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TECHNICAL BARRIERS TO TRADE AND ROLE OF INDIAN STANDARD INSTITUTIONS

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SECTION I: INTRODUCTION

During the negotiation rounds promoted by the GATT, especially since the Kennedy Round, the world has witnessed a significant reduction in import duties. Lately there has also been a reduction in the unilateral application of quotas and other traditional non-tariff barriers. However, a considerable number of non-tariff 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 a trade barrier. However, their use and/or adoption to raise new obstacles to imports and to give protection to domestic producers could pose as barriers to trade.

The Agreements on Technical Barriers to Trade (TBT)[i] and Sanitary and Phyto-Sanitary measures (SPS)[ii] define the international rights and obligations of member countries. These are with respect to the development or application of standards-related measures that affect trade and are based on the principle that countries have a right to adopt and apply standards-related measures as long as these do not restrict international trade more than is necessary or

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unavoidable. Although these agreements have established certain standards for the application, disagreements between countries about these measures often involve complex issues not specifically addressed by the texts of the agreements.

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. Developing countries fear that technical barriers may become increasingly important in the future and develop into significant barriers to trade. Among the difficulties identified by the developing countries on technical aspects of trade are the high cost of adaptation, the irrelevance of foreign standards to local conditions, the lack of timely and adequate information and consequent transaction costs, the difficulties in understanding the requirements as well as testing for and monitoring them, the perceived lack of scientific data for specific threshold or limiting values and the uncertainty that arises from rapidly changing requirement in overseas market.

At the Uruguay Round, countries took on obligations not only to reduce trade barriers, but also to implement significant reforms in trade procedures and regulations that establish the basic business environment. Exporting firms may find that complying with a foreign standard is too costly if the standard is stringent or varies significantly from a domestic or international standard, if a standard is written to favor domestic producers by requiring the use of an input that is more widely available in the home country than in potential exporting countries. However, it does not give a reason to avoid implementation. There are provisions in the agreement to tackle with this problem. Countries would be worse off without reforms and without fulfilling WTO commitments.

The first triennial review of the operation of the Agreement on TBT was conducted in the WTO in 1997. Keeping in mind the above difficulties, one of the important decision taken at the triennial review was related to provision of technical assistance and

special and differential treatment to developing country members to enable them to fully implement the agreement as well as take advantage of its provision to improve their market access under Article 12 of the agreement.

The second triennial review will take place in the year 2000. Till then, India has to fully review the implementation of the agreement and propose required changes before seeking technical assistance or other benefits arising out of the first triennial review.

This paper is an attempt to identify some of the important foreign technical and SPS measures that may unfairly restrict India's exports; it will also review the government's institutional structure and approach for addressing such measures and identify areas where international technical/ financial assistance required by India to fully implement TBT/SPS agreements.

Section II of the paper identifies some of the products which have faced non tariff barrier in the international market. **Section III** reviews the domestic institutional structure responsible for implementation of TBT/ SPS agreements. **Section IV** gives conclusions and recommendations.

SECTION II: NON-TARIFF-BARRIERS

The agreements on TBT and SPS were added to the WTO, with an idea that no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life, or health of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate. But it is subject to the requirement that they are not applied in a manner which constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of these Agreements. However, what has been experienced is the contrary. Barriers in the name of technical regulations line the boundaries of internationally trading nations.

The technical and sanitary & phyto-sanitary[iii] measures have been a major source of non-tariff barriers, because and as it stands, would continue to be so in the future too. This is not hard to infer because the SPS Agreement lays down that a country may introduce or maintain a higher level of SPS protection than that achieved by an international standard if there is a scientific justification or when the country determines that a higher level of protection would be appropriate. In fact, the latter is often chosen to explain many an over-stringent SPS measures in EU and USA.

The following are some examples of the measures perceived as non tariff barriers by Indian exporters, which are disguised under the (arguable) logic based on various grounds like, quality, manufacturing process, certification, testing methods, environment etc.

Product Related NTBs

Aflatoxin in 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 (2 ppb B1) for consumer ready products. The new 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 3 tests be found to be over the limit, the lot will be rejected. The revised standards for aflatoxin in peanuts laid down by the EU have become effective from 1.1.99. This revision varies from previous ones, as also from that specified by the Codex Alimentarius.

This step is totally uncalled for and unwarranted from the scientific angle (as submitted by various agencies/governments) - what more, it will also lead to total turmoil of the entire peanut export trade to the EU countries.

Arguments Based on Scientific Basis

Laboratory test 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. Statistically, one would expect to find one contaminated nut is a sample of say, 5000 to 10,000 uncontaminated nuts. Experts have concluded that 75% of the lots rejected under the proposed procedure would be below the established tolerance level, i.e. uncontaminated material.

- The effect of any toxin is dependent on 3 factors - *the amount of toxin, the frequency of intake and the resistance of the body.* Now, in the case of aflatoxin in nuts, the following are noteworthy:
- With a tolerance level of 20 ppb = 0.00002 g/kg, the amount is extremely small.
- With an estimated annual consumption of 300,000,000 kg in the EU and also taking into consideration the fact that on an average,out of 7,500 nuts just one nut may be contaminated with aflatoxin, and taking the average weight of every nut to be 3 g, the following frequency calculation results:

  300,000,000 kg = 100,000,000,000 nuts

  100,000,000,000 / 365,000,000 inhabitants = 274 nuts per capita per year

  7,500 / 274 = 27.4; **thus an EU citizen is at risk of eating a nut contaminated with aflatoxin every 27.4 years!** The frequency is thus extremely low. It is also obvious that the human body is considerably more resistant than that of small animal used for testing.

It is therefore fair to conclude that the health risk for EU consumers through aflatoxins in nuts with tolerance level proposed by *JECFA* - an expert committee formed by the FAO and the WHO responsible for food additives and contamination of foodstuffs - is extremely low or even negligible.

Similarly, much hue-and-cry is raised at EU & USA, about the **pesticide residue**[iv] levels in food items. Indeed, food loaded with pesticide residues would be harmful and thus limits for these residues must be set. However, are all such limits set by EU justified?

Production and Process Methods

MANGO PULP: Many a codex as well as European SPS link up quality of the product with production processes also. Thus, what is under surveillance, is not just the end - product but also the process of production[v] of the end - product. In India, where most primary production takes place at very unorganised, small - scale units, such primary-level quality assurances are hard to give. Thus, the EU demand of maintenance of a record of each mango - farmer from whose orchard the mango for mango-pulp processing unit comes from, is rather cumbersome. The EU justification for this SPS is that in case a consignment of mango-pulp is found to be harmful, then the farmer whose mangoes were bad can be traced. However, it is suggested that as long as a pulp-processor observes strict quality checks at the entry - point of mango pulps coming from various orchards, into the processing-unit, record of farmers need not be maintained. In this situation, if a pulp-processor cum-exporter can ensure strict compliance with quality norms in his factory's 'entry-point', than the cumbersome task of maintenance of farmers-records need not be carried out.

