Standards for Sustainable Trade: Assessing Technical Assistance Needs Under the WTO’s Technical Barriers to Trade (TBT) Agreement

Final Report for South Asia: Bangladesh, India, Nepal and Pakistan

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and
The Sustainable Development Policy Institute, Islamabad

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REGIONAL INITIATIVES (INSTITUTIONAL, HUMAN, ORGANIZATIONAL) REQUIRED TO IMPLEMENT THE TBT AND SPS AGREEMENTS AND THEIR PROVISIONS

1. The Context

Developing country exporters are awakening to the reality that prices are not the only criteria for saleability. As import tariffs decline and quota entitlements under the MFA phase out, production and trade regimes in South Asia will need to become leaner and cleaner, reflecting emerging consumer preferences and inter-governmental requirements. These are articulated in the form of a growing array of quality, social and environmental standards. In other words, only those products will have a competitive edge which is of a high quality, have no adverse health impacts embodied in them and can be safely disposed after use. Not surprisingly, these standards evoke reactions in the South, ranging from sovereign issues to concerns about non-tariff protection. There is merit in each of these viewpoints but there is also a convergence of interest as well as available recourse. Thus, industries in the south act in the national interest when their actions limit damage to the environment or institute health and safety measures for workers. Conversely, the World Trade Organization (WTO) has mechanisms for dealing with unfair trade practices.

At the end of the day it is not only expedient but also profitable for exporters to comply with the increasingly complex demands of international clients -- both in the public and private sectors. However, “willingness” to comply does not translate easily into “ability” to comply. This is based upon a complex mix of institutions, policies, financial means and technical capacity. Further, such capacity needs to be able to address the different dimensions associated with compliance namely, the implementation of standards, information access and dissemination, certification and accreditation. The WTO Agreements on Technical Barriers to Trade (TBT), and on the Application of Sanitary and Phytosanitary Measures (SPS) contain provisions for harmonizing international standards and facilitating technical assistance to developing countries to comply with them.

Developing countries often advocate the need to become more proactive in the standards setting process. The argument is that international standards should reflect their cultural affinities and environmental tolerances. There is no quibble with this but it does track back to the issue of scientific and institutional capability. Absent such capability, developing countries will not be able to comply with international standards, much less engage with the TBT, SPS and other voluntary ISBs in setting – for lack of a better word – “south-sensitive standards.”

This paper identifies regional capacity building approaches to enhance compliance with the TBT and SPS Agreements and company bilateral requirements pertaining to technical regulations and voluntary standards, in order
to increase access for South Asian exports. Clearly there is an established need for this as regional and global economies become more closely integrated. However, the backward linkages with national capacity building imperatives are also emphasized. This recognizes both the embryonic nature of the initiatives underway in the region and the political and logistical complexities associated with regionalization. While there is undeniable merit in being forward looking, grounding this in the national context will make the regional constructions more realistic.

The paper has 5 sections. Section 2 examines the pros and cons of a regional approach to capacity building to effectively implement and benefit from the TBT and SPS Agreements. Section 3 assesses the relevance of the European model for harmonizing standards for the South Asian Association for Regional Cooperation (SAARC) region. Section 4 identifies the institutional prerequisites for effective compliance in the region and for a more active role in standards formulation. Section 5 presents a synopsis of the country studies. Section 6 presents a menu of small but achievable steps that would demonstrate that cooperation is possible and help build confidence and trust relationships.

2. A Framework for Regional Cooperation

2.1 The Mandate, Constraints and Opportunities

It is appropriate to state at the outset that, with the exception of SAARC, there are no other extant formal bodies with a mandate to coordinate trade, investment -- or any of the activities covered by the WTO -- across the region. Stronger regional links are prevented by political tensions, which have created an atmosphere of mistrust between the member countries. Specifically, with regard to voluntary standards and technical regulations – referred to collectively as standards hereafter – the two constraining factors are a) the small scale of intra-regional trade which limits the scope and need for harmonizing standards regionally and; b) more generically, a lack of awareness of social, environmental and quality issues in the SAARC countries. While exports are coming increasingly under a standards regime, a more embracing national culture has still to evolve. A contributing factor is the endemic poverty in the region. Consequently, it is not surprising that the region has limited competencies (financial, technical) when it comes to formulating, identifying, implementing and demonstrating compliance with standards, and international standards in particular.

