SPS regulations and Developing Country Exports

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Introduction

The Food Processing sector

The Food Processing sector in India is one of the largest in the world in terms of production, consumption, export and growth prospects. Important sub sectors in food processing industries are:- Fruit & Vegetable Processing, Fish-processing, Milk Processing, Meat & Poultry Processing, Packaged/Convenience Foods, Alcoholic beverages & Soft drinks and Grain Processing etc. Primary food processing is a major industry with thousands of rice-mills, flour mills, pulse mills and oil-seed mills. There are several thousands of bakeries, traditional food units and fruit/veg./spice processing units in unorganized sector. In the organized sector, there are over 820 flour mills, 418 fish processing units, 5198 fruit/vegetable processing units, 171 meat processing units.

KEY STATISTICS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of the industry</td>
<td>250,000 crores</td>
</tr>
<tr>
<td>No of units</td>
<td>Approx. 6607</td>
</tr>
<tr>
<td>Investments</td>
<td>20097 crores</td>
</tr>
<tr>
<td>FDI as on 31/2/03</td>
<td>3500 crores</td>
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<tr>
<td>Contribution in GDP</td>
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</tr>
<tr>
<td>Direct employment</td>
<td>Approx. 2.77 lakh</td>
</tr>
<tr>
<td>Exports (2003)</td>
<td>14500 crores</td>
</tr>
<tr>
<td>Growth</td>
<td>15 % p.a</td>
</tr>
<tr>
<td>Contribution in total exports</td>
<td>10 %</td>
</tr>
</tbody>
</table>

During the negotiation rounds of GATT, especially since the seventies, the world has witnessed a significant reduction of import duties. Lately there has been a reduction also in the unilateral application of quotas and other traditional non-tariff barriers. However, a considerable number of such barriers in the shape of technical regulations and standards still persist. Technical standards and regulations including sanitary and phyto-sanitary controls are not in themselves trade barriers. However, their misuse to raise new obstacles to imports and to give protection to domestic producer are trade barriers.

Despite growing concern that certain technical and SPS measures may be inconsistent with World Trade Organization provisions and may impede the flow of trade, the Indian government is not well positioned to address this issue. Trade associations and key government officials have identified such measures as an increasingly important issue in trade. However, they have difficulty in defining the nature and scope of the problem, partly because of the complex nature of the issue itself, but for other reasons as well. For example, they lack complete information on the number of measures that affect India’s exports, they are also unsure that how many measures that have been identified may be inconsistent with World Trade Organization provisions, and they do not have reliable estimates of the impact such measures have had on exports. The government and industry officials indicated that foreign technical standards and sanitary and phyto-sanitary measures affect the exports of a broad range of commodities, result in a variety of trade effects, and may create additional costs for the Indian industry and government but they are not equipped to deal with them. For details see the project website at www.spsmeasures.net

SPS measures
Consumers in developed countries have become increasingly concerned about food safety, environmental issues and social dimensions of the food supply chain. In several countries especially within the European Union, the response to these consumer concerns— and to the real prevailing weaknesses in food safety management systems— has seen a wave of legislative and regulatory activity, and the emergence of numerous private sector ‘codes of practice’ or other technical protocols.

How will this growing array of governance measures affect the terms and conditions for continued market access by developing country exporters?

Will these measures raise the technical, financial, and/or administrative bar for market entry to unattainable levels, or, otherwise, impose requirements which essentially erase the labor cost and other advantages which developing country suppliers have held until recently?

Are these measures sufficiently transparent—in their formation, content and implementation—to enable developing country suppliers to understand the necessary benchmarks and time frame for compliance?

How will the stringent governance systems being put in place by major supermarket chains and industry groups effectively crowd out the participation of small farmers, small exporters, and even small countries from the fresh produce trade?

How does the Indian experience highlight the fact that market and regulatory standards still remain diverse even in the face of harmonization effort in large part due to the continued dominant role of private standards and consumer preferences?

In Europe as in many developed countries the consumer population is faced with a number of concerns:

A perceived ‘loss of control’ over food in the contexts of rapid globalization and structural and technical change,

A perception that there had occurred systematic withholding of information (by governments) of potentially significant food safety hazards,
A perception that the regulatory apparatus was biased toward protecting the interests of farmers and downstream food producers rather than consumer safety;

Publicly visible risk assessment disagreements among food safety scientists from different countries,

Evidence of widespread member state violation of EU Directives/Regulations and a seeming lack of accountability and responsibility for enforcing existing rules,

Lack of consumer trust in food safety information provided by most segments of the private sector, and

Media coverage, which emphasizes health threats and the presence of vested interests, deemed to be incompatible with consumer protection.

The consumer backlash has been severe, bringing down one national government (i.e. in Belgium), undermining the careers of several senior health and agricultural officials, and, at least in certain product groups, threatening to undermine on-going efforts to achieve European market integration. In response to these consumer concerns have been a broad set of institutional and regulatory changes at EU and member state levels as well as major initiatives within the private sector to restore consumer confidence.

It is in this context that this project was undertaken by RGICS funded by the European Union. In this study, the various issues concerning food safety and preparedness of part of exporters to face the new and changing sanitary and phytosanitary measures is evaluated, especially in certain high value sectors such as marine products, rice, mango and mushroom. The study sought to take a cue from successful exporters and prepare a CD ROM based workbook that could be of use to train exporters in meeting new standards and complying with regulation to the benefit of the exporters and the importing markets.

Indian Exporters and SPS Concerns

Background: The Agreements on Technical Barriers to Trade (TBT) and Sanitary and Phyto-Sanitary measures (SPS) under the WTO lays down general principles and rules and regulations that are needed by any member state for the protection of human life and health, animal life and health, and plant life and health. These are with respect to measures that affect trade and are based on the principle that countries have a right to adopt and apply standards as long as these do not restrict international trade. However, there are significant differences between the perceptions and institutional capacities of developing countries as compared with developed countries when implementing agreements on TBT and SPS under WTO.

Despite growing concern that certain foreign sanitary or phytosanitary measures may be inconsistent with World Trade Organization provisions and may unfairly impede the flow of agricultural trade, the Indian government is not well positioned to address this issue. Agricultural trade associations and key government officials have identified such measures as an increasingly important issue in agricultural trade. However, the Indian authorities have difficulty defining the nature and scope of the problem that foreign sanitary and phytosanitary measures present for India’s exports, partly because of the complex nature of the issue but for other reasons as well.

For example, they lack complete information on the number of measures that affect India’s exports, they are unsure how many measures that have been identified may be inconsistent with World Trade Organization provisions, and they do not have reliable estimates of the impact such measures have had on exports.

The aim of the project was to study the current food safety and SPS regulation in India and to prepare a comprehensive text on existing standards in India and their practice.

Target groups in this exercise include exporters, standard formulation and implementation authorities, industry associations, policy makers, media and interested members of the civil society.
For dissemination of results, the project website www.spsmeasures.net was kept updated on findings, workshops and papers written.

This report starts with the premise that the goal of reaching higher standards is always desirable. And this is particularly true in case of food and food products. However, this report also recognizes that standards can impede exports, either because explicit bans are placed on imports of particular products or the costs of compliance with stringent requirements diminish export competitiveness. In the new world order where trade is increasingly more and more competitive and open, this report argues that the increased stringency of food safety and agricultural health standards can used for the competitive repositioning and enhanced export performance in India.

However, this would only happen when exporting countries upgrade capacity and make necessary adjustments in the structure and operation of their supply chains.

**SPS and Developing Countries**

The SPS Agreement built upon the Standards Code, introduced in the 1947 General Agreement on Tariffs and Trade (GATT). It permitted measures that were ‘necessary to protect human, animal or plant life and health’, yet required regulators to: (1) base measures on a scientific risk assessment; (2) recognize that different measures can achieve equivalent safety outcomes; and (3) allow imports from distinct regions in an exporting country when presented with evidence of the absence or low incidence of pests or diseases. In addition, the Agreement encouraged (yet did not require) the adoption of international standards, making explicit reference to those of the Codex Alimentarius Commission (CAC) for food safety, the International Office of Epizootics (OIE) for animal health and the International Plant Protection Convention (IPPC) for plant health. Importantly, the Agreement protects the right of a country to choose its own ‘appropriate level of protection’, yet guides members to ‘take into account the objective of minimizing negative trade effects.’

The main goal of the SPS Agreement is to prevent domestic SPS measures having unnecessary negative effects on international trade and their being misused for protectionist purposes.

However, the Agreement fully recognizes the legitimate interest of countries in setting up rules to protect food safety and animal and plant health. More specifically, the SPS Agreement covers measures adopted by countries to protect human or animal life from food-borne risks; human health from animal or plant-carried diseases; and animal and plants from pests and diseases. Therefore, the specific aims of SPS measures are to ensure food safety and to prevent the spread of diseases among animals and plants. SPS measures can take the form of inspection of products, permission to use only certain additives in food, determination of maximum levels of pesticide residues, designation of disease-free areas, quarantine requirements and banning imports.

With the Uruguay Round, agriculture trade reform enter they agenda of GATT talks for the first time. The Punta del Este Declaration in 1986, called for increased disciplines in three areas in the agricultural sector: market access; direct and indirect subsidies; and sanitary and phyto sanitary measures. On SPS issues, the talks sought to develop a multilateral system that would allow simplification and harmonization of measures, as well as elimination of all restrictions that lack any valid scientific basis. Developing countries strongly advocated the removal of Sanitary and Phytosanitary measures that acted as non-tariff barriers to trade. They supported the international harmonization of SPS measures to prevent developed countries from imposing arbitrarily strict standards.