MILK PRODUCTS: The EU in their standard for milk and milk products, insists that checks should originate from the level of primary production and has laid down the conditions of maintaining animals, types of feed to be given, etc. and monitoring these aspects. Under Indian conditions where the population is large, a

dairy holding may have just one or two draught animals and milk from a number of such holdings is pooled together before it is processed. It is not possible to monitor each and every animal. Under this situation, the quality is determined at the 'entry point' of the processing unit and the milk appropriately treated to ensure destruction of any pathogens. The final product is thereby safe. It is therefore necessary to lay stress on the quality of the final product, which may be attained through a flexible systems approach. It is neither feasible nor desirable to standardise a specific systems approach.

Likewise, the EU directed that raw milk must originate from cows or buffaloes which in case of cows, yield at least 2 litre of milk/day. Under Indian situation this is simply impractical. Similarly the animal health requirements stipulated by EU are also far in excess of the requirements laid down under the International Animal Health Code of the OIE (Office International des Epizootic)[vi]. The International Animal Health Code does not include any conditions specifically related to milk and milk products for the diseases like Rinderpest, pestedes petits ruminants, bluetongue, sheep pox and goat pox. However, animal health attestation conditions as laid down by EU read that the animals must belong to holdings which were not under restrictions due to FMD. Therefore, While OIE requirements for FMD are specific in nature the EC directives are general in nature and have also included the conditions for livestock diseases like Rinderpest.

In 1997, EU circulated a directive stating that when dry milk was exported, the package should clearly mention that buffalo milk was used, and that ideally it should be done by illustrating a buffalo on the package. The direct implication of this would have been to create a psychological barrier in the mind of a consumer who is used to drinking cow's milk. Whereas, in terms of health-related aspect, it is known that both cow and buffalo milk are perfect substitutes for making milk powder. However, on opposition from countries like India, this directive was with drawn.

Testing Procedures

EGG PRODUCTS: The acceptance of a sanitary standard is based on the acceptance of certain test results. However, even test results are disputable; for example, Company O, a Bangalore - based egg products exporting company, in 1997, sent egg powder to Japan. Japan, reported BHC (beta isomer) levels, in the Indian product, far - in -excess of permitted levels of .01 ppm. To investigate this, composite sample were analysed in laboratories in Bangalore and Belgium. Both analysis reported that the BHC level was below the detectable limit of ppm. The inference to be drawn from this case in hand is that if laboratory results can vary like this, then products which have been tested 'fit' for export in Indian laboratories, can be declared 'unfit' for acceptance at international borders. When both parties stick to their test results, how can credibility be brought about in laboratory tests?

Certifications

TYRES: Brazil requires that tyres being exported to Brazil should have 'En-Metro' marking on them. 'En-Metro' is the national standard in Brazil for tyres, quite like the 'Agmark' is for foods in India. However, to the Indian tyre - exporter, this process of 'En-Metro' Certification is an expensive proposition detrimental to the health of tyre-trade. To avail the En-Metro Certificate, a Brazilian team of experts comes to the prospective Indian exporter and visits his tyre unit in India. The visit, lodging and other miscellaneous expenses of the Brazilian team have all to be defrayed by the Indian exporter. ATMA (Automotive & Tyre Manufacturers Association) quotes the sum total of these expenses at an average of US $ 20,000.

The direct cost of the certificate is $ 1100. The certificate is valid for one year only, and to renew the certificate a similar team of experts has to be invited all over again! Thus, barring a few top Indian tyre manufacturers like Apollo, JK & Modi Rubber, many smaller potential tyre exporters from India cannot export tyres to Brazil. Comparative systems like that of DOT certification in USA

is a one-time certification. Moreover, even if we assume that the Brazilian tyre - manufacturers also have to go in for EM certification, it is apparent that the cost to them would come to $ 1100 plus a little more.

The interesting fact about EM certificates is that while the EM team has been coming from Brazil to inspect here, every year, the formal EM certificates have not been issued at all for the last 2 years, and exports of Indian tyres to Brazil continues.

Likewise in Mexico, imported tyres must bear 'Norm' certification. 'Norm' is a certificate awarded to each and every tyre and not to the tyre company. For this, each and every tyre is tested. To get this certificate $ 40000 - $ 50000 has to be paid.

Environmental NTBs

STEEL: Australia and New Zealand imposed extremely stringent environment laws and raised objections to the ***usage of wooden dunnage*** by the Indian company. As a consequence the company had used treated wood and/or use substitutes for wood. which is not only more expensive, but is also in short supply. Furthermore, there is a condition for fumigation of containers for which an additional cost of $400 per container has to be incurred.

PACKAGING, MARKING, LANGUAGE BARRIERS

From hurdles of minimum import price in countries like Brazil and Syria, to hurdles like the fact that in some European markets ***texturised yarn is to be supplied in equal length packages.*** Now, this is an un-necessary cost addition for exporters. Besides stating the (in)famous CKD-bicycle case, also reported that Germany poses a big problems to Indian exporters of engineering products. This is because, the ***German technical regulations are very rarely made available in English,*** and most often the Indian exporters have to resort to employing translators on their own. But even then the Germans argue that the translations are not identical meanings of the German specifications, and hence Indian exporters are always apprehensive of falling short of German norms.

This obviously hurts the export potential. These and many more, sung and unsung woes are outrightly NTBs, purely spurred by the fear of competition to the concerned domestic market of the importing country.

SECTION III: DOMESTIC INSTITUTIONAL FRAMEWORK

A. Export Import Policy of India

The Export and Import Policy (EXIM Policy) of India is drawn up for a period of five [vii]years, with some changes being effected in an annual review in April and some other changes as and when necessitated. The current EXIM Policy is applicable for the years 1997-2002. There is a negative list each for exports and imports comprising of prohibited, restricted (licensed) and canalized items. India's domestic environmental concerns (health and conservation related) and multilaterally agreed environmental measures (e.g. CITES and Montreal Protocol) are implemented through these lists. There are many export promotion measures built into the EXIM Policy, including the grant of special import licenses for firms having ISO certification. There is a separate chapter on quality, where ISO compliant firms are rewarded and quality complaints are addressed.

Export Promotion Councils and certain (commodity) Boards and (export development) Authorities are given a special status in the EXIM Policy. They grant membership to exporters based on which the exporters become eligible to get certain licenses and benefits, like duty free advance licenses for inputs for export production and benefits of deemed exports. Other relevant incentives include duty concession on import of capital goods used for export production, duty free imports for 100% export oriented units and units in export processing zones, some fast track mechanisms for import clearances and additional benefits for export and trading houses showing export performance beyond a certain threshold.

B. Rules and Regulations on Product Standards

The Prevention of Food Adulteration (PFA) Act[viii] regulates food articles intended for domestic consumption within India. Exported articles, including food stuffs, are exempted from the PFA Act and regulated instead by the Export Quality Control and Inspection Act. It authorizes pre-import inspection and quality control for certain "notified commodities." It also prohibits the export of specified notified commodities when the commodities fail to satisfy appropriate quality specifications. The intent of the Act is given in its preamble:

> "An Act to provide for the sound development of the export trade of India through quality control and inspection and for matters connected therewith."