However, this should not cloud the existing potential for regional cooperation, demonstrated by the similarity of sectors and economic characteristics across the region. For instance, textiles, leather, tea and fish are some of the common and important export items for India, Pakistan, Bangladesh and Sri Lanka. Also, the SAARC countries are roughly similar in terms of their macro indicators: GDP growth rates, per capita incomes, levels of poverty and export composition. While
some countries like India and Pakistan have a relatively stronger standards infrastructure; this can work to the advantage of the relatively less well equipped countries, especially when they have common interests and problems. Ultimately, both constraints and commonalities should be taken into account when suggesting frameworks for regional cooperation. Under the existing dispensation, regional cooperation should be based on the two following premises:

1. The proposed regional structure should not displace national entities. This does not mean that a country like Nepal which does not have an Accreditation Board needs to set up one, especially when its relevant standards/testing requirements are already covered by other countries in the region. By the same token, it would be difficult to dismantle a national body that already exists, such as the Pakistan National Accreditation Council. Ultimately, comparative advantage, sector capabilities, existing national bodies, risk of duplication, diversity and breadth of activities are some of the criteria which should dictate whether a certain standardization activity should be nationally or regionally based. In the absence of a formal assessment, an impression is that accreditation and notification/enquiry points lend themselves more easily to regional cooperation than conformity assessment and standards setting. Thus, for instance the South American region has a relatively well developed regional accreditation body. Also, SADC has a regional accreditation body that is becoming more useful with technical assistance investments.

2. The regional harmonization of standards should be undertaken in the context of international requirements, reflecting the present importance of extra-regional as opposed to intra-regional trade. However, there is a nuance to this. If the region finds that existing international standards are inappropriate to their common context, then the countries in the region could pool resources to develop a more appropriate regional-designed standard. They could also then exert combined political pressure to get the regionally appropriate standard recognized in export markets. In this case, harmonization is not a question of bringing different regional standards into a single standard, but rather of creating a regional standard in order to make it more appropriate. This is in keeping with the notion of subsidiarity. However, it does presume that the region has the capacity to formulate and negotiate regional standards.

A suggested framework for cooperation is a regional infrastructure linked to key national stakeholders. With regard to standards its main focus would be to leverage, facilitate and coordinate activities with a view to harmonizing these standards regionally and in compliance with international standards. Two distinct but related mandates are envisaged. The first and relatively less important one is to promote the harmonization of standards for goods traded exclusively within the region. More important, and reflecting the extra-regional thrust of trade, it should
promote the harmonization of standards for goods and services traded globally and against the yardstick of international standards. Similarly, regional approaches to accreditation, conformity assessment and notification/enquiry points offer prospects of convenience, efficacy and credibility. The proposed functions of the regional infrastructure should include but not be limited to:

- Compiling and forecasting economic data (macro and sector)
- Compiling trade data and forecasting trade trends (intra and extra-regional)
- Forecasting trade trends
- Identifying sector priorities
- Facilitating regional standardization work through stakeholder networking (technical and consultative meetings, workshops, seminars)
- Regional enquiry point to reinforce and support the work of national enquiry points (dedicated website, online information sharing)
- Providing accreditation services and facilitating links with regional and international standards certification and accreditation bodies
- Representing the region in international standardization bodies
- Developing and promoting regional policies and programs
- Publicizing/advocating consumer concerns
- Promoting research, advocacy and training

Essentially, this body should be linked to national stakeholders in a synergistic relationship. The SAARC Chamber of Commerce and Industry seems well suited for this role. It is the only formally constituted body with regional and international recognition. It has the infrastructure in place to coordinate, facilitate and disseminate information and policy advice. It has the potential to represent regional concerns at international fora such as WTO ministerial meetings. More importantly, it has the political will to become involved formally in a regional standards initiative. However, the SAARC Chamber has not had much success with one of its key objectives, namely promoting intra-regional trade. To be fair, political obstacles have been intractable at times. The expectation is that the region will be more willing to come together when faced with common external threats and challenges.