In December 1988, at the Mid-Term Review of the Uruguay Round, it was agreed that the priorities in the area of SPS were: international harmonization on the basis of the standards developed by the international organizations; development of an effective notification process for national regulations; setting-up of a system for the bilateral resolution of disputes; improvement of the dispute settlement process; and provision of the necessary input of scientific expertise and judgement, relying on relevant international organizations.

**Working Group on SPS**

The Working Group on Sanitary and Phytosanitary Regulations, which was formed in 1988, produced a draft text in November 1990. First of all, the discipline related to SPS measures was included in a separate draft agreement. Secondly, a consensus was reached by the parties on the following points: SPS measures should not represent disguised
trade barriers; should be harmonized on the basis of international standards, guidelines and recommendations and of generally-accepted scientific principles; special consideration should be taken of developing countries and their difficulties in meeting standards; transparency should be ensured in setting regulations and in solving disputes; and an international committee should be established to provide for consultations regarding standards. However, several areas remained unsettled: there was no agreement on whether and under what circumstances, countries could implement domestic measures stricter than international standards, or on whether economic considerations or consumer concerns, other than health-related concerns, should be taken into account in the risk assessment. The issues of inspection and approval still remained an area of dispute. It is worth noting that progress on SPS-related issues continued to outpace many other sectors within agriculture. The final text of the Agreement on the Application of Sanitary and Phytosanitary Measures that was approved at the end of the Uruguay Round was largely based on the Dunkel text.

The SPS Agreement

The Agreement provides national authorities with a framework to develop their domestic policies. It encourages countries to base their SPS measures on international standards, guidelines or recommendations; to play a full part in the activities of international organizations in order to promote the harmonization of SPS regulations on an international basis; to accept the SPS measures of exporting countries as equivalent if they achieve the same level of SPS protection; and, where possible, to conclude bilateral and multilateral agreements on recognition of the equivalence of specific SPS measures.

The Agreement requires countries to choose those measures which are no more trade restrictive than required to achieve domestic SPS objectives, provided these measures are technically and economically feasible (e.g. to apply a quarantine requirement instead of a ban). The SPS Agreement recognizes that, due to differences in geographical, climatic and epidemiological conditions prevailing in different countries or regions, it would often be inappropriate to apply the same rules to products coming from different regions/countries. The SPS Agreement allows, therefore, countries to apply different SPS measures depending on the origin of the products. This flexibility should not lead to any unjustified discrimination among foreign suppliers or in favour of domestic producers. On the same lines, governments should recognize disease-free countries, or disease-free areas within countries, and adapt their requirements to products originating in such countries/areas.

The important underlying objectives of the SPS Agreement are the minimization of the protectionist and unjustified discriminatory use of standards and promotion of greater transparency and harmonization. In both regards, the experience has been mixed. The difficulties encountered are probably less due to specific shortcomings of the SPS Agreement itself than the intrinsic complexities of the management of food safety and animal health protection and rapidly evolving markets for agricultural and food products. Further, it is evident that WTO Members vary widely, both in their understanding of the Agreement and their ability to take advantage of the rights and responsibilities it defines.

The SPS Agreement has not eradicated the differential application of standards and it is, perhaps, unrealistic to expect it to do so. Indeed, differentiation in the application of SPS measures is a necessary part of any risk-based food safety and agricultural health control system. At the country, industry and enterprise levels, there is a need to prioritize the hazards to be monitored and the control measures that are implemented, given limited resources. Further, priorities are inevitably set not only on the basis of scientific evidence but also political factors, for example where consumers and other interest groups are showing most concern.

Agro-Food Exports from Developing Countries: The Challenges posed by Standards

Expanding global trade in perishable agricultural products and high-value foods has served to highlight the extent to which national standards for food safety and animal and plant health diverge, as well as the differential capacities of public authorities and commercial supply chains to manage the potential risks associated with trade in these products. For many higher-value foods, including fruits and vegetables, fish, beef, poultry and herbs and spices, the challenges of international competitiveness have moved well beyond price and basic quality parameters to greater emphasis on food safety and agricultural health concerns. Across this range of products there is increasing attention to the risks associated, for example, with microbial pathogens, residues from pesticides, veterinary medicines or other agricultural
inputs and environmental or naturally occurring toxins. However, there is greater scrutiny of the production or processing techniques employed along these supply chains.

There are various reasons why food safety and agricultural health standards commonly referred to as sanitary and phytosanitary (SPS) measures within the context of the World Trade Organization (WTO) differ between countries.

- There are significant differences in tastes, diets, income levels and perceptions that influence the tolerance of populations towards these risks.
- Differences in climate and in the available technology affect the incidence of different food safety and agricultural health hazards.
- Standards reflect the feasibility of implementation, which itself is influenced by legal and industry structures as well as available technical, scientific, administrative and financial resources.

While the process of notification under the SPS Agreement has contributed to increased transparency of official food safety and agricultural health measures, this has been accompanied by the proliferation of private standards that fall outside of the purview of the WTO. Thus, the overall picture for food safety and agricultural health requirements in trade is becoming increasingly complex and fast moving as standards are promulgated in multiple spheres at both the national and international levels. Further, the complexity of this issue stems not only from the variability of standards on paper, it is magnified by differences in the ways, means and intensities by which the standards are monitored and enforced, which themselves are changing over time.

**Capacity Building**

Importing countries frequently require guarantees that exports are derived from areas that are free from certain pests or diseases, that minimum standards of hygiene have been applied in the manufacture, packaging and distribution of food products, or that products are free of excessive residues, for example of pesticides, veterinary medicine, environmental contaminants or naturally occurring contaminants. The exporting country must have the capacity both to comply with these requirements and to undertake the necessary actions in order to demonstrate that compliance has been achieved.

In pursuing the development of a modern and competitive agro-food system, a country needs to have the capacities to undertake a range of SPS-related functions, some of the most important being:

- Detecting the presence/demonstrating the absence of biological, chemical or physical hazards and having an information system to inform decision-making processes; employing emergency procedures in the event of emerging hazards and/or outbreaks.
- Verification/certification of traded products with respect to established food safety risks.
- Undertaking scientific analysis of hazards in agricultural inputs and food products.
- Establishing/maintaining the identity of agricultural products through the supply chain.
- Establishing/maintaining systems for hygienic practices in agro-food product handling and transformation.
- Registering the production, distribution, and use of agricultural inputs that may pose risks to human, animal or plant health.

**Compliance Costs**

In the context of international agro-food trade, developing countries can incur significant ‘costs of compliance’ whenever changes are made in international standards or those of their trading partners. Additional costs may also be incurred in response to new or more stringent food safety or other requirements of private buyers. These costs can come in various forms, including fixed investments in adjusting production/processing facilities and practices, recurrent personnel and management costs to implement food and other control systems and the public and private sector costs of conformity assessment.

Many forms of technological and organizational change involve shifts in levels and structures of operating costs. There are at least two (related) reasons why the costs associated with these changes are deemed to be ‘controversial’ in relation to food safety and agricultural health standards. First, there is a perception that the needed actions are not
justified and represent an unnecessary cost burden on (developing country) suppliers. This lack of justification might be because these requirements lack (or are perceived to lack) scientific basis or involve burdensome arrangements when simpler and less costly procedures might provide similar outcomes. Second, suppliers may obtain little or no benefit beyond continued market access, while the opportunity cost of the required investments, for example in terms of product development or expansion of capacity, can be considerable. In many cases this latter argument is difficult to sustain and may reflect a lack of appreciation of the (often intangible or indirect) benefits that can accrue from, for example, enhancement of food safety controls. Adoption of improved control systems can result in reduced product and raw material wastage, improved product-cost accounting and enhanced staff morale. Thus, changes in product and process technologies can generate substantial increases in efficiency, reducing production costs and promoting competitiveness.

The enhancement of food safety capacity can also have more dynamic and wide-ranging impacts on private sector suppliers. For example, the implementation of a HACCP system and gaining third-party certification can send positive signals to both existing and potential customers. Firms can use these signals as a mechanism to reposition themselves in the marketplace and/or access new markets. For example, Indian fish processing plants that have invested in sophisticated systems of hygiene control are making efforts to access higher-value markets for processed and semi-processed products. Conversely, the potential burden of compliance costs can induce strategic changes as a means to avoid investments, for example through attempts to access markets with lower food safety requirements.

Even where the administrative, technical and financial burden of compliance is achievable at a country or industry level, this burden may be too great a burden at the level of individual firms or producers. There is a general concern that the challenge of rising standards is marginalizing the position of smaller players, especially producers, traders and processors, as well as smaller industries as a whole, in international agro-food trade. However there is presently little empirical evidence to support this argument. In part, this is because of the difficulties in disentangling the specific and distinctive role of standards compliance in the processes of consolidation of agro-food systems.