The Act (Section 3(1)) authorizes the establishment of the Export Inspection Council, a twenty member governing board, which includes a Chairman and several senior representatives from other Ministry of Commerce agencies. The Act authorizes the establishment of an Export Inspection Agency (EIA) for quality control and inspections and also authorizes the utilization of other agencies for quality control or inspection or both.

C. Export Promotion Institutions

There are 19 Export Promotion Councils (EPCs), 2 Export Development Authorities and 4 Commodity Boards in India. The EPCs mainly promote exports of their constituents while the Authorities and Boards are also charged with product development duties. The latter are Government institutions while the former and industry associations sponsored and partially funded by the Government. The Marine Products Export Development Authority (MPEDA), Agriculture Produce Export Development Authority (APEDA), Tea Board and Basic Chemicals, Pharmaceuticals and Cosmetics Export Promotion Council (CHEMEXCIL) are some of the important ones. EPCs are generally aware of issues affecting market access of their products and suppose to act as the intermediary between exporters and the Government for getting them addressed.

D. Standard Setting Bodies

There is a multiplicity of standard setting institutions as many Federal and State Government Departments have their own standard setting process for specific items of commerce. This occurs because different departments require goods tailor made for specific needs e.g. Railways. However, this leads to a lot of confusion in the domestic market itself. According to BIS, there are at least 24 standard setting bodies at the central level and a host of related bodies at both the central and state level.

Indian goods have repeatedly faced restrictions to entry in foreign countries, due to alleged, non-compliance with certain standards, norms or regulations laid down by the importing country. Apparently, products made under Indian standards were not fit enough to be accepted abroad. Thus either our standards and hence the product made under these standards were not good enough OR while our standards were fine, the product, was being harassed at international borders on pretext of unduly stringent foreign standards.

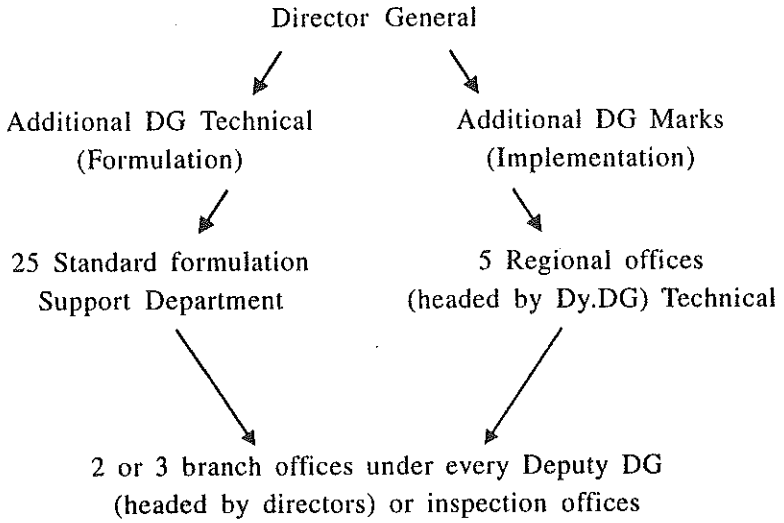
The following identifies the procedures of standard setting, their implementation and problems. We have also tried to see the co-ordination among various standard setting bodies and how well equipped these organisations are to meet the challenges posed by WTO.

Some of the most important standard setting and implementation authorities are the Bureau of Indian Standards (BIS), National Accreditation Board for Testing & Calibration Laboratories (NABL), Central Committee for Food Standards (CCFS), Standardisation, Testing and Quality Certificate (STQC) and Ministry of Food Processing Industry.

i. Bureau of Indian Standards

There are around 32 standard setting bodies in India. Bureau of Indian Standards (BIS) is the premier standard setting organisation. BIS has set around 17000 standards so far out of which only 150 standards are mandatory, rest are voluntary standards.

The organisational hierarchy of BIS is as follows :



The procedure of setting up a standard in BIS is the same as anywhere in the world. The request for a standard comes from the consumer/ organisation. A divisional council of BIS for its viability considers the request for new standard. Then BIS constitutes a committee with a convenor and members from interested groups. Once the draft standard is made and approved it will be circulated for comments before its adoption. All BIS standards are voluntary unless they are adopted by the central government and made mandatory by the concerned ministry.

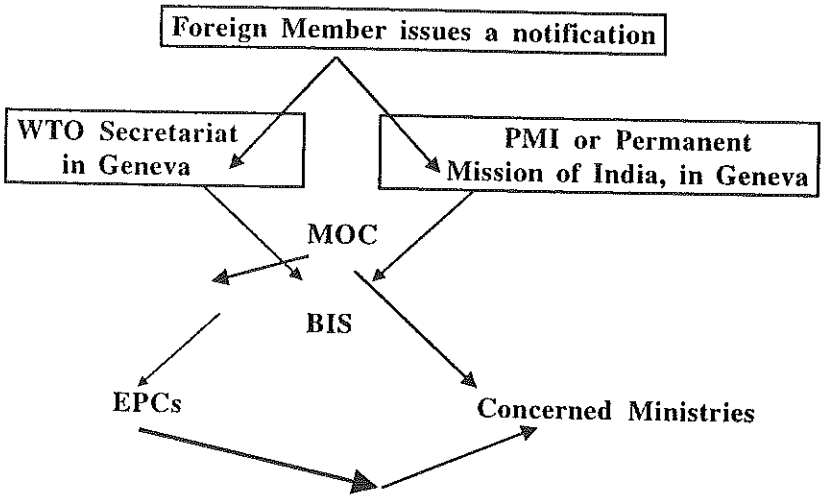
Notification Procedure

BIS has been notified as the 'enquiry point ' for all TBT related issues under the article 10.1 of Agreement on Technical Barriers to Trade which states that *"Each member shall ensure that an enquiry point exists which is able to answer all reasonable enquiries from other members and interested parties in other members countries as well as to provide the relevant documents".*

Notification can be made to the WTO, via the BIS or through the Ministry of Commerce. This notification has to be made in a set

format prescribed by the WTO, and is easily available with BIS or from the WTO. Under Art 10.6 of ATBT, *"the WTO Secretariat will, when it receives notifications in accordance with provisions of this Agreement, circulate copies of the notifications to all members and interested international standardising and conformity assessment bodies."*

At present the route for this notification in India is:



Suggested alterations or deletions/additions to the draft reach the concerned foreign Member, through the same route back. Apparently, this is a tedious process, and BIS is thus trying to expedite the mechanism by trying to download the notifications from the Internet directly.

Only technical regulations -TRs which are at, slight or major, variance with the prevalent international norm, need to be notified. In the language of ATBT, where a distinction has been made between the technical regulations and standards, it must be specified that only technical regulations need to be notified, and not standards. The BIS has made around **46 notifications** so far- this number may not seem too large for a national level SSB, but the reason is *that only technical regulations need to be notified,* because while TRs are mandatory (in

compliance), standards are voluntary. Lesser technical regulations are set up as compared to standards.