The table below identifies regional and national bodies involved directly or indirectly with standards, conformity assessment and accreditation and that could, potentially, have a role in regional initiatives.
### National and Regional Bodies Involved in Standards

<table>
<thead>
<tr>
<th>BODIES</th>
<th>REGIONAL</th>
<th>BANGLADESH</th>
<th>INDIA</th>
<th>NEPAL</th>
<th>PAKISTAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards setting bodies</td>
<td>No regional body but regional representation at ISO through Sri Lanka Standards Institute</td>
<td>BSTI</td>
<td>Bureau of Indian Standards</td>
<td>NBSM</td>
<td>PSQCA &amp; EPA</td>
</tr>
<tr>
<td>Accreditation body</td>
<td>None</td>
<td>None</td>
<td>Private foreign bodies</td>
<td>None</td>
<td>PNAC</td>
</tr>
<tr>
<td>Certification</td>
<td>Through private companies e.g., SGS, Moodys.</td>
<td>Thought private company SGS</td>
<td>Many foreign and national private bodies</td>
<td>Through private company SGS</td>
<td>Many foreign and national private bodies.</td>
</tr>
<tr>
<td>Laboratories (including metrology)</td>
<td>Affiliated to private certification agencies</td>
<td>Mainly labs under various ministries</td>
<td>Export Inspection Council</td>
<td>Mainly in the public sector.</td>
<td>Many public and private labs</td>
</tr>
<tr>
<td>Research and training institutions</td>
<td>National research institutions with regional focus</td>
<td>BCAS, CPD, BIDS</td>
<td>IIFT, DA, CUTS, CITA, RIS</td>
<td></td>
<td>SDPI, LEAD, IPS</td>
</tr>
<tr>
<td>Consumer bodies</td>
<td>None</td>
<td>Consumer Associates of Bangladesh</td>
<td></td>
<td>Consumer Association of Nepal</td>
<td>3 bodies - CRCP, CPS, NCP</td>
</tr>
<tr>
<td>Sectoral industry associations</td>
<td>None</td>
<td>Privates sectors will be represented e.g., Garment, Textile, Frozen Food leather Exporter Association</td>
<td>National associations like FICCI, CII. Sector specific associations are also active</td>
<td>Industry Association exists.</td>
<td>Priority sectors well represented nationally e.g. textiles, leather, fisheries</td>
</tr>
<tr>
<td>Commercial organisations</td>
<td>SAARC CCI</td>
<td>FBCCI represented regionally through SCCI.</td>
<td></td>
<td>Federation of Nepalese Chambers &amp; Commerce and Industry</td>
<td>FPCCI represented regionally through SCCI.</td>
</tr>
<tr>
<td>SMEs</td>
<td>None</td>
<td>Small and College Industries Association</td>
<td></td>
<td></td>
<td>SMEDA</td>
</tr>
</tbody>
</table>

Schematically, a framework for regional cooperation could be envisaged as follows:
Regional standards association

Regional accreditation association

Priority/common sector representatives (industry associations, SMEs)

Civil society: Consumer groups, environmentalists, advocacy, research

International fora, e.g., WTO ministerial meetings, International and regional, certification and conformity assessment bodies
The prevailing political sensitivities and the inevitable bureaucratic delays weigh in favor of a regional architecture built around private sector bodies, namely the SAARC Chamber of Commerce and Industry, federal and provincial chambers of commerce and industry and industry associations. This is not to exclude the national government and autonomous bodies involved in standards work but to build their input into a construction which maximizes their effectiveness. By the same token, role transference is not enough, even the private sector has to garner the political will for this enormously challenging task.

