards to fit Indian conditions. It also urges that any government funding be consistent, targeted and time-bound, and that cooperative structures replace direct funding of certification fees. It calls for consumer-centric standards to balance SDG 12.

Part III — Questionnaire-based survey of six sectors

The third part reports a face-to-face survey of 300 manufacturer-exporters, 50 each across marine (fisheries), leather, textiles, wood, food processing, and chemicals and pharmaceuticals, drawn from major clusters nationwide. Firms consistently reported that PSS and their

¹³⁸ Unique PPS were nearly 554 in numbers till 2016.



compliance requirements are driven by client needs, which differ from buyer to buyer even within the same country. This frequently forces exporters to build separate production lines or plants for individual buyers, a burden falling hardest on SMEs. Awareness of PSS is strikingly low even among firms that comply, limiting Indian participation in standard-setting. Traceability emerged as a serious constraint, particularly in the marine, food processing, and wood sectors, where weak data on vessels and raw material sources undermine the credibility of traceability certificates. A mismatch between Indian testing norms and international restrictions on chemicals and antibiotics leads to rejected shipments and inflated costs. Reported benefits include better product quality, confirmed orders and improved market access; most firms spent under ₹4 million on compliance, though some large marine firms exceeded ₹6 million.

The survey's recommendations are to standardise compliance requirements to reduce duplication of plants and audits; build traceability information systems and institutional capacity, including a dedicated cell and reliable data; synchronise Indian testing and restriction policies with international benchmarks; conduct more technical workshops to close the awareness gap; and promote the export of finished rather than intermediate or semi-finished products, to strengthen firms' bargaining power and lessen the adverse impact of compliance.

Overall conclusion

Across all three parts, the study's central message is that standards (not tariffs) now determine market access, and that PSS, though voluntary and often well-intentioned, function as an under-regulated barrier that disproportionately burdens developing-country exporters. India's response, it argues, should combine domestic institution-building, a registry, inter-ministerial coordination, awareness and traceability systems, active engagement in international standard-setting, and sustained advocacy for a WTO framework.



Annexure II

Questionnaire

for

Survey on the Application of Private Sustainability Standards: Scope & Nature

2017

Background

Market access negotiations in the WTO have historically targeted two trade policy instruments: tariffs and non-tariff measures (NTMs). Tariff negotiations have been disciplined globally, with tariffs decreasing from very high levels in the Uruguay Round. Increasingly, these have been replaced by non-tariff barriers (NTMs), such as standards (voluntary & mandatory) and technical regulations. The Private sustainable standard is a form of voluntary standard that has grown alongside trade and globalisation. The analysis of the WTO's treatment of tariffs and NTMs clearly indicates an imbalance in the international trade regime.

Further blurring the issue would be the moves by certain interested parties to push the PSS into the WTO system. A proposed survey is carried out to make an informed assessment of the nature and applicability of Private Sustainable Standards (PSS) or Private Standards (PS) among Indian firms.

Methodology

It becomes imperative for India to make an informed stand rooted in a sound understanding of the nature, application and scope of the PSS. The Centre for WTO Studies proposes to undertake a study on its implications for Indian producers or firms. The complete study will be divided into two parts. The final Reports will be submitted to the Trade Policy Division of the Department of Commerce, Government of India.

The **first part** of the report will provide an overall assessment of PSS's global presence and impact, based on secondary sources. This part would assess seven broad parameters: costs,



proliferation, interoperability, transparency and accountability of standard-setting organisations (SSOs), incidence of PSS, sectoral preference for PSS, and Legitimacy.

For the **second part** of the report, the Centre proposes to survey certain Indian producers exporting to developed-country markets, mainly the QUAD and other developed countries such as Australia, South Korea, and Singapore, using a questionnaire.



Questionnaire for the Survey

(Wherever the option of a tick (✓) mark is given, use it)

Firm Details (General)

1.1. Name of the Respondent	
1.1.a. Designation	
1.2. Name of the Company	
1.2.a. Address and Phone	Mobile:
1.3. Location:	Factories - Headquarter –
1.4. Number of Employees	No:
1.5. Type of Ownership	Private / Public / Partnership / Others
1.6. Size as per records –	Large/medium/small / MSME
1.6.a. Paid-up-Capital	Rs.
1.6.b. Total Investment	Rs.
1.7. Sector[s] (tick (✓))	Food processing/textiles and clothing/leather/ chemicals and pharmaceuticals/wood products / Marine (fisheries) Any other: _____
1.8. Which products do you deal in? Specify the products you export	1. Product 1 _____ (Export – Yes/No) 2. Product 2 _____ (Export – Yes/No)