The above-mentioned duties of an organisation entrusted with the responsible status of an 'enquiry point' require some basic infrastructure. Essentially, an enquiry point must be able to answer all enquiries regarding all standards set within the national boundary of a country. Thus as far as possible SSBs should have a well - integrated information system so that there is as less multiplicity of standards as possible. This would also mean that there could be more harmonisation of standards on lines of international standards. There are around 24 standard setting bodies (SSBs) at the centre and a host of regulating agencies at the centre as well as at state levels.

However nothing much has been done about creating such an integrated process. The ***stark absence of a national - notification system in India,*** is indeed noteworthy. BIS reported an effort that it was making alongwith the Ministry of Commerce, for awareness - program for evolving a national notification system. However, the other standard setting bodies have not responded to such a proposal as yet.

A relative apathy has been observed towards Article 2.9.2 of ATBT. *This Article states that, "Whenever a relevant international standard does not exist or the technical content of the proposed technical regulation is not in accordance with the technical content of the relevant international standard, and if the technical regulation may have a significant effect on trade of other members, members shall notify other members through the WTO secretariat of the products to be covered by the proposed technical regulation, together with a brief indication of its objective and rationales. Such notification shall take place at an appropriate stage, when amendments can still be introduced and comments taken into."*

In India the body setting the new technical regulation can make such a notification through BIS, or else directly. The ISO/IEC, on behalf of the WTO brings out a weekly publication of a roster of

Standard Setting Bodies that have adopted a notification system. **Till now only BIS' name had figured in the list.** Essentially **Notification** implies that whenever an Indian SSB sets a technical regulation that is different from the existing international regulation on the same item, then the rest of the world must be informed about it. This will be helpful because if any country wished to export that item to India, then that country would know that what are the minimum technical requirements that it must meet specifically for the Indian market.

Likewise all SSBs are under an obligation to adopt the **Code of Good Practice** (CGP) for the preparation, adoption and application of standards, as laid down in the Annex 3 of the ATBT. Thus Article C of the Annex 3 says, *"Standardising bodies that have accepted or withdrawn this Code shall notify this fact to the ISO/IEC Information Centre in Geneva. The notification shall include the name and address of the body concerned and the scope of its current and expected standardisation activities. The notification may be sent either directly to the ISO/IEC Information Centre, or through the national member body of ISO/IEC or preferably through the relevant national member or international affiliate of ISONET, as appropriate."* The CGP calls for transparency in preparation of standards. In this aim Sec.J of Annex 3 says *"At least once every six months, the standardising body shall publish a work programme containing its name and address, the standards it is currently preparing and the standards it has adopted in the preceding period. A standard is under preparation from the moment a decision is taken to develop a standard until that standard has been adopted. The titles of specific draft standards shall, upon request be provided in English, French or Spanish. A notice of the existence of the Work Programme shall be published in a national or, as the case may be, regional publication of standardisation activities"*. Apparently, there is a twin-obligation on the SSB. The SSB has to first notify the WTO that it has accepted the CGP. It has then to notify to the WTO that it has prepared a Work Programme (WP). The WP is as Article J of Annex 3 says, *"the work programme shall for each*

standard indicate, in accordance with any ISONET rules, the classification relevant to the subject matte, the stage attained in the standard's development, and the references of any international standards taken as a basis. ***No later than at the time of publication of its work programme, the standardising body shall notify the existence thereof to the ISO/IEC Information Centre in Geneva.*** *The notification shall contain the name and address of the standardising body, the name and issue of the publication in which the work programme is published, the period to which the work programme applies, its price (if any), and how and where it can be obtained .The notification may be sent directly to the ISO/IEC Information Centre, or, preferably through the relevant national member or international affiliate of ISONET, as appropriate."* In India, despite the multitude of SSBs, the CGP has been duly accepted by BIS only. Thus only BIS has as yet notified to the WTO about its acceptance of the CGP, and about its work programme. It is not that the other SSBs have not notified because they do not maintain any record of standards set by them. Surely these SSBs maintain an index, a catalogue or some written documents to record their activities, which need not necessarily be titled as WP, but whose contents would contain more or less the requisites of the WP. Then what has stopped them from notifying? ***Apparently it is apathy and lack of consciousness about their responsibilities towards WTO.***

While notification signifies disparity between a national and an international standard, equivalence between a national and an international standard is denoted by the term ***'harmonisation'***. Thus Art 2.4 of ATBT states *"where technical regulations are required and relevant international standard exist or their completion is 'imminent, members shall use them or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problem."* Obviously such a

clause has been added with an intention of bringing down trade barriers regarding standards. Harmonised standards (TRs actually) allow for all the concerned trading partners to decipher the rules/ technical regulations in the same way. Harmonisation involves a careful analysis of the Indian standards vis-à-vis the international ones. Thereafter, depending on the feasibility, the Indian standard is harmonised. Obviously, for all items, an International standard does not exist and quite often even when an international standard exists, **it may become necessary for the Indian SSB to set such an Indian standard that is different from the former because of local conditions. But then the onus lies on the SSB to justify why it has set a standard/TR different from the international one. Hence, harmonisation can be done only in limited standards.** The BIS has till date harmonised approximately 3500 standards, in accordance with EU/ISO norms. Harmonisation in many other standards is underway at BIS.

ii. Food and Agriculture Department (FAD)

The Food and Agriculture Department was established in 1956 in the BIS. FAD deals with the standardisation in the field of food and agriculture including processed food, agricultural inputs, agricultural machinery and livestock husbandry.

There is a committee for each product group. Each Committee must meet once a year and not before six months. The committee consists of around 30 to 40 members or participants who are representatives of industries, consumer groups, research groups, exporters, and govt. ministries. The BIS sends only one member per meeting, as the technical secretary. All these representatives have some or more expertise on the subject under purview of the committee. Thus the FAD maintains a database of resourceful persons who could be invited to be members of these committee. The membership is renewed after every 2 years.

Essentially in each such meeting, matters may relate to any of the 3 things, (a) Review of an existing standard, (b) Finalisation of a standard, work on which had already started after discussions in

the last meeting or (c) A new standard to be set up because no standard on the subject existed before.

Thus any member of the committee can put forward a proposal for establishment of a standard for a particular good, standardisation for which had not been done before because a need had not been felt for it. These cases are becoming particularly significant now. This is so, because post - WTO, SPS related issues have become really important and many countries have begun to use SPS measures not only to protect the health and sanitation levels of their domestic consumers, but also to put up (non-tariff) barriers to trade. Thus in the recently held ninth meeting of FAD council, it was realised that lots of work needs to be done on limits of the possible contaminants in food. Standards and regulations for some of these already exist with the BIS and PFA respectively. However, even the existing standards need to be reviewed in light of newer and stricter specifications being issued by Codex/ EU for exports. The BIS has set around 17000 standards so far, while FDA has set 1720 standards so far. FDA harmonises standards with Codex or EN also. It must be remembered that these standards are voluntary.