**Estimated world agricultural and food trade directly impacted by import border rejections based on technical standards, 2000-01**

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</tr>
</thead>
<tbody>
<tr>
<td>Meat/Dairy Products</td>
<td>1.25</td>
<td>811</td>
<td>142</td>
<td>8</td>
<td>21</td>
<td>982</td>
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<tr>
<td>Fish and Fishery Products</td>
<td>1.00/2.00</td>
<td>232</td>
<td>417</td>
<td>145</td>
<td>90</td>
<td>884</td>
<td></td>
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<tr>
<td>Fruit and Vegetables and Products</td>
<td>0.75/1.50</td>
<td>367</td>
<td>439</td>
<td>44</td>
<td>61</td>
<td>911</td>
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<tr>
<td>Grains</td>
<td>0.50</td>
<td>160</td>
<td>40</td>
<td>6</td>
<td>8</td>
<td>214</td>
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<tr>
<td>Animal Feed</td>
<td>0.50</td>
<td>65</td>
<td>39</td>
<td>4</td>
<td>2</td>
<td>110</td>
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<tr>
<td>Tropical Beverages and Products</td>
<td>0.25</td>
<td>25</td>
<td>18</td>
<td>16</td>
<td>0</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Nuts and Spices</td>
<td>0.75/1.50</td>
<td>16</td>
<td>33</td>
<td>30</td>
<td>1</td>
<td>80</td>
<td></td>
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<tr>
<td>Other Processed Food</td>
<td>1.00/2.00</td>
<td>122</td>
<td>53</td>
<td>3</td>
<td>6</td>
<td>184</td>
<td></td>
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<tr>
<td>All Other Categories**</td>
<td>0.25</td>
<td>199</td>
<td>112</td>
<td>19</td>
<td>6</td>
<td>307</td>
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<tr>
<td>Totals</td>
<td>1.97</td>
<td>1332</td>
<td>275</td>
<td>195</td>
<td>3799</td>
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<td></td>
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<tr>
<td>Proportion of Trade Affected</td>
<td>0.70</td>
<td>1.10</td>
<td>0.93</td>
<td>1.25</td>
<td>0.84</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Where there are two numbers the first relates to exports of high-income countries and the second to middle and low-income countries.

**This includes oilseeds, textile fibers, drinks, tobacco/cigarettes, and sugar/confectionery.
This exercise suggests that the value of world agro-food trade impacted by official product rejections at the import level was $3.8 billion in 2000-01. Admittedly, this is almost certainly an over-estimate since we have assumed similar levels of rejections for products entering developing countries as for industrialized countries, despite the fact that levels of standards and enforcement capacities are typically lower. Reflecting the dominant share of high-income countries in certain product groups for which detention/rejection levels are relatively high (for example meat and dairy products, other processed foods and processed fruit and vegetables) these countries are estimated to account for 53 percent of ‘rejected’ exports, while they account for some 63 percent of world agricultural and food product exports. The estimated value of developing country agro-food border rejections is $1.8 billion, 74 percent of which is accounted for by middle-income countries. The estimated value of low-income country agricultural and food product trade rejected at the importing country border is $275 million, representing just less than one percent of the agricultural and food exports of these countries. The product composition of the estimated ‘rejected exports’ of developing country is broadly consistent with the data presented earlier on EU and US rejections. For middle-income countries, the dominant products are fish and fishery products and fruit and vegetable and products, followed by livestock products. For low-income countries, fish and fishery products are the dominant category accounting for more than half of the total estimated ‘rejections’.

Disputes at the WTO

Ž Given the nature of the counter-notification database and the information provided in most of the actual counter-notifications, it is not possible to quantify the levels of developing country trade, which has or might be affected by the contested measures.

Complaints by developing countries are dominated by a handful of countries, in particular Argentina, Brazil, Chile and Thailand. Each of these countries has issued or supported more than a dozen complaints, with Argentina alone being involved in more than a quarter of all cases of developing country complaints. These four countries have been involved, in one way or another, in the vast majority of complaints by developing countries.

Ž Only a handful of other countries, including Uruguay, the Philippines, South Africa, Ecuador and India, have been involved in multiple cases. This pattern of participation reflects the prominence of certain countries in the trade of a few product categories, especially beef and horticultural products, rather than the overall structure of developing country agricultural and food trade.

Ž Low-income countries are weakly represented in the pool of counter-notifications, issuing or supporting complaints in only five cases. This could partly be a reflection of the structure of their exports (that is they concentrated in commodities for which food safety and agricultural health measures are of lesser importance) or their limited capacity and/or confidence to participate in the SPS Committee. Their lack of formal complaints is, however, not because of their ability to resolve effectively their concerns bilaterally. Thus, these data alone provide us with very little information regarding the extent to which food safety and agricultural health measures are inhibiting the exports of low-income countries.

Ž Among the seemingly large number of developing country complaints there are a limited number of concerns that repeat themselves time and time again, yet with slight variations from context to context. In relation to animal health, the vast majority of complaints relate to what are claimed to be over-restrictive (and non-scientifically based) measures with respect to FMD and beef products or BSE and animal by-products for pet food, animal feed, cosmetics etc. In the case of plant health, the large majority of complaints relate to claims of overly restrictive measures for plant diseases/pests for to horticultural products. Food safety-related complaints are a mixture of quite specific concerns with no large clustering around any particular theme. Surprisingly, given its huge importance for developing country trade, there are rather few complaints issued in relation to measures governing fish products.

The reasons for developing country complaints are varied, yet the vast majority involve concerns about either the ‘lack of scientific evidence’ in relation to food safety, absence of risk assessments in relation to plant health, and inconsistencies between country and international standards in relation to animal health.

Ž Among developed countries, the European Union has been the subject of the largest number of complaints by developing countries. For example, there were more than three times as many complaints against the European
Union than against the United States. Several reasons might account for this. Firstly, the process of harmonization of food safety and agricultural health measures within the European Union has often resulted in the adoption of the most stringent standards previously applied by individual Member States. Secondly, the European Union has more frequently and most visibly embraced the ‘precautionary principle’ when adopting certain standards, sometimes giving rise to controversies over the scientific basis for these measures. Thirdly, due to the complex administrative structure of the European Union, some countries reportedly find it difficult to resolve concerns through bilateral discussions and therefore need to more readily use the venue of the SPS Committee to take up concerns with the European Commission.

Counter-notifications relating to new measures in the SPS Committee, 1995-2002

<table>
<thead>
<tr>
<th>Complaints against measures of</th>
<th>Regulatory Goal of Contested Measure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plant Health</td>
<td>Animal Health</td>
</tr>
<tr>
<td>Developed Countries</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Developing Countries</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Multiple Countries</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Sub-total</td>
<td>33</td>
<td>20</td>
</tr>
</tbody>
</table>

Number of Complaints by Developing Countries

| Developed Countries           | 12           | 12            | 34           | 2       | 60     |
| Developing Countries          | 8            | 17            | 7            | 2       | 34     |
| Multiple Countries            | -            | 2             | -            | -       | 2      |
| Sub-total                     | 20           | 31            | 41           | 4       | 96     |
| Total                         | 53           | 51            | 126          | 11      | 241    |

The growing number of recorded complaints or counter-notifications by developing countries provides only a very crude indicator of the extent to which food safety and agricultural health measures impede their trade in high value agricultural and food products. These complaints probably represent the ‘tip of the iceberg’ as most concerns and disputes are raised bilaterally and technical organizations rather than country trade representatives handle the majority of negotiations. Some of the complaints have occurred in the context of expanding trade ties in which the previous non-effect (or at least nuanced effects) grows more serious with expanded levels of trade. There is little basis for associating the growing number of complaints with deliberate protectionism; the nature of many of the concerns seems to be more related to inadequate (scientific) information rather than discrimination. Further, the apparatus of formal complaints relates only to mandatory standards set by public agencies. As noted above, a growing array of standards are being set privately, either through consensus within particular industries or by the ‘gate keepers’ of the dominant supply chains. While many such standards are ostensibly voluntary, they are becoming the de facto standards to gain or maintain access to particular buyers or market segments.

Banning Fish and Fish Products

Over the last decade, developing country exports of fish and fishery products have increased at an average rate of six percent per annum. However, one of the major challenges facing developing countries in seeking to maintain and expand their share of global markets is a progressively more strict food safety requirement, particularly in major industrialized countries and regions. Previous studies suggest that exporters in a number of countries have experienced not inconsiderable problems complying with these requirements. Whilst the associated costs of compliance can be significant, however, the returns in terms of continued and/or expanded access to high-value markets often more than compensate.
The European Union lays down harmonized requirements governing hygiene throughout the supply chain for fish and fishery products. Processing plants are inspected and approved on an individual basis by a specified 'Competent Authority' in the country of origin, whether a European Union Member State or a Third Country, to ensure that they comply. The European Commission undertakes checks to ensure that the Competent Authority undertakes this task in a satisfactory manner. Imports from Third Countries are required to have controls that are at least equivalent to those of the European Union. Countries for which local requirements have been recognized as equivalent are subject to reduced physical inspection at the EU border. Countries that have not yet met these requirements, but which have provided assurances that their controls are at least equivalent to those of the European Union are currently permitted to export, but are subject to higher rates of border inspection. Initially the deadline for all countries to be fully harmonized with the EU’s hygiene standards was 31 December 1996. However, this has been extended on numerous occasions and the current deadline is 31 December 2005.