	3. Product 3 _____ (Export – Yes/No) 4. Product 4 _____ (Export – Yes/No)
1.9. Do you have an IEC number?	IEC number:
1.10. What is your company's NIC code	NIC code:
1.11. Which countries are you exporting to? Specify the share for each country in your total exports	1. Country 1 _____ (Share _____) 2. Country 2 _____ (Share _____) 3. Country 3 _____ (Share _____) 4. Country 4 _____ (Share _____)
1.12. What have been your latest year's export values	1. _____ Value 2. _____ Quantity

Application and Scope of Private Sustainable Standard (PS)

2.1. Are you aware of the existence of Standards (PSS)	[Yes] / [No]
2.1.a. Do you have to comply with multiple standards	[Yes] / [No]
2.1.b. Can you list some of the relevant private standards in your sector?	1. 2. 3. 4.
2.1.c. How many PSS have you adopted? Specify the product and importing country for which you have to adopt the same	1. _____ PSS Name _____ (Product _____ Importing Country _____)



	2. PSS Name _____ (Product _____ Importing Country _____) 3. PSS Name _____ (Product _____ Importing Country _____) 4. PSS Name _____ (Product _____ Importing Country _____)
2.1.d. No. of years of the subscription of the standard	1. PSS _____ Validity _____ _____ 2. PSS _____ Validity _____ _____ 3. PSS _____ Validity _____ _____ 4. PSS _____ Validity _____ _____
2.1.e. Were there any difficulties faced in obtaining PSS certification? Specify	
2.2. Scope of PSS, i.e. what is the impact of PSS on overall product quality?	1. Product _____ Improvement _____ _____ _____



	2. Product _____ Improvement _____ _____ _____ 3. Product _____ Improvement _____ _____ _____ 4. Product _____ Improvement _____ _____ _____
1.3 Are you aware of PSS type?	[Yes] / [No]
2.3.a (If Yes)	Private / Government / Multilateral / Others
2.4. How do you perceive the Role of PSS for your firm	positive/negative
2.4.a. If positive, specify the reason	
2.4.b. If negative, specify the reason	

Costs of Certification of Private Standard

3.1. What is the total cost towards PSS?	Rs. : US\$:
3.1.a. Are there any membership fees? If yes, how much	[Yes] / [No] Rs. : US\$:



3.2 Annual renewal fees, if any?	Rs. : US\$:
1.3 Does the Certification process require you to make structural modifications? 3.3.a. (If Yes) What Changes are you required to undertake? <i>(Tick and Qualify)</i>	[Yes] / [No] 1. Building/Structural: 2. Accounts and Administration; 3. Production Process: 4. Marketing and Sales:
3.4. What are the cost implications for the changes undertaken in the product price?	1. PSS Name _____ (Cost Incurred _____ Percentage Increase in Per Unit Product Price due to Compliance _____) 2. PSS Name _____ (Cost Incurred _____ Percentage Increase in Per Unit Product Price due to Compliance _____) 3. PSS Name _____ (Cost Incurred _____ Percentage Increase in Per Unit Product Price due to Compliance _____) 4. PSS Name _____ (Cost Incurred _____ Percentage Increase in Per Unit Product Price due to Compliance _____)



3.5 Did the certifying body or Agency visit your premises	[Yes] / [No]
3.5.a. Are there yearly certification-related visits	
3.5.b. Costs undertaken by your firm or you	b.1 Travel Rs: US\$: b.2 Accommodation Rs: US\$: b.3 Visits Rs: US\$: b.4 Cost of Testing Rs: US\$: b.5. Other miscellaneous costs (Specify): Rs: US\$:
3.6. Any other related costs	Specify: Rs: US\$:
3.7. Number of Years of experience with PSS	

Benefits of the Adoption of Standard



4.1. Did the adoption of PSS benefit your firm	[Yes] / [No]
4.2. What were the Benefits – <u>[(✓) mark the options]</u>	1. Better quality final product 2. Confirmed business orders for a certain number of years 3. Exclusivity in terms of supplying to the client 4. Streamlining the processes (like better resource/inventory management) 5. Better working conditions 6. Regulation of waste generation 7. Promotion of alternative ways of production 8. Greater access to markets/companies 9. Any Other (Please specify):
4.3. What do you think are the lacunae	1. 2. 3. 4.
4.4. What is the one lacuna that was striking?	1.
4.5. Has the adoption of PSS helped your firm in increased participation in exports	[Yes] / [No]