Many standards have not been harmonised; this is because local Indian conditions for production of these commodities are such that the Indian standard will have to remain different from Codex/ EN standard. **Quite often, the industry representatives on technical committees are reluctant to bring about a change in the standard, because this would entail a change in production procedures or equipments and thus newer costs. Such attitudinal rigidities have been observed but have as yet not posed any major problem.**

At the moment, FAD is also certifying for ISO 9000 and ISO15000 (the latter is the standards terminology for HACCP while the former deals with general quality control). Presently 8 units have taken up HACCP from FAD. These include Mother-Dairy and Pepsi Foods Ltd. Other agency issuing HACCP certificate in India is the SGS India Ltd.

Members of FAD are called in for consultations by the Health Ministry also, as and when a new technical regulation on food products is to be made.

iii. National Accreditation Board for Laboratories (NABL)

NABL is India's premier and the only, lab accreditation centre[ix], and performs testing & calibration of laboratories, these testing being repetitive in nature i.e. the tests may be done again, either under surveillance programme or otherwise. NABL is formed under the Ministry of Science and Technology and is funded by it too. Though after a period of five years NABL is supposed to begin to garner its own resources, chiefly through the revenues generated in the form of accreditation charges from laboratories seeking accreditation. An accreditation certificate expires after 3 years.

NABL accredits laboratories, and not products. Also, it does not certify R&D labs, because in these labs the tests are not of 'repetitive' nature. [Standards for products are certified by BIS]. Accreditation is provided by a team comprising of experts, who are either on the permanent pay-roll of NABL or are hired in for their expert consultancy.

The TBT & SPS Agreements encourage the use of international standards, where these exist, rather than relying on national standards which are specific to only one market. Increasingly customers are using international standards when specifying technical requirements.

ILAC or International Lab. Accreditation Cooperation an informal international forum of the lab accreditation bodies, has played a major role in establishing international standards for lab testing. In 1993 the ISO/IEC published ISO/IEC Guide 5B, developed by ILAC, as the standard for the operation of systems for the accreditation of testing, calibration & measurement laboratories. In order to avoid expensive and unnecessary re-testing of goods, ILAC promotes the concept of bilateral & multilateral recognition arrangements between Laboratory Accreditation Bodies (LABs) of

various countries. Multilateral agreements, are based on international peer evaluation by an international assessment team consisting of accreditation experts in quality assurance as well as experts in different technical fields.

Thus, as of now, NABL's role in facilitating international trade is rather non-functional. What good is a lab accreditation, if all goods have to be tested at both places - at port of leaving and at port of destination? Thus NABL must strive to get its accreditation system recognised by more countries, so that Indian goods carrying test reports issued by NABL accredited labs are accepted readily without additional tests in for countries. This would greatly reduce interim time between shipping and final consumption of Indian good, thus reducing chances of decay, and of, course increasing credibility of Indian goods.

iv. Central Committee for Food Standards

The PFA Act of 1954 came into force on 1 June 1955 and is included in the concurrent list of the Constitution of India. There have been several amendments to this Act, such as those in 1964, 1976 and 1986. The implementation of this Act comes under the purview of the state governments. The Central Committee for food standards statutory Advisory Committee has set up 9 subcommittees which deal with different subjects such as oils and fats, milk and milk products, etc. The relevant subcommittee handles the proposal for a new standard/ the revision of an existing standard. The first step involves generation of data to support the justification of the proposal. This is done in cooperation with laboratories, industry and consumers. Once the proposal is made final, the subcommittee sends its recommendations to the Central Committee for food standards. The Director General of Health Services is its Chairman and it has representation from all states, 3 industries, 5 consumers, 2 government experts, the Bureau of Indian Standards and related ministries. After deliberation on the recommendations, a notification is sent to the government. It is then published in the Gazette, with 60-90 days

notice to the public to react. The comments received are incorporated into the final form of the standard.

The issue of harmonisation is of special concern to developing countries and has been discussed in the June 1998 meeting of the WTO. The standards imposed by the Codex Alimentarius Commission are used as guidelines by Indian standard setting bodies. But due to various reasons, **participants from developed countries have largely dominated the Codex. Consequently, many codex standards are not relevant/feasible for India. For instance, due to the differing dietary habits of developed countries, India has chosen to adopt Codex limits with respect to fruits and vegetables, but only half of those limits for foodgrains.**

Codex standards however become relevant for our exports and non-compliance may create disputes. As the following suggest:

i) In 1955, India took a strong objection to the requirement of the labelling of milk and milk products with the picture of a buffalo. India's stand involved questioning the justification of such a measure and claiming the superiority of the use of cow's milk in India's exports.

ii) Codex reduced the permissible level of sulphur dioxide in sugar from 70ppb to 20ppb. India, as the world's largest exporter of sugar, took strong exception to this measure. A paper was presented indicating the technological unfeasibility of this requirement as well as the fact that the original level did not pose any significant health hazards.

iii) Codex had recently fixed the permissible level of aflatoxin in milk and milk products at 0.05 ppb. The Indian level is 30 ppb. The Codex limit is based on the assumption that per capita consumption of these products is 1500 gm, whereas a realistic assumption would be 300-400 gm. EEC won this case.

In some cases, Indian standards are more stringent than international ones. The relevant factors in this respect are nutritional status, dietary practices and technological feasibility.

For instance, India does not allow the use of artificial sweeteners in chocolates or the use of artificial colours and flavours in edible oils. The permissible limits are calculated on the basis of Acceptable Daily Intake (ADI) per kg body weight per day. Technological constraints and dietary status are as significant as safety considerations in the determination of food standards.

As far as exports are concerned, the Export Inspection and Quality control Act is applicable. Information about this is available from the Ministry of commerce and the Export Inspection Council of India. It is important to note that the violation of international standards by an individual exporter, also affects the reputation of the exporting country. Hence, organisations such as APEDA provide subsidies and other assistance to Indian exporters to ensure that standards are met.

The Ministry of Health maintains 4 central food labs at Calcutta, Ghaziabad, Mysore and Pune. The first 2 are under is direct administrative control, whereas the last 2 are supported through annual grants.

v. Ministry for Food Processing Industry (MFP)

The MFP deals with fruits and vegetables processing. It provides norms and standards for these processing. Hence, it sets Standards / Technical Regulations for methods of manufacturing of processed edibles.

It thus specifies that:

i) machine and equipment parts that touch the food, should be made of stainless steel

ii) water, in use for washing and cleaning, should be potable

iii) running water should be made available all the time.

iv) there should be in-house laboratories.

v) qualified food technologists must assess the quality of the food.

Standards for finished products:- These are standards that are specified by section A16 of PFA, 1954. Most standards pertain to

- ★ chemical contents
- ★ physical characteristics
- ★ contaminant levels, and
- ★ additives levels, in food,

so as to ensure safety of health in their consumption.