An example of a failed initiative is the South Asian Regional Standards Organization (SARSO), an inter-governmental organisation established in June 1999 under the auspices of SAARC. In its first meeting in New Delhi, it gave itself a mandate to promote: a) the harmonization of national standards and the establishment of regional standards in line with international standards; b) mutual recognition agreements with regard to calibration and accreditation and; c) information exchange. The SARSO has become dysfunctional, largely due to the inertia of its government members. It was with this in mind that an alternative regional framework involving a greater role for the private sector has been presented.

2.2 The SAARC Chambers of Commerce and Industry (SCCI) – A Capacity Assessment

The SCCI is recognised by all the governments of SAARC member countries as the apex trade organization in the region and consists of the following national federations/chamber of commerce and industry as members:

- Federation of Bangladesh Chambers of Commerce & Industry (FBCCI)
- Bhutan Chambers of Commerce & Industry (BCCI)
- Federation of Indian Chambers of Commerce & Industry (FICCI)
- Maldives National Chambers of Commerce & Industry (MNCCI)
- Federation of Nepalese Chambers of Commerce & Industry (FNCCI)
- Federation of Pakistan Chambers of Commerce & Industry (FPCCI)
- Federation of Chambers of Commerce & Industry of Sri Lanka (FCCISL)

The SCCI’s primary objective is to promote regional trade. It has attempted to achieve this through the concurrent activities of policy formulation, awareness creation (conferences, seminars, workshops, publications) and trade facilitation – for example, a commercial arbitration board in India is in the initial stages of planning to represent South Asia under the umbrella of SAARC. In general, it has attempted to develop itself as an institution to promote regional economic cooperation. Through no fault of its own -- given the prevailing political tension between India and Pakistan – the SCCI has not achieved much success in increasing the flow of trade within the region. Aggregate intra-regional official trade has remained below USD 3 billion per year, or less than 5% of its total exports, while intra-regional trade in the ASEAN countries totals close to USD 100 billion (almost 23% of its total exports). The volume of unofficial trade is
larger by many factors and another measure of its success will be how effectively it can legitimise this trade.

However the SCCI has been more effective in the policy arena, particularly, in bringing the government and the private sector closer in trade negotiations at the national, regional and international levels (for example, the President of the SCCI will represent SAARC at the Cancun Ministerial Meeting). With regard to its envisaged role in standards and related activities, there is an advantage to facing external challenges and opportunities collectively which defines a more effective role for the SAARC Chambers. Further, when the volume of trade is large collective efforts are likely to generate their own momentum.

**Comparison of Intra-Regional Trade - 2001**

<table>
<thead>
<tr>
<th>Trade bloc</th>
<th>USD Billion</th>
<th>% Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>1394</td>
<td>7.1</td>
</tr>
<tr>
<td>NAFTA</td>
<td>680</td>
<td>55.6</td>
</tr>
<tr>
<td>ASEAN</td>
<td>96</td>
<td>22.5</td>
</tr>
<tr>
<td>MERCOSUR</td>
<td>18</td>
<td>21.3</td>
</tr>
<tr>
<td>CEFTA</td>
<td>14</td>
<td>11.7</td>
</tr>
<tr>
<td>ANDEAN</td>
<td>5</td>
<td>8.6</td>
</tr>
<tr>
<td>SAARC</td>
<td>2.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

2.3 **Proposed SCCI Involvement in International Standards**

This section provides an overview of SCCI’s involvement in international standards. The focus of its activities in this area have been on organizing conferences and highlighting updates of regional standardisation activities through publications. Its first conference on standards, ‘Harmonization of Standards in SAARC,’ was held in Colombo, September 2001, and the following recommendations were adopted.