Kenya provides an example of longer term efforts to comply with the EU’s food safety requirements, overlaid with the necessity to overcome restrictions on trade relating to immediate food safety concerns. The major export of fish from Kenya is Nile perch derived from Lake Victoria. Until the mid-1980s this was a relatively minor species in the Lake Victoria fishery, but subsequently came to dominate the landed catch through the 1990s. At the end of the 1980s, this was accompanied by a shift in focus from local to export markets and by the mid-1990 Nile perch accounted for over 90 percent of Kenya’s exports of fish and fishery products, with a value of around $44 million in 1996. The majority of these exports were destined for the European Union. Through the 1980s there was significant investment in industrialized fish processing facilities and by the mid-1990s 15 facilities were in operation. At the landing beaches, however, there was little or no change in fishing methods or the development of marketing facilities.

Initially, Nile perch exports were extremely profitable. In recent years exporters of Nile perch in Kenya (as well as Tanzania and Uganda) have faced a catalogue of restrictions on trade with the European Union. In 1996, Salmonella was detected in a number of consignments of Nile perch from Kenya, Tanzania and Uganda at the Spanish border and Spain immediately prohibited imports. In April 1997, the European Commission introduced a requirement for Salmonella testing of all consignments of Nile perch from the region. Following an outbreak of Cholera across East Africa, this was extended to all fish and to cover Vibrio cholerae and Vibrio parahaemolyticus. These requirements were eventually lifted in June 1998. In March 1999, a suspected case of fish poisoning with pesticide was identified in Uganda. The European Union subsequently imposed a ban on exports of Nile perch in April 1999 that, in the case of Kenya, was not lifted until December 2000. In each case, the impact on the Nile perch sector was immediate. Exports declined, although over time these were partially offset by increased sales to other markets. Fish processing plants, most of which were already operating at less than 50 percent capacity, reduced their production and some closed. In turn, the landed price of Nile perch fell.

In 2000 the Kenya Fish Processors and Exporters Association (AFIPEK) was formed. This has developed a code of Good Manufacturing Practice for the sector, which is adopted on a voluntary basis by its members. A remaining weakness in the Nile perch supply chain is standards of hygiene at landing beaches. Over time, most attempts by the government to implement effective management of the fishery resource and marketing arrangements have failed. In many cases, only recently have most efforts been made to provide toilets, paved and fenced landing areas, potable water and covered markets. This is undoubtedly the biggest compliance issue facing the sector in the short to medium-term if access to EU markets for fish and fishery products is to be maintained. It is evident that the efforts of the Kenyan Government and private sector eventually paid off. In December 2003, the European Commission recognized the controls in place as equivalent to those in the European Union.

There are varied indications that mycotoxin problems have disrupted developing country trade. Thailand was once among the leading world exporters of corn. However, due to persistent aflatoxin problems Thai corn regularly sold at a discount, costing the country an estimated $50 million a year in reduced export revenue. Similarly, India was historically a significant supplier of peanut meal to the European Union, yet this trade declined sharply in the early 1980s due to problems meeting stricter standards for aflatoxin. In 1997, the EU proposed a set of harmonized standards and a uniform sampling procedure for testing. In response to the EU’s notification to the WTO, developing countries raised a series of objections, related both to the proposed standards and associated sampling methods in conformity assessment. The proposed standards were to be far more stringent than the proposed Codex standard yet; it was suggested, without proper scientific justification.
**Scientific Justification**

The SPS Agreement allows countries to introduce sanitary and phytosanitary measures which result in a higher level of protection than that which would be achieved by measures based on international standards, if there is a scientific justification or where a country determines on the basis of an assessment of risks that a higher level of sanitary and phytosanitary protection would be appropriate. In carrying out risk assessment, countries are urged to use risk assessment techniques developed by the relevant international organizations. Since the drafting and entry into force of the SPS Agreement, the FAO/WHO Joint Codex Alimentarius Commission, the Secretariat of the International Plant Protection Convention and the International Office of Epizootics have undertaken a substantial amount of work in the area of risk analysis. On the other hand, the SPS Agreement permits governments to choose not to use international standards and adopt lower standards. The Agreement also permits the adoption of SPS measures on a provisional basis as a precautionary step, in cases where there is an immediate risk of the spread of diseases but where the scientific evidence is insufficient.

All countries must maintain an Enquiry Point, which is an office in charge of receiving and responding to requests for information regarding domestic SPS measures, including new or existing regulations and decisions based on risk assessment. Countries are required to notify the World Trade Organization (WTO) Secretariat of any new SPS requirement, or modification of existing requirements, which they are proposing to introduce domestically, if the requirements differ from international standards and may affect international trade. The WTO Secretariat circulates the notifications to all member countries. Notifications should be submitted in advance of the implementation of the measure, so as to provide other countries with the opportunity to comment on them. In cases of emergency, governments may implement a measure prior to notification. Countries are also requested to publish the sanitary and phytosanitary measures they have adopted.

**Special and Differential Treatment**

The SPS Agreement provides for special and differential treatment in favour of developing countries and least-developed countries (LDCs). It includes, under certain circumstances, longer time frames for compliance, time-limited exceptions from the obligations of the Agreement and facilitation of developing country participation in the work of the relevant international organizations.

The Agreement includes provisions for a two-year grace period for all developing countries (which expired at the end of 1997). However, this delay did not include the transparency provisions. For the LDCs, a five-year grace period, covering all obligations including the transparency ones, will expire at the end of 1999. One of the advantages of the transitional period is that countries are not required to provide a scientific justification for their SPS measures during this period, therefore, their measures can not be challenged on this basis.

**Standards and Regulations**

While standards and regulations can promote economic development and trade, they can be used as tools to impede international trade and protect domestic producers. This they do through

- unjustified different requirements in different markets;
- unnecessary costly or time consuming tests;
- duplicative conformity assessment procedures.

The risk of domestic protection is increasing, since more obvious trade barriers, such as tariffs, were reduced through several rounds of multilateral negotiations. This risk is particularly high in the agricultural sector where lowering the level of protection provided by tariffs and many non-tariff barriers would increase the importance of sanitary and phytosanitary measures as border protection instruments.

Compliance with regulations is mandatory, therefore products which do not comply with regulation cannot be sold in a given market. On the other hand, therefore no product can be stopped at the border or refused access to the domestic market because of non compliance with standards.

**Traditional reasons for setting for standards**
Ž Minimizing risk
Ž Providing information to consumers about the characteristics of products
Ž Providing information to producers about market needs and expectations
Ž Facilitating market transactions
Ž Raising efficiency and contributing to economies of scale.

However, in practical terms, the distinction between standards and regulations is fading away, since adherence to standards is often a pre-condition for the acceptability of products by consumers and distributors.

Ž Moreover, insurance companies may request compliance with standards to reduce product liability exposure;
Ž importers may ask adherence to standards when there is a need for compatibility with a prevailing product in the importing market; and standards may be incorporated in regulations.
Ž Conformity assessment measures are aimed at assessing the compliance of a product with a standard or a regulation.
Ž Measures to evaluate and ensure conformity may be as significant as the standards and the regulations themselves; therefore they can also act as powerful non-tariff barriers if they impose costly, time-consuming and unnecessary tests or duplicative conformity assessment procedures. In the case of conformity assessment, as well as in the case of standards and regulations, the lines between legitimate measures and measures aimed at discouraging imports and protecting domestic producers is very difficult to draw.
Ž Conformity assessment can enhance the value of standards and regulations by ensuring that both domestic and imported products meet the required conditions. However, statistics show that conformity assessment is a rapidly growing activity, especially in developed countries.

A country that has sixty-five percent of its population depending on the agricultural sector; an under-developed processed foods industry; and fledging exports of agro-based commodities should see the Sanitary and Phytosanitary Standard (SPS) agreement of the World Trade Organization (WTO) as an opportunity to upgrade its skills and move up the value chain. In all the three segments, India has been wanting in its formulation of rules governing quality standards and its implementation.

Though the agriculture sector needs structural change to come out of the morass of low productivity, the issue of standards for the allied sectors can address the problem of growth in the short run with a relatively painless transition. It is in this context that the SPS agreement can be the catalyst for progress as at its core lies quality standards that need to be adhered too. In the process the entire supply chain can move to the next level to attain these said standards.

The SPS agreement by affecting the finished product, encompassing process controls, quality benchmarks and packaging design, ensures that the back processes too adheres to certain norms. It is this effect of the sanitary and phytosanitary standards (re-hauling the Indian processed food industry) that will necessitate improvements in the quality of the raw materials at the base of the pyramid i.e. the agricultural sector.
The Theoretical Underpinning

With the signing of the Agreement of Agriculture (AoA), it was thought that the market for agricultural commodities would become perfectly competitive as is generally tooted in textbooks as the products are assumed to be homogenous. AoA did succeed in reducing tariff across countries but there arose a new point of contention in international trade – standards and quality norms. To tackle these new agreements were needed between all the members of the WTO, which finally lead to the Agreement of Sanitary and Phytosanitary Measures and Agreement of Technical Barriers to Trade.

When consumers are provided complete information, they choose the quality and quantity of commodities that they think is optimum given the price. In such a case there is no need of market intervention, as stated in neoclassical economics. A similar argument can also be given by incorporating the variable of food safety. But underlining this theory is the assumption that all goods being traded are homogeneous and substitutable. But this is farthest from the attributes of commodities in the arena of international trade in agriculture products.