The MFP too has made no efforts so far to harmonise their standards, or to get in touch with the BIS for creation of a national notification system.

vi. Department of Electronics Standardisation, Testing and Quality Certification (STQC):

STQC is the premier testing and calibration agency for electronic items, in India. Thus STQC has 22 laboratories all over India, which are duly certified by NABL, and are fit and well equipped for testing electronic items. Noteworthy is that ***STQC by itself does not set any standards.*** However, what it does is that as and when a party comes to STQC for acquisition of a certificate, STQC asks the party as to what standard the party would like to comply with, the DOT standard, or the BIS/ISI std., or the Railways std., or the IEC std., etc. When the party has expressed its desired standard, the STQC tests the product against that standard, and certifies for the asked standard.

Within India, the consumers do not ask for very high quality products in electronic items and are usually quite unmindful of existing standards too, thus not many producers for the domestic market come to STQC. But *exporters* are the chief clients of STQC, because for export quality the STQC certifies according to the IEC norms. The STQC is thus a competent authority, and foreign parties duly accept certification by it. Moreover, STQC enters into 2 types of international contracts:

- International Certification Scheme, and
- Mutual Recognition Agreements,

both of which demand reciprocity. Thus, if STQC agrees to accept the certification of an equivalent body in country - of - origin of our import (of electronic item), then STQC certification on our export items would be duly recognised in that country too. Moreover, STQC's labs are equipped to test according to IEC norms.

STQC's role in standard formulation is on an ad-hoc basis directly, and an on going continued basis indirectly. Thus, whenever a standard. is required very quickly, then since the normal procedure for setting an international standard is about 6 years, and for a national standard its about 2-3 years, the STQC comes with the standard. much faster. It consults the manufacturers, consumers and other standard setting bodies for this. Thus, for colour TVs since no prior standard existed in the country, STQC made one quickly which in due time has been adopted by DOT & BIS; like wise for Personal Computers, the first standards in the country were set up by STQC.

Otherwise, almost all standards for electronic items, though made by BIS, are actually decided by STQC, whose members dominate the electronic experts committee of BIS, because STQC has an MoU with BIS.

Prior to 1991, SSI manufacturers dominated the BIS committees because, as a Govt. policy these products were reserved for SSI. The SSI kept quality diluted because it was not a costly proposition for them to aspire for very superior quality, thus the national standard continued to be of a rather not so superior status. However, now with export - awareness, the Standards are being tried to be made on IEC norms.

Since Standards are not set by STQC there is not much role it can play in harmonisation process. Yet, STQC reserves an opinion on the current harmonisation - status of standards / technical

regulations in field of electronics. ***According to STQC, many a harmonisation cannot be done in India, because of lack of facility to test for, and certify for, those harmonised standards. In fact, the basic infrastructure in the country does not permit for many a harmonisation.*** For e.g. the EU levels allow for standards with - respect to electricity fluctuations of + or - 10%, while fluctuations allowed within the Indian standards. are + or - 20%, though practically these are even greater than + or - 50% or even + or - 100%. Of, course many a times, various International standards are far too stringent than those allowable by any level. Thus USA, not EU, has some standards, which are quite stringent from the IEC norms. India, clearly does not have enough laboratories to certify for these standards. Though, generally there is a feeling that USA's standards may not be all justifiable, and there is thus international pressure on USA to amend its standards Where feasible, STQC is following the EC norms. Thus since EU asks for CE markings or 'Compliance with EU' norms markings, STQC provides this marking on EU's behalf. ***'Procedures for Certification / Calibration' has to be submitted by STQC, as 'Programme of Works', to BIS, under the WTO. But STQC admits, it has done nothing so far in this direction.***

vii. National Quality Council (NQC): Brilliant but nonstarter

A national scheme for formation of NQC was prepared, in 1992. The scheme was to serve the following chief purposes.

i) Mobilise resources to ensure that goods and services are designed to match the consumer needs, expectations and desires in terms of their specifications, delivery and competitive price, and that goods and services are produced consistently conforming to standards and at the optimum cost at which the consumer will buy.

ii) Raise quality consciousness in the country, both amongst the industry (manufacturing and service) and the consumers, by launching a nation-wide quality campaign and through a national information enquiry service on standards.

iii) encourage third party certification of goods and services, and third party certification of quality management systems (ISO 9000 standards or equivalent) at the enterprise level with a view to minimise the need for multiple assessments by the consumers;

iv) facilitate the up-gradation of testing and calibration laboratories and encourage the development of a unified national laboratory accreditation system to ensure that the test reports become acceptable in the world market;

v) raise level of training for personnel engaged in Quality activities including assessors and trainers, and encourage their third party certification;

vi) obtain mutual recognition with similar national schemes of India's major trading partners;

vii) meet effectively the challenge of new and demanding European accreditation standards and legislation. -Its most advantageous aspect would be the fact that all efforts would be made to bring about maximum possible national and international recognition of the scheme. This would greatly help in increasing the acceptibility of Indian goods abroad.

The NQC has been established in structure, however its effects have not yet started to percolate at levels where it is required----------it is non-operational as yet.

E. Enforcement bodies

The Export Inspection Council (EIC) was set up in 1963 to advise the Government with regard to measures for enforcement of quality control and inspection and also to arrange for pre-shipment inspection of commodities intended for export. The EIC operates via its regionally located agencies or Export Inspection Agencies (EIAs) at Mumbai, Calcutta, Cochin, Delhi and few more places. The EIAs have 61 offices at various port towns and industrial centres. To get the consignment inspected, the exporter informs the

inspection agency concerned a few days (depending on product and inspecting agency norms) before shipment. Inspection is done according to the standards set out in the export contract. If none is mentioned it is generally checked against standards set by the BIS. Exports can be inspected in three ways, consignment-wise inspection (CWI), In Process Quality Control (IPQC) and self-certification. In addition, stringent requirements have been prescribed for 4 elements, namely design and development, quality-audit, after-sales service, housekeeping and maintenance of self-certification scheme for exporters. Thus organizationally, as also by expressed intentions, it seems that the EIC is a competent authority for certifying the quality of a good. Moreover, as many as 1000 commodities (under groups such as food and agriculture, fisheries, minerals and ores, organic chemicals, inorganic chemicals, rubber products, refractories, ceramic products, pesticides, light engineering products, steel products, jute products, coir and coir products, footwear and footwear components) are under compulsory pre-shipment inspection obligations of the EIC. In 1995, EIC adopted the Export of Fresh, Frozen and Processed Fish and Fishery Products (Quality Control, Inspection and Monitoring) Order and Rules, 1995. To keep with its lofty ideals, the order has been made keeping in mind "the requirements of the importing countries that would encompass standards like unified directive No.91/493/EEC dated the 22nd July 1991 of the EC, the proposed HACCP of USA and Quality Assurance Standards of Japan". Thus, the EU recognised EIC approval for inspection and monitoring of fish and fishery products imported to EU. Likewise, in its order dated 23.8.97, the EIC has adopted EU's norms for egg products. In November '97, the EIC adopted the Animal Casing Inspection Rule of the EU. Such exercises are almost like 'harmonization' events. Obviously, this has meant clearer comprehension of inter-country demands, though at cost to the domestic industry in the form of increased compliance costs.