4.5.a. If Yes, can you express in Values or percentage (%)	
4.6. What is the range of your exports to total sales in % ages	100% / above 75 % / up to 50 % < 50 % / > 30% / < 20 % / =10 %
4.7. Which are three reasons, according to you, that make your product sustainable by nature	1. 2. 3.
4.8. Is there any conditionality of the PSS?	[Yes] / [No]
4.9. What are the conditionalities?	1. 2. 3.
4.10. What do you feel about the conditionality?	1. Reasonable 2. Unreasonable
4.11. What are the major challenges posed by PSS to your organisation?	1. PSS Name _____ (Product _____ Challenges _____ _____ _____ _____ _____) 2. PSS Name _____



	(Product _____ Challenges _____) _____ _____ _____ _____) 3. _____ PSS Name _____ (Product _____ Challenges _____) _____ _____ _____ _____) 4. _____ PSS Name _____ (Product _____ Challenges _____) _____ _____ _____ _____)
4.12. Did you encounter multiple PSS on the same product in different markets?	1. Product _____ _____ a. _____ PSS Name _____ Country _____ b. _____ PSS Name _____ Country _____ c. _____ PSS Name _____ Country _____



	d.	PSS
	Name _____ Country _____	
	2.	
	Product _____	
	_____ a.	PSS
	Name _____ Country _____	
	b.	PSS
	Name _____ Country _____	
	c.	PSS
	Name _____ Country _____	
	d.	PSS
	Name _____ Country _____	
	3.	
	Product _____	
	_____ a.	PSS
	Name _____ Country _____	
	b.	PSS
	Name _____ Country _____	
	c.	PSS
	Name _____ Country _____	
	d.	PSS
	Name _____ Country _____	
	4.	
	Product _____	
_____ a.	PSS	
Name _____ Country _____		
b.	PSS	
Name _____ Country _____		
c.	PSS	
Name _____ Country _____		



	d. PSS Name _____ Country _____ 5 others
4.13. Were you denied entry into any market/organisation due to non-compliance with any of the PSS? Please provide requisite details.	1. PSS Name _____ (Product _____ Country _____) _____) 2. PSS Name _____ (Product _____ Country _____) _____) 3. PSS Name _____ (Product _____ Country _____) _____) 4. PSS Name _____ (Product _____ Country _____) _____)
4.14. What are the compliance measures required to be undertaken – in the areas mentioned – for obtaining PSS?	1. Product _____ _____ a. PSS Name _____ Country _____ b. Areas of Compliance i) Production Process _____ ii) Labour Welfare _____



	iii) Environmental Compliance _____
	iv) Hygiene Measures _____
	v) Electricity Conservation _____
	vi) Others _____ _____
	2.
	Product _____ _____
	a. PSS Name _____ Country _____
	b. Areas of Compliance
	i) Production Process _____
	ii) Labour Welfare _____
	iii) Environmental Compliance _____
	iv) Hygiene Measures _____
v) Electricity Conservation _____	
vi) Others _____ _____	



	3. Product _____ _____ a. _____ PSS Name _____ Country _____ b. Areas of Compliance i) _____ Production Process _____ ii) _____ Labour Welfare _____ iii) _____ Environmental Compliance _____ iv) _____ Hygiene Measures _____ v) _____ Electricity Conservation _____ vi) _____ Others _____ _____
	4. Product _____ _____ a. _____ PSS Name _____ Country _____ b. Areas of Compliance i) _____ Production Process _____ ii) _____ Labour Welfare _____



	iii) Environmental Compliance _____ iv) Hygiene Measures _____ v) Electricity Conservation _____ vi) Others _____ _____
4.15. Do you think PSS should be adopted to increase sales in domestic markets as well?	a. Yes/No b. Reasons _____ _____ _____ _____ _____
4.16. How credible do you think PSS are measured?	1. Sustainability (environment and labour issues) a. 2. Relevance (is it Relevant?) a. 3. Accessibility (technology-wise) a. 4. Efficiency (improvement in production) a. 5. Engagement (involvement of all) a.



	6. Impartiality (in regional coverage) a. 7. Improvement (adaptation –geographic) a. 8. Rigour (what is the method of testing?) a. 9. Truthfulness (in terms of Reporting) a. 10. Transparency (Notifications) a.
4.14. Global value chain (GVC) – where do you think your products will fit	❖ Raw Materials ❖ Semi-finished raw materials ❖ Intermediate ❖ Semi-finished intermediate ❖ Finished