The products being traded can be divided into three groups – Search, Experience and Credence – according to the level of information made available to the consumer (Nelson 1970, 1974; Darbi and Karni, 1973). Search goods are those where the consumers can inspect the commodities before making purchase decisions. For Experience goods the buyers cannot determine the attributes of the commodity in question till after the purchase and use. When a repeat client makes a transaction or the establishment of a ‘brand’ by the producer signifying certain attributes with the product nullifies the effect of this imperfection. Credence goods are the last of the troika, where the consumer lacks full information of the product before as well as after the purchase.

Since the market needs to factor in the above, some intervention is required and SPS and TBT facilitates the conversion of this involvement into a rule-based system. All through the text the differentiation of products as laid out above will help us incorporate the discussions on the SPS in the theoretical framework.

Tracing the Agreement on Sanitary and Phytosanitary Measures

The General Agreement on Tariffs and Trade (GATT), 1948 provides the underlying base for discipline in national food safety and animal and plant health protection norms. Articles I and III ensured that the principles of non-discrimination and national treatment in the overall trade of goods between the signatories. The said rules were also applicable to food products and animal and plant health.

But it was the specificity of Article XX on General Exceptions that necessitated the need for the SPS agreement in 1995. In this article provision (b) provides for governments to impose restrictive requirements on imported products if they were, “necessary to protect human, animal or plant life or health”.

The Tokyo Round

The Tokyo Round of multilateral negotiations between 1973 and 1979 made the first attempt to address issues of non-tariff barriers to trade and farm trade. An important outcome of this round was the TBT agreement, which covered the technical requirements, inspection mechanisms and labeling relating to food safety and animal and plant health. The relevant standards were to adhere to the principle of harmonization and transparency with the GATT secretariat acting as the notification body.

The agreement also had a dispute redressal mechanism for the member countries. However this code was applied to only those countries that ratified the TBT agreement which ensured the need for a stronger enforcement mechanism in the run up to the SPS agreement in the Uruguay round.

Agreement in the Uruguay Round
With increased pressure to expand negotiation into areas like non-tariff barriers, the Punta del Este Declaration, 1986 made a specific mention of “minimizing the adverse effects that sanitary and phytosanitary regulations and barriers can have on trade in agriculture” among other issues like market access and direct and indirect subsidies. Elimination of all these impediments are required to unknot trade in agriculture but the developing nations were the strongest votaries of removal of SPS as a barrier to trade.

To overcome their concerns, the touchstone for the Working Group established in 1988 was the harmonization of standards on the basis of accepted scientific principles, development of a notification process for regulations and transparency in dispute resolution to weed out arbitrariness. All these concerns were tackled in the final draft of the agreement but at the time of its passage key areas like domestic implementation of stricter norms than international standards, process of risk assessment and inspection mechanism remained in the realm of grey. The developing nations were also able to get a concession of five years in its implementation strongest votaries of removal of SPS as barrier to trade.

Background Note on the Agreement on Agriculture

Historically, trade in agriculture has a strong tradition of protection, particularly in industrialized countries. The Uruguay Round brought the movement of agricultural products into the discipline of rule-based trading system. Though it might not have led to the liberalization of the market to the extent the developing world would have preferred. But there were three main components of the deal that ensured some semblance of stabilization in the market for agriculture products (Anderson, 1999). These were - targets set for reduction of farm export subsidies, expanding market access for imported goods and cuts in domestic producer subsidies.

The reasons for briefly highlighting the Agreement on Agriculture is the concurrent signing of the Agreement on Sanitary and Phytosanitary Measures as the developing and the least developed nations realized that the concessions gained in the AoA could be diluted with stringent quarantine measures.

The SPS agreement was conceived to block this design and bring these variable policies into the ambit of a rule-based process.

An in-depth explanation of the Agreement provides us with an enhanced perspective on the issues that this agreement tries to address.

**Article 1 - General Provisions**

It indicates that the Agreement applies to all sanitary and phytosanitary measures which affect international trade and informs that the definitions for terms used are provided in Annex A. Further, the rights of member states under the TBT Agreement that does not fall within the scope of the SPS Agreement remains unaffected.

**Annex A - Definitions**

1. Sanitary or phytosanitary measure is defined as following:

   1. Any measure applied to protect animal or plant life or health within the territory of the Member from risks related to the entry, establishment or spread of:

      - Pests or diseases;
      - Disease-carrying organisms; or
      - Disease-causing organisms.

   2. Any measure applied to protect human and animal life or health within the territory of the Member from risks arising from:

      - Food additives;
      - Contaminants;
      - Toxins; or
      - Disease-causing organisms in foods, beverages, or feedstuffs.

   3. Any measure applied to protect human life or health within the territory of the Member from diseases carried by:
Sanitary and phytosanitary measures include all laws, decrees, regulations, requirements and procedures related to:

- End product criteria;
- Processes and production procedures
  - Testing;
  - Inspection;
  - Certification and approval procedures;
  - Quarantine treatments (associated with animal and plant transport and the materials required during their transport);
  - Statistical methods;
  - Sampling procedures;
  - Methods for risk assessment;
  - Packaging and labeling directly related to food safety.

2. Harmonization refers to the establishment, recognition and application of common sanitary and phytosanitary measures by Members.

3. International standards, guidelines, recommendations

   For food safety, the terms international standards, guidelines and recommendations refer to those established by the Codex Alimentarius Commission relating to:

   - Food additives;
   - Veterinary drug and pesticide residues;
   - Contaminants;
   - Methods of analysis and sampling; and
   - Codes and guidelines of hygienic practices.
Ž Textile and garments from Sri Lanka: by EU; MFA export restraint, MFA quota agreement, MFA consultation agreement, tariff quota, countervailing price undertaking import monitoring and bilateral quota by USA; import authorisation by Japan
Ž Rubber manufactures from Sri Lanka: anti-dumping duties by the USA; global quota by Japan
Ž Leather Manufactures from Sri Lanka: safeguard tariff rates and countervailing duties by the USA
Ž Non-metallic mineral products from Sri Lanka: anti-dumping duties, MFA restriction, MFA quota agreement, MFA consultation agreement and countervailing duties agreement by the USA
Ž Paper products from Sri Lanka: subjected to MFA quota and Child Labour prohibition
Ž Readymade garments from Sri Lanka: subjected to MFA quota and Child Labour prohibition

* Subject to data availability.

Export Facing NTBs at the major destinations for South Asian Countries (percentage of total exports, 1998)

<table>
<thead>
<tr>
<th></th>
<th>Bangladesh</th>
<th>India</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
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<tbody>
<tr>
<td>EU</td>
<td>91.01</td>
<td>55.45</td>
<td>71.30</td>
<td>83.41</td>
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<tr>
<td>USA</td>
<td>93.86</td>
<td>43.98</td>
<td>77.01</td>
<td>0.01</td>
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<tr>
<td>Japan</td>
<td>68.41</td>
<td>42.52</td>
<td>26.97</td>
<td>49.32</td>
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</tbody>
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Source: ‘Calculations Made on the Basis of “TRANS”, UNCTAD Database’ in Bhattacharyya and Mukhopadhyay, 2003

Sectoral production coverage (in percentage) of South Asian NTBs in their major destinations

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</thead>
<tbody>
<tr>
<td>1</td>
<td>Argi., Forestry &amp;fishing</td>
<td>18.8</td>
<td>7.2</td>
<td>11.3</td>
<td>7.0</td>
<td>5.5</td>
<td>2.8</td>
</tr>
<tr>
<td>2</td>
<td>Mining and Quarrying</td>
<td>0.0</td>
<td>6.7</td>
<td>3.5</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>3</td>
<td>Manufacturing</td>
<td>12.6</td>
<td>5.4</td>
<td>3.9</td>
<td>2.5</td>
<td>16.0</td>
<td>8.1</td>
</tr>
<tr>
<td>32</td>
<td>Textiles &amp;Apparel</td>
<td>9.5</td>
<td>4.1</td>
<td>1.1</td>
<td>0.7</td>
<td>13.5</td>
<td>5.5</td>
</tr>
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EU Standards

Ž EU regulatory changes are taking place that may also influence the operating environment for Third Country fresh produce supplier especially in relation to sanitary and phytosanitary inspection.
Ž Over the years, each Member State has developed its own arrangements for phytosanitary inspection and imposed different requirements for certificates, plant quarantine, etc.
Ž In an effort to harmonize and strengthen protective measures against the introduction of organisms harmful to plants or plant products, Council Directive 2000/29/EC was issued and subsequently amended in 2001.
Ž This Directive is of concern to developing countries as is not clear how individual members with their capacity limitations and other priorities will implement it. After some delay, the Directive entered into force on January 1, 2003.
In 2002, a European Food Safety Authority was created whose core functions are to provide independent scientific advice, undertake risk assessments, and provide information to the general public.

An earlier precedent in addressing this central matter came with the passage of the Food Safety Act in 1990 in the United Kingdom. Under the Act, any supplier of a branded product would be liable for the safety of their product. For purposes of the Act, all fresh produce sold in unpackaged form was considered to be the own brand of the retailer.

The BRC Food Technical Standard was created in 1998 and has since undergone two revisions. It entails specific requirements for company Hazard and Critical Control Point (HACCP) systems, quality management systems, factory environment systems, and product and process controls.

Specific protocols have also been developed for inspection and the accreditation of inspectors, in line with a European standard for inspection (EN45004). This affects local producers, manufacturers, and importer/distributors, and increasingly, overseas exporters. The BRC food safety standard has now been adopted by selected supermarkets outside of the UK.