Yet, even with a seemingly impressive infrastructure like this, EIC is not always an exporter's first choice for getting a quality

certificate. Surprisingly, 4 out of 7 questionnaire-replies that we received indicated other names/agencies for this purpose. Most EPCs and industry people we talked to, reported a discouraging feedback on EIC.

Most exporters and export-promotion councils like EEPC, ATMA, etc. informed us that in the past, there had been cases when EIC approved consignments were found to be unfit at international borders, and usually because the EIC approval had been faulty. Such faults were discovered to be cases of gross negligence. Such instances may not have been recorded as specific episodes, but what these did was to generally harm the credibility of EIC. Industry people emphasize that EIC is relatively lax about following strict quality norms. In fact even merchant exporters of fish products, despite the 'harmonized' 1995 order of EIC, subscribe not to the EIC but to private inspection agencies. The EIA is also accused of corrupt practices. A stark example of such a practice is the fact that though export of silver pomphret is banned in India, yet these are exported with due certification from EIC. Actually the EIC passes the 'silver' pomphrets as 'white' pomphrets. Many a times EIC passed consignments have found to be unfit, but since the goods have most often already reached the foreign port, and the RBI norm asks for foreign currency to be brought back, the exporter most often has to make a distress sale. Many cases of such distress sales were reported in private conversations but the exporters were not willing to take up the matter officially due to the fear of loss of the buyer for future business or loss of credibility in the market place.

As indicated above the inspection and product testing required under the Act is carried out both by the Central Government's Export Inspection Agency and also by government sanctioned private agencies or laboratories. There are 28 Government Export Inspection Laboratories and approximately 40 private export inspection laboratories. No non-government laboratory has yet been authorized to conduct food export inspections and so all food exports are

inspected and tested by the government laboratories. There are now approximately 1500 government inspectors and analysts and approximately 400 analysts and inspectors in private as well as government sanctioned laboratories.

There is some confusion in India among spice exporters, in particular, about whether these inspections are mandatory or voluntary. According to the Export Inspection Council, these inspections are mandatory and all consignments for export that include notified commodities must be sampled and tested for adherence to export quality standards. According to spice exporters, standards for whole and ground spices are not mandatory. They point out that the old grade standards under AGMARK standards were mandatory, but several years ago they were made voluntary and they are outdated anyway (the last revisions were in 1973).

However whether mandatory or not, it is clear that with only 1900 inspectors responsible, for the whole of India, for the 1000 and more commodities on the notified commodities list, it would be impossible to check all export consignments. Clearly the practice in India is to check only some export consignments.

Whom do the exporters resort to as an alternative? Clearly, the exporter chooses an agency whose credibility is high and thus the acceptability of the goods abroad is more. Multinational players in the arena include SGS (India) Ltd. of Switzerland, Cotecna of France, Bvgi of the Netherlands and Lloyds of London. The chief amongst these is the SGS. It has the major market share in the filed. SGS offers third-party inspection and quality control through it. It has 10 divisions, 52 offices and 32 laboratories in India and has been here for the past 48 years. It inspects nearly all goods except defense and aviation products. SGS uses a comprehensive import supervision service (CISS), which is based on a pre-shipment inspection in the country of supply on behalf of the Government of the importing country. CISS covers inspection of quality, quantity, and price and verification of the value and classification of the

goods for the customs purposes. It leads to correct assessment of import duties and taxes. There is a uniform application of import regulation, value and customs classification and a third party verification. All this facilitates a speedier clearance of goods t the time of import. Its modus operandi involves two kinds of methods. One is where the individual seller directly approaches SGS for inspection of his goods, with the purpose of attaining a 'quality-based' clearance certificate.

The other method not prevalent in India, is what SGS calls 'mandatory-inspection'. Here SGS works on contract basis with the Governments of importing countries. In this method, for example, the Governments in most African and Latin American countries offer a time-bound contract of two or more years to SGS. Under this contract, the SGS is the sole agency that is officially assigned to inspect goods originating from India directed towards these African or Latin American nations. Also, SGS carries out evaluation of goods by comparing the market price of the goods in the country of origin and the country of final destination. Thus this agency tries to prevent under-invoicing of exports. Likewise EU and Asia region have been assigned to SGS again. This contract is won by SGS from amongst its competitors, who too bid tenders to the importing countries for the contract. SGS essentially inspects the items against standards laid down by the buyer or else against the prevalent international standards. If SGS finds itself incapable of inspecting for a particular standard, due to lack of technological facilities etc., it tries to collaborate with sufficiently equipped labs. In fact, SGS has sufficient infrastructure in its laboratories, to check for the most stringent quality standards----even for the azo dye standards, as also for the new EU limits for aflatoxin.

SECTION IV: CONCLUSIONS & RECOMMENDATIONS

Despite growing concern that certain technical and SPS measures may be inconsistent with World Trade Organization provisions and may unfairly 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. Our study indicates that agricultural exports faced number of measures in various countries whose impact on the value of trade is potentially extensive. 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.

Many of government, trade, regulatory, and research entities have some responsibility for addressing such measures, but there is no one entity directing and coordinating overall government efforts. Some entities' roles and responsibilities regarding these measures are not clearly defined, and these entities have had difficulty coordinating their activities. Government entities lack comprehensive data on which these measures are being addressed or what progress has been made to address them.

They have not developed a process to jointly evaluate measures and determine which ones the government should address, and in what order. Once the government decides to challenge a measure, multiple entities with conflicting viewpoints have made it difficult to develop a unified approach to address measures and decide which cases should be referred to the World Trade Organization for dispute resolution. Coordinated goals, objectives, and performance measurements related to government efforts do not yet exist.

One important recommendation for all the standard setting and implementation bodies is the need to create an infrastructural set-

up for documenting data on WTO compliance activities .This means that these organisations have to be made aware of their reponsibilities in WTO and also about how they can play a more active part in setting standards at international level.

We can also conclude that there is a lack of coordination among standard setting bodies. It leads to duplication in standards and confusion in its implementation. There is a need for integration among standard setting bodies and for harmonisation and national notification of standards.

As far as WTO is concerned, BIS is well aware of obligations under TBT/SPS agreements. As an enquiry point it is doing reasonably well. But BIS , as it is structured today with multiple responsibilities and lack of authority and coordination with other standard setting bodies may find it difficult to cope with increasing demands of WTO. Thus a separate body or Cell, something like National Quality Council in collaboration with BIS should be established so that there is a body fully committed to standard related matters in WTO. APEDA seriously emphasises that much of quality - upgradation in India needs expertise from countries which have tried and tested quality measures on *their* farms Practically, to invite such expertise is a very costly proposition. Thus, as it seems, a recommendation here would be that WTO should promote and may be sponsor too, experts whose expertise would benefit a larger mass of a developing nation in complying with WTO standards.