At the EU level, there is an on-going process to more clearly define food safety responsibilities. Council Directive 93/43/EEC laid down general rules for food hygiene as well as procedures for the verification of compliance with these rules.

In 2002, a general Food Law (Regulation EC 178/2002) was adopted, an important provision of which was to introduce traceability as a requirement for all food marketed within the EU, from January 1, 2005.

Significantly, the Regulation would make it obligatory for all non-primary food operators to implement a HACCP system. Companies would be obliged to keep records of safety checks covered under HACCP for external surveillance purposes.

The Regulation would also seek to strengthen the traceability of foods by having compulsory registration of all food businesses and having registration numbers accompany food products throughout the distribution chain.

The impact of such a Regulation would be felt beyond the EU, as exporters from developing countries would presumably have to demonstrate that they are implementing a HACCP system and some form of traceability system.

In 1991, Directive 91/414/EEC was issued, setting out a Community harmonized framework for the authorization, use, and control of plant protection products. The Directive, which did not enter into force until July 1993, represented a significant change in procedures and focus of pesticide regulation.

Under this system the Commission would evaluate the active substances while Member States would evaluate and authorize the products/formulations containing such active substances. The focus of the program was to develop a positive list (referred to as Annex 1) of active substances.

Directive 91/414/EEC provides for Member States to individually extend their authorizations of pesticides for minor uses and to seek voluntary mutual recognitions of these minor use authorizations.

According to Commission Regulation 2076/2002, such authorizations may remain in place until mid-2007, although by the end of 2003 all products from these active substances must be relabeled to indicate their restricted use conditions.

By late 2002, such continued use authorizations had been made for some forty-two active substances, typically for several countries. The vast majority of these authorizations are for use on selected fruits, vegetables, or ornamental crops.
Some of the chemicals used in developing countries are out-of-patent, lower cost pesticides for which the major agro-chemical companies have no interest in generating data for regulatory re-approval. In addition, few of the fruits and vegetables exported by lower income countries are ‘major crops’ representing large markets for the leading agro-chemical companies.

Hence, unless special measures are taken, there is a concern that developing country growers (and exporters) will face a greatly reduced and probably more costly range of options for managing pests and diseases, contributing to increased levels of crop wastage, higher rates of crop failure, and a reduced ability to meet market requirements for visual and other quality standards.

Legislation at the EU level dates back to 1976 when Council Directive 76/895/EEC fixed MRLs for forty-three active substances for a range of fruits and vegetables. There have been subsequent revisions in these particular MRLs plus the introduction of Directives to establish community-wide MRLs for a broader array of products including cereals, products of animal origin, foods consumed primarily by infants and small children, and a wide range of processed foods.

Even now, for many fruits and vegetables, there are differences between Member States for individual crop/pesticide MRLs, reflecting local production conditions and the extent to which MRLs set at CODEX have been adopted.

According to some analysts, the harmonization of MRLs and more stringent monitoring of such MRLs could endanger developing country exports by exposing them to high or higher levels of rejection or product (due to violated MRLs) or forcing them to cut back on needed pesticide uses to an extent which weakens the commercial viability of production.

Several Council Regulations (i.e. 2078/92, 2200/96, and 1257/1999) refer to the need for farmers (or fruit and vegetable growers) to take better account of environmental concerns. However, the adoption of ‘good agricultural practices’ is yet to become part of any compulsory requirement in EU law or that of any individual Member State.

Inspections for this collective industry standard began in 2000, with inspections and certifications being done by independent EUREP-approved agencies. Of the twenty-six certification bodies accredited against the EUREPGAP standard for fruits and vegetables, all but two are based in developed countries.

Marine Products

The European Commission in August 1997 banned fishery products from India. This extreme step was precipitated on three primary goods:

1. Serious deficiencies with regard to infrastructure and hygiene in fishery establishments;
2. Potentially high risk for public health with regard to the production and processing of fisheries products; and
3. Contaminated by microorganism, which may constitute a hazard to human health.

The Government, faced with the EC ban, issued an Order that specified elaborate process standards, in line with the health requirements of the importing countries especially the European Community. The European standards are higher than the HACCP standards. The Seafood Exporters Association of India claims to have spent US$ 25 million on upgradation of their facilities to meet the regulations. Appropriate training of the personnel involved in various stages of production and processing were also addressed. Many of the standards adopted in the government Order are either not relevant for the product quality or are too stringent given the Indian fishing conditions and the legitimate objective, cumbersome and less costly procedures. The EC approved plants are normally bigger plants with capacity of more than 10 tons per day. Before you enter the plant you have to take off your shoes for rubber boots, put on a hair cover, facemask and a gown. These units have chilling room with -28 degree C temperature. These factories are spotless with excellent facilities.

In most of the plants, there is in-house peeling facility as well as a proper record keeping routine is maintained. A microbiological laboratory is also part of the facility. It is clean and well equipped. There is a microbiologist. There are
regular checks of the incoming material as well as finished products. The microbiological tests are done in external laboratories also to be doubly sure. According to some industry experts, the most common occurrence is presence of ‘coliform’ bacteria but they rarely found ‘salmonella’. Since the first step is to wash the shrimps in cold brine, the contamination gets removed.

In view of the sustainability issues arising on shrimps harvested from the sea, there has been a gradual shift to aquaculture in India.

This shift was assisted by MPEDA by providing technical assistance beginning in 1977-78. As a consequence, export of cultured shrimp in total export of shrimp has moved up to 42.9 per cent in quantity terms and 66.4 per cent in value terms by the year 1997-98.

The total area under shrimp farming is estimated to be 141,591 hectare. Of this, more than 50,000 hectare is based on traditional shrimp farming practices in the states of Kerala, West Bengal and Karnataka.

The potential area for shrimp farming along the coast in India is estimated to be 1.2 million hectare, of which only about 10 per cent is currently being utilized.

Environmental issues have emerged in aquaculture also, but these are emerging from domestic environmental concerns rather than international sustainability issues.

Concerns were also raised about the acute shortage of drinking water in the coastal areas and the suspicions that aquaculture could have contributed to it. But Unlike Taiwan, the Philippines etc., India does not use ground water for aquaculture.

Aquaculture checks environmental pollution and degradation also as imported and costly seed is used resulting in economic use. Effluents from shrimp farms are biodegradable.

The environmental issues for aquaculture are in fact of a different kind. For example, degradation of aquaculture land due to pesticide residues discharged from agriculture land is threatening aquaculture activity. Effluents from industrial belts along the coast may also contribute to the degradation.

The fact that fish cannot survive in polluted water can be a boon for policy makers to ascertain which areas need corrective measures by looking at the aquaculture units in the area.

**Peanuts**

The EU Commission in Brussels has specified tolerance limits for aflatoxin contamination in peanuts and also testing methods - the new proposed levels are 10 ppb (5ppb B1) for raw material and 4 ppb (2ppb B1) for consumer ready products.

The new proposed sampling plan is similar to the Dutch Code (3x10 kg) - the analysis to be derived from a 3 test Dutch code methodology from a randomly drawn 30 kgs sample. The new procedure is much more rigorous than is currently in force as should any of the 3 tests be found to be over the limit, the lot will be rejected.

This step is considered harsh by many from the scientific angle as it could potentially also lead to total turmoil of the entire peanut export trade to the EU countries.

Laboratory tests with small animals such as touts and rats which were fed highly contaminated feed (B1) on a daily basis have concluded that aflatoxin can cause cancer of the liver. But there is as yet, no clear evidence to prove that aflatoxins are carcinogenic in humans.

This should be viewed against the backdrop of the fact that should a shipment of peanuts be found to contain aflatoxin, this does not mean that all peanuts are contaminated since aflatoxin is concentrated on very few nuts. Experts have concluded that 75% of the lots rejected under the proposed procedure would be below the established tolerance.

The proposed sampling plan is similar to the Dutch Code (3x10 kg). The analysis is to be derived from a 3 test Dutch Code methodology from a randomly drawn 30 kgs. sample. The new procedure is much more rigorous than is currently in force as should any of the three tests be found to be over the limit, the lot will be rejected. In the case of bulk raw nuts, the implementation of a regular monitoring policy presents difficulties because the aflatoxin will seldom be
evenly distributed throughout a given batch and only a few nuts may be contaminated. For example, the contamination rate is estimated at 1:10,000 for groundnuts (peanuts).

The question is how large should the sample be in order to ensure that the test yields reliable data on the degree of aflatoxin contamination. Opinions differ on this point.

The implementation of the EU Commission’s proposals would endanger the export of peanuts to the EU member countries.

The planned tolerance limits of 2 ppb aflatoxin B1 and 4 ppb total aflatoxins in finished products are so low that they would almost certainly cause insurmountable difficulties and immense costs for production and export to the EU countries.

Producers within the EU itself would also suffer unreasonably from these regulations. Whereas the WHO is proposing a limit of 15 ppb for all aflatoxins, the EU Commission is insisting on an upper limit of 10 ppb for the raw nuts, despite the fact that the aflatoxin content decreases during subsequent processing of peanuts. A JECFA study demonstrates clearly that an increase in the upper limit for all aflatoxins from 10 ppb to 20 ppb would involve a theoretical risk of only two additional cases of liver cancer annually per one billion population.

Under the circumstances, it would be advisable for the EU Commission to adopt the WHO proposals and to specify an upper limit of 15 ppb for both raw and processed peanuts that will be binding throughout the EU. As regards the sampling procedure, a single test on a 30 kg sample would suffice.

The European Snack Association’s Nut Working Group has already expressed concern of the industry about the testing programme and analytical methodologies through CIAA (the European Food and Beverage Association).

The American Peanut Council has submitted documents showing significant increase in costs and rejections as a result of multi sample system.

The UK Ministry of Agriculture - MAFF - (UK is the largest consumer of peanuts in Europe - approx 25% of the peanuts is imported into Europe) has already stated that the proposals were more of a burden than required by current UK regulations and could result in unacceptable costs to both industry and enforcement without any prospect of improved consumer safety.

Despite these protests the revised draft of the sampling plan still recommends a multiple sampling system. It is evident that such a change will have very serious implications on the peanut industry.

It is also significant to note that this EU proposal possibly contravenes the WTO as this will erect artificial barriers and seriously discriminate against a number of producing origins, particularly third world status and developing countries including India.

Scientific data has documented that reducing aflatoxin levels for raw material (eg:from 15 ppb total to 10 ppb total) has little or no effect on the levels of aflatoxin found in finished product.

There is no justification for restrictive aflatoxin levels on the basis of consumer protection, given the fact that aflatoxin levels in raw materials can be substantially reduced through processing.

Introduction of rigorous, expensive import requirements puts undue burden on suppliers, distorting trade as it will limit the volume and number of origin suppliers who can routinely meet the criteria. This could, quite obviously, result in an artificial trade barrier and the possibility of a WTO action.

Rigorous testing programmes are extremely difficult to monitor and enforce. If not applied uniformly, both suppliers and importers are at a disadvantage. In a crop year when supplies are short, there may be an effort to manipulate results or encourage alternative import schemes through markets where surveillance may not be as stringent.

Lastly, none of the European countries is a producer of peanut and to bring about such stringent import restrictions on a commodity for which they have to fully depend on other origins, without giving any heed to the suppliers, other experts and JECFA/ WTO will be unhealthy and may prove to be more troublesome than serving any useful purpose.

Mango and Mango Pulp
Fresh mango and mango products are one of the primary product mix of the food-processing sector. India is the single largest single and offers a wide range of produce with over 1,000 varieties of mangoes. The climate is particularly suited to keep the market well supplied with mango produce throughout the year.

The Food and Agricultural Organisation (FAO) has categorised food processing industry into three sectors, namely Primary, involving basic processing of natural produce such as cleaning, grading, dehusking. Secondary, involving elementary modification of natural foods, such as hydrogenation of edible oils, and Tertiary, involving a high level of modification to make the natural produce ready-to-eat, for examples ketchup and ice cream.

Under this classification, India has a huge presence in the primary sector, as exporters of fresh mangoes. But it has a very limited presence in secondary and tertiary sectors, especially as exporters of mango chutneys, pickles, juices and concentrates, etc.

Mango is the third most popular tropical fruit (excluding bananas) after pineapples and avocados. Global production of mangoes was estimated by the FAO at 32 million tonnes.

The demand for mangoes in the world market is increasing rapidly, with imports having effectively doubled every five years.

The three main markets are North America, Asia and Europe, the USA alone accounting for almost 40 per cent of the total market.

In contrast to other tropical fruits, which are cultivated especially for exports to Europe or the USA, Indian mango is sold most extensively in regional markets of Asia and the Middle East. Three quarters of the world’s mangoes are produced in Asia, India (10 million tonnes), Pakistan (0.9 million tonnes), Indonesia and Thailand (0.6 million tonnes) respectively.

The main markets for Indian mango pulp are Saudi Arabia, Kuwait, UAE, Netherlands & Hongkong. In case of Indian pickles & chutneys, the popular markets are USA, UK, UAE, Germany and Saudi Arabia.

Other items like mango paste, jams, jellies and juices are exported to USA, Russia, UK, United Arab Emirates, and Netherlands. It is evident that majority of Indian producers have opted for less regulated markets like Middle-East, South Asia, etc.

Few large producers have entered highly regulated markets of European Union, USA and Japan. This is primarily due to past links and burgeoning Asian population in these regions. At the same time India mangoes confront severe competition from Pakistan, Thailand, Mexico, Brazil, etc, in its major export markets.

Standards are a major issue in fresh mango exports. Standards are usually defined as voluntary specifications emanating from market forces. It covers product characteristics, including those relating to quality; process and production methods (PPMs) that have considerable effect on product characteristics; terminology and symbols; and packaging and labelling requirements.

There are no established rules or regulations pertaining to ascertain the quality of mango. Each production center has its own unique physical characteristics, which include size, shape, color, skin texture, pulp color, fiber, aroma, flavor, shelf life, etc. It is the responsibility of the grower/shipper to provide the highest quality of fruit possible that best represents the above characteristics of mango. In fact, the market decides on the quality standards of fresh mangoes.

The US, which has set standards for variety of fresh fruits, does not give standards for mangoes. But the Food and Drug Administration (FDA) of USA has given a set of general guidelines on fruits and vegetables, similar to the Good Management Practices (GMP) guidelines for pharma. But there are no set standards or guidelines for mangoes in Europe and Southeast Asia.

**Indian Poultry**
India gave to the world the modern hen. The Indian Red Jungle fowl (Gallus gallus murghi), first spotted in the wilds of South and south East Asia, is recognized as the ancestor of all present day chicken breeds across the globe.

However, Indian poultry and poultry products barely cause a flutter in international, India, with poultry exports of just about Rs.15647.28 lakhs (2002-03) is only a bit player in the global market for broilers and other processed poultry products.

India’s share was a mere 0.007 per cent in 1998 and since then precious little has happened to merit a change in the situation.

India’s miniscule exports are limited to hatching/table eggs to neighbouring countries and West Asia.

Egg powder exports, mostly to the European Union (EU) and Japan, also constitute a significant chunk of total poultry exports. Leveraging on lower transportation costs, India has tentatively broken into the West Asian market for chicken meat, dominated by Brazil.

During the second half of 2003, India also managed to export large quantities of table eggs to the region leveraging on the inability of the Netherlands to service the market.

The Netherlands was embroiled in combating Avian Influenza that ravaged its poultry sector through the early months of 2003. This country, with a total egg export of 87,980 tonnes, accounted for 47.2 per cent of the EU’s trade in eggs with non-member countries. Germany and Belgium followed with 18.4 per cent and 7.9 per cent respectively.

Indian processors of egg powder, following numerous skirmishes with EU’s authorities through the late nineties, are still recovering from the body blow rendered by a European Commission directive on Maximum Required Performance Limit (MRPL) issued in March 2003.

Analytical procedures alien to Indian establishments were harnessed to detain Indian egg powder exports to the EU. Several consignments of Indian egg powder to Europe were consequently subjected to stringent checks and rejected, citing the new order.

The reason: detection of nitrofuran metabolites in samples of Indian egg powder tested at European ports. Nitrofurans are chemical compounds used in animal feed. The nascent Indian Egg Processors Association (IEPA) describes it as yet another attempt to stop Indian exporters in their tracks for they are increasingly seen as a growing threat to European interests.

Procedures and SPS measures are now all the more stringent with the adoption of the Public Health Security and Bio-terrorism Preparedness and Response Act, 2002. The Bio-terrorism Act stipulates a host of measures—from registration with the Food and Drug Administration (FDA), maintenance of reams of records, and even prior notice of exports to the US. Under the new rules, details of the food consignment, including information about the grower, if available, are to be plied to the FDA in addition to the Bureau of Customs and Border Protection (CBP), no more than 5 days before arrival of the shipment.

Prior notice under the earlier ‘container security initiative’ also makes it necessary to inform the US customs 24 hours before goods are loaded in any port headed for the US. It is feared that all these measures put together could act as non-tariff barriers. Non-adherence to rules can lead to detention of shipments. Even before the enactment of the Bio-terrorism Act, the US, invoking a plethora of reason, has refused shipments from developing countries. During November 2003, a total of 57 Indian shipments were refused entry. Of these, five shipments contained various types of shrimp and the reasons were the oft repeated ‘filthy’ and salmonella.

Indian poultry is emerging out of consolidation and, as witnessed in recent years, is all set for a period of rapid expansion, provided a few problems like the perennial shortage of corn that impinge on the feed situation are taken care of. The sector has not yet achieved critical mass for it to make a serious entry in the global market.
Rapid vertical integration is setting right some of the issues on hand, better control at the retail end of the market and stabilization of poultry prices, for instance, but it has also brought into play a fresh set of issues,

The setting of transparent norms for contracting, extending fair rearing fees to poultry farmers under contract drawing out just terms of contract, collective bargaining with association of poultry farmers, arbitration and disputes redressal etc. are some of the issues that the commercial sector ought to look at seriously, I instead of trying to push them under the carpet.

With increased integration and contracting driving the cutting edge of Indian poultry, some sort of a regulatory or monitoring mechanism, without being restrictive, ought to be in place before things go away for contract poultry has far reaching implications, good and bad, on rural livelihoods.

Norms on domestic bio-security, residue monitoring, testing traceability et al ought to be scaled up to international norms. The Indian administration, while concerned about Indian exports has set up an inspection regime for exports, but it should also look at translating this to into a tight inspection infrastructure for food imports too.