There is inadequate representation from India in international standard setting meetings. The quality of representation is rather poor because the criterion for sending a representative to these meeting is not purely professional. Repeatedly it has been reported that most of the Codex standards are set even when there is very poor participation by developing nations, including India. The Codex committees are chiefly dominated by members from developed countries and therefore the standards set by Codex are most often non-viable for the developing countries because the standards so set

by Codex are made keeping in mind the food and agricultural practices of the developed nations, which in fact are vastly varied from those prevalent in the developing countries. Thus more informed personnel must be deputed from India, to represent the country in international standard setting procedures.

As far as testing facilities are concerned, our laboratories are poorly equipped in machines and in skilled manpower, which has led to poor reputation of our test results in international markets. Thus exporters resort to multinational testing facilities which are more expensive. Accreditation of laboratories is voluntary and without any accountability. This has led to a mushrooming up of laboratories that are very inappropriately equipped and often resort to issuing fake certificates.

For implementation of PFA Act, there is an acute lack of trained inspectors, well-equipped laboratories and the overall enforcement machinery. Further, being a poor country food is sold largely loose. This increases the risk of adulteration, which is difficult to, control and check. Most of the state health departments responsible for implementation of PFA are preoccupied with disease control and food safety receives the lowest priority. Moreover even the PFA has become rather obsolete and has not taken into account many a new food-related scientific reports as well as changing socio-economic pattern of the Indian society. Many an industry organisations have proposed to assist the Government in updating the Act, according to changed needs of the Food-based industries, but the Ministry of Health and Family Welfare must atleast initiate a move towards that direction. Most SSBs do not even think that they have a role to play in meeting commitments to the WTO. Therefore we feel that there is dire need to set our house in order as regards WTO issues.

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i The Agreement on Technical Barriers to Trade (TBT) allows members to apply standards (both mandatory and voluntary) for protection of human health or safety, animal or plant or life of health, or the environment. This Agreement also requires sound science and fulfillment of the least trade restrictiveness test. Even voluntary standards (such as eco-labels) have to be followed a code of good practice based on the above principles. Rules are laid down for conformity assessment here also. The Agreement does not consider standards set by any particular international setting organization as acceptable. In practice, however, ISO standards are considered compatible unless certain trade rules and certain jurisprudentially developed practices are not followed in setting them. For example, standards based on non-product related process and production methods and those differentiating between like products may not be acceptable.

ii The Agreement on the application of sanitary and phytosanitary measures (SPS) is an elaboration of GATT rules as they relate to measures necessary to protect human, animal or plant or life of health. Under this Agreement, member countries are required to base their SPS measures on scientific principles and refrain from maintaining measures without sufficient scientific evidence. Exceptionally, measures could be taken without sound science provided they are provisionally adopted, additional sound science is sought and the measure reviewed within reasonable time based on risks that non-fulfillment may entail. This provision was tested in three WTO cases in recent times. Broadly speaking, the 'precautionary principle' was not allowed to be expanded beyond what is already available in this provision. Also, it was considered essential to consider the risks that non-fulfillment would entail in adjudging the compatibility of the measure with WTO rules. The Agreement encourages harmonisation of SPS measures and considers the standards set by three international standard setting bodies as acceptable standards. These are the Codex Alimentarius Commission, the International Office of Epizootics and the International Plant Protection Convention. Equivalence is encouraged and conformity assessment guidelines are laid down. Special and more favourable treatment provisions exist for developing countries, but in name only.

iii Technical specifications can be divided into three types of standards relevant to primary and processed goods. *Packaging standards* regulate a broad range of container attributes, from dimensions to biodegradability

of packaging material, to realize a wide range of regulatory goals. *Process standards* (sometimes referred to as production standards) dictate the means (inputs and/or production technology) by which firms are to realize different regulatory targets. *Product standards* specify the ends (characteristics of a product related to its size, weight, or any number of other product attributes). A product standard for imported tea, for example, might state that the product must be free of any trace of residue, a status that could be objectively verified by phyto-sanitary authorities in the importing country by means of tests on shipments at the border.

iv Moreover, irrespective of whether the answer to the above question is 'yes' or 'no', Indian exports of agricultural products would be hit, because Indian farming conditions will take a long time to assimilate to growing pesticide-free products. Our soil-types, as well as climatic conditions require particular levels of pesticidal sprays. Also then where such sprays could be minimised, our farmers are not educated to do so. Thus what is needed is a wider dissemination of information of better farm-techniques. APEDA has been making efforts at its own level. It has tied-up with various agricultural universities to carryout on-farm educative campaigns. In the Chittoor district of Karnataka, APEDA has been undertaking a quality-alignment program for 12 units in the mango-pulp processing sector. Of these 6 units have been given the necessary quality-upgradation mantra.

v This means that the aforementioned 6 units observe the codex and HACCP norms completely, and when the remaining 6 units have been given this antidote too, mango-pulp exports from these 6 units would be allowed entry at all destinations and no SPS would be able to acquire the form of a TBT for them.

vi A process standard might alternatively stipulate that all tea must be processed with a specific method. Economists usually argue that product standards are more efficient regulatory tools than process standards, since the former allow heterogeneous firms to choose the technology that minimizes the resource costs of achieving a specific regulatory target while the latter does not. However, it has also been pointed out that in the context of food safety regulations, process standards can sometimes be the optimal regulatory option. They note that a Hazard Analysis and Critical Control Point (HACCP) system, which includes flexible process standards designed to reduce microbial contamination in food, might be superior to specific product standards, given the expense of microbiological tests and the recurrent nature of the pathogen hazard. The costs of

enforcement and the degree of administrative discretion in enforcement are also important considerations in any evaluation of the relative efficiency of process or product standards.

vii According to Article 2.1.1.20 of International Animal Health Code of the OIE for import of milk and milk products from the countries considered infected with Foot - and - Mouth Disease or FMD or Rinderpest, the Veterinary authorities of exporting countries are required to produce International Sanitary certificate attesting that these products originate from herds or flocks which were not subject to any restrictions due to FMD at the time of milk collection and that products have been processed to ensure the destruction of the FMD virus according to the procedures laid down in the Article.

viii It is possible to question whether the emphasis of this Act on product development really results in an adequate inspection system with reference to the safety of the product for consumer use. Clearly a good quality product is likely to be a safe product also, and there is nothing in the Act that precludes adequate safety testing. Moreover, specific Orders and Rules under the Act (for example, for fisheries products) specifically mention the main objective of product safety. Still, foreign governments whose food supply is regulated by Ministries of Health rather than Ministry of Commerce may question whether the statutory authority is sufficiently focused on safety to assure the safety of Indian exports.

ix Laboratory - Accreditation is the formal recognition, authorisation and registration of a laboratory that has demonstrated its capability, competence and credibility to carry out the tasks it is claiming to be able to do. The body granting the formal recognition records the accredited laboratory in a register, which will be periodically published. The accredited lab is authorised to issue certificates, test reports and reports of chemical analysis, which are recognised & accepted under that logo of the (inter-) national laboratory accreditation body. Accreditation provides an independent 3rd Party assessment of a laboratory's technical competence and consistency in the interpretation of international standards.

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