The recent notification to temporarily ban imports of various birds including poultry, from certain countries, in the wake of the outbreak of avian influenza is welcome, but such security measures ought to be institutionalized. What comes in has a bearing on what goes out and how Indian food exports are looked at in the international market place. Proper screening methods and norms ought to be strengthened.

The Indian poultry sector can turn to exports of chicken meat and shell eggs in a big way only if these measures are put in place. A global push under the present state of affairs will be catastrophic. Banned drugs and feed additives are sold clandestinely across the country and poultry farmers, not aware of its banned status or implications, use them. They should be totally off the shelves of stores. This will be just one of the measures that will lead to a residue plan governing the entire poultry sector. Given the scale and scope of this and the fact that Indian poultry is still unorganized in many ways, the task is leviathan.

Only Indian egg processors, with a tight control over the entire poultry chain, have been able to maintain a degree of clinical sophistication but on occasions there are slips-ups here too. One of the egg processors had, on an occasion, sourced eggs from the market, when produce from his contract farms, was not enough to meet export demands. A step fraught with risks.

The Indian egg processing sector is quite competitive in the international markets today. In fact, a Dutch study maintains that Indian egg powder will be cheaper than those from all egg powder exporting countries- the EU, USA, Ukraine and Brazil, even in the year 2012! Perhaps it’s this looming threat that prompts frequent attempts to cripple and kill Indian industry by using SPS measures in an insidious manner.

The Indians are not against SPS measures per se, for they too are concerned about public health issues. The manufacturing facilities of the Indian egg processors are as good as any in the developed world and, in recent years, they have also introduced stringent checks in the supply chain too- from feed, egg farms to processing. What they ask for is a simple- a level playing field.

The Indian poultry sector maintains it can make it on its own in the global arena, if wrongly wielded SPS measures, obstructive tariff measures and of course, subsidies are obliterated. The ‘moving-goal-post’ syndrome also needs to be dismantled, allowing for proper and timely dissemination of information about an impending amendment of rules. Sufficient grace periods for developing countries to adhere to the new norms, as provided for in the SPS Agreement, should be put into practice.

The Indian government, and poultry sector, ought to lobby hard for lifting of production subsidies, export subsidies, non tariff measures, tariff quotas etc. measures that developed countries adopt at will to obstruct free and fair trade.

Internalizing the ‘Problem’ of SPS and Suggested Solutions

Any impediment to trade is generally seen as a having ‘strategic implications’ on a countries economy and by the extension of this characterization the barriers that the Agreement on Sanitary and Phytosanitary Measures throws at us
need to be tackled rapidly. However, if this problem is looked at from another angle, SPS is not just a trade issue but also addresses a much bigger issue – public health. While trade just affects the economy of a country, health has much larger ramifications.

Much of the literature on SPS in India just concerns trade and the influence that the developing nations need to wield at the WTO to break these non-tariff barriers. But such an argument seems to externalize the debate, wherein we do not have too much leverage on these issues and have to depend on the developed nations to take the initiative. An alternate approach could be an internal assessment of the standards that we have and its effect on our own citizens with trade in commodities being only of secondary considerations.

Once such a stance is taken to solve the problem, the burden of SPS seems our own. Yes, we do need to tackle the unfair trade practices that have crept in while implementing the agreement but a large swathe of the initiative to meet the quality standards should be our own. Underlying the SPS is a fundamental principle of quality standards that should address health concerns. Issues of cost and technology must take priority but only in the context of health and not market access.

On of the major impediment to fulfilling the potential that Indian food processing industry has been the lack of post-harvest facilities. Whether it be the quality of storage space, the establishment of a cold chain for perishable items or basic value addition on the producer side, the facilities for the same are non-existent. The government should be the catalyst in the creation of such services, rather than the service provider, by following policies that induce invest in this sector. This approach will not only improve the quality of agro-produce but improve employment opportunities without the attendant baggage that direct government intervention brings.

To improve the quality of production and to verify the claims being made by the producers, a system of third party certification is a must. Herein lies the role of the government as a creator of such skills. Its role should as the regulator of such certifying agencies rather than being the authority to issue such clearance. Not only will the government be unencumbered from public dealing with the vast number of producers, hence directing its resources elsewhere, it will also reduce corruption and improve the quality of verification services being provided. Thus by promoting more private sector participation an alternate extension service infrastructure and capacity is being created with the government being just overall regulator.

As suggested in the above section, the documentation of norms required under SPS should be centralized with the Bureau of Indian Standards best equipped to handle all the queries that arise from the implementation sanitary and phytosanitary measures. One problem that is repeated stated is India’s, and the developing countries, is their inability to find representation in the three sister organization. As detailed in the section on them, the standards suggested by them are all constructed in a rule-based manner, similar to the procedure being followed at the WTO for its dispute resolution. The difference might be that in case of the three sisters representation by technocrats will not suffice but need to be made by scientists.

Producers should be provided with the necessary support infrastructure to modernize the entire production process. Here the adoption of HACCP would be a beneficial for the processed food industry. The technology needed to follow the processes outlined in HACCP is expensive but the government should provide the right incentive for indigenous technology and hence reduce costs. Traditionally mechanization in the agriculture sector has been viewed with suspicion as it supports a large mass of population but the government should realize that the implementation of such technology would lead to the expansion of the food processing industry and help in transferring of some of the labour force from agriculture to manufacturing.

Also, as shown by the case studies on the disputes between members the jurisprudence established is veering away from the strict interpretation of trade law and is accommodating issues like environmental concerns. Here the developing world needs to take such changes into consideration and not think of just being at the receiving end of the developed nations as the WTO’s Dispute Settlement Body takes only nine to twelve months for taking decisions on SPS conflicts.

In the end, the Agreement should still be held in good faith, as it is the implementation of the document that has lacked spirit. Though some of these issues were addressed in the Doha round but they need to be further strengthened, the developing nations must open dialog to renegotiate parts of the Agreement that too can then be implemented as in the letter of the Agreement.
Conclusions and Recommendations

Ž Indian food export is growing, as witnessed in recent years, is all set for a period of rapid expansion, provided a few problems taken care of. The sector has not yet achieved critical mass for it to make a serious entry in the global market.

Ž Rapid vertical integration is setting right some of the issues on hand, better control at the retail end of the market and stabilization of prices, for instance, but it has also brought into play a fresh set of issues,

Ž The setting of transparent norms for contracting, collective bargaining with association of farmers, arbitration and disputes redressal etc. are some of the issues that the commercial sector ought to look at seriously, instead of trying to push them under the carpet.

Ž Norms on domestic bio-security, residue monitoring, and testing and traceability ought to be scaled up to international norms. The Indian government, concerned about exports has set up an inspection regime, but it should also look at translating this into a tight inspection infrastructure for food imports Capacity building measures are necessary for most of the health related requirements faced by Indian exporters. While large enterprises and better organized sectors have been able to overcome these requirements through advocacy and efforts (e.g. pesticides in tea, azodyes in textiles, effluent treatment plants for dye manufacturing units in Gujarat) even they have faced higher compliance costs.

Ž SMEs in particular need capacity support both from the Government and from Industry Associations, if they are to survive these requirements. Their case also needs to be taken up in multilateral agencies like WTO, ISO, and Codex etc.

Ž Solutions for capacity constraints may also involve subsidies or trade related investment measures (TRIMS). Multilateral effort, particularly in WTO would be required to render such subsidies non-actionable and such TRIMS compatible with WTO rules.

Ž Capacity constraints requiring technical and technological solutions may not be overcome only by efforts of the Government. International cooperation may be necessary in this area. The reviews of TBT and SPS agreement should factor these constraints into the recommendations for changes or special and differential treatment.

Ž Capacity building is also necessary to overcome market diversion or distress sales. The exporters need to be advised to shed their fears of market loss and report distress sales to the Government so that health related requirements could be analyzed for possible disguised protectionism. Further, the relevant provisions in and enforcement of Export-Import Policy of India need to be strengthened in this regard.

Ž Standard setting organisations in India need to be strengthened and brought under a common canopy for uniformity. The enquiry points for TBT and SPS Agreements need to create institutional support for dissemination of drafts standards notified in the WTO to exporters and get their feedback for sending comments to Governments abroad.

Ž Where standards in India differ from standards in the buyers market, equivalence may be attempted, particularly where harmonization is not possible because of domestic constraints or incapability of foreign standards to local conditions.

Ž Testing equipment and procedures need greater attention at the national level and possibly, funding of laboratories. Mutual recognition Agreements with important buyers may be necessary and should be encouraged multilaterally also.

Ž Appropriate standard setting in markets abroad to the local conditions need to be assessed at the national level before applying them, as was done in the case of dyes and dyes stuff and the marine product sectors. Social costs should also be factored into this assessment.

Ž It is important to examine the legitimate objective behind standards applied on India’s exports and analysis of the risk that non-fulfillment may create (e.g. marine products, peanuts, spices). Such risks should commensurate
with the effort involved to meet the standard as well as the compliance costs. If not, equivalence or MRAs may be the answer.

Ž. Quotas and price preferences to competitors are issues relevant for the Government to take up with the concerned foreign governments for redressal particularly where environmentally friendly products are using their compatible advantage and denying India a ‘win-win’ on environmental gains and market access gains.

Ž. Voluntary process requirements and other measures like eco-labels can act as de-facto barriers to market access and therefore may have become a necessity in the market place. Wherever significant market access effects are discernible, the matter needs to be taken up multilaterally by the Government.