- Standardization in the region should be based on international standards rather than national standards. In this connection, the European Union model for regional standardization should be pursued as far as possible within the region. The rationale for this is to build up institutional capability in the future to come up to par with European institutions. This would allow greater participation in the international standards making process and increase global trade.
- For bilateral trade, the countries in the region should respect each other’s standards (technical equivalence established through sound science and risk assessment).

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If the intra-regional trade for a particular product is significantly high, a regional standard based on national standards may be considered. An assessment of intra-regional trade and international trade for different products should be undertaken. This would serve to focus the need for compliance with international standards for globally traded goods, as well as indicating where new international or regional standards are required. The business sector should play a more positive role both financially and technically in standardization activities in the region. Sector industry associations and CCIs should be identified and a programme for information sharing instituted. The governments of the region should support the national standards organizations of each country to accelerate the development of standardization activities. This is an important prelude to more regionally oriented work because stronger institutions would mean more effective regional cooperation.

None of the recommendations have been adopted yet as a lack of inter-governmental dialogue has slowed down this process.

3. Is the European Model Viable for the SAARC Region?  

Within Europe, most voluntary standards have been harmonized amongst member countries under guidelines set by the EU Commission. This has reduced the compliance costs of meeting 15 different national standards. Non-harmonized products still exist where national mandatory regulations apply. Three European standards organisations are mandated by the EU Commission to draft European technical standards, namely the European Committee for Standardization (CEN), European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI). In order to avoid duplication, The EU Commission, CEN and CENELEC have agreed to adopt international standards (ISO and IEC) unless none exist or are unlikely to meet the requirements of EU Markets. Under the Vienna agreement of 1991, revised in 1996 as the Dresden Agreement, general areas of cooperation between CEN and ISO are:

- The general exchange of information.
- Cooperation on standards preparation between CEN and ISO.
- The adoption of existing international standards as European standards.
- Parallel approval of standards through parallel voting
- Joint coordination meetings.

4. From Standards Takers to Standards Makers: The Preconditions

4.1 Standards Setting, Notification and Enquiry Points

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Can the European model be replicated among the SAARC countries? Appropriately one should start with a reality check. As indicated earlier, with the exception of trade specific to the region, the SAARC countries are by and large standards takers. Second, even in this passive context they are at different stages when it comes to complying with international standards due to their varying institutional capacities, technical know-how and legal systems. However, certain measures/prerequisites are at the regional level will enable South Asian countries to become more active players in standards setting. Some suggestions are:

- The SCCI, in conjunction with national standards bodies, should prepare a list of international standards, especially basic standards that pertain to health and safety, testing methods, quality and the environment.
- Undertake baseline research to identify products and sectors on a priority basis for the adoption of international standards. A key part of this research would be an analysis of global and regional trade patterns. The SCCI is well-placed to access the relevant data in view of its links with national commercial organisations and multi-lateral bodies, for example, the Asian Development Bank and the World Bank.
- To encourage a broader consultative process, each member country should make standards information public via an online database.
- The SCCI should establish sector committees dealing with the economic and legal aspects of important industries e.g., textiles, food, and fisheries. These committees should also monitor blocked exports due to non-compliance and the associated reasons. This information could be communicated back to the industry associations of the member countries to improve compliance.
- The approach to international standards should be holistic. The SCCI needs to address consumer issues. In substantive terms this means including national consumer groups in the consultative loop for the formulation of standards and in sensitising them to the health and environmental requirements and impacts embodied in traded goods processes.
- As mentioned earlier, the SCCI has the potential to act as an enquiry point for international standards in the region. To aid transparency and information exchange, it should compile a global database of stakeholders working on standards issues and international programmes to aid developing countries. It could also provide information on new standards that have been issued on a sectoral basis, compliance deadlines, international meetings and research publications. This could take the form

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3 Through research, needs assessments and information dissemination, regional priorities need to be identified initially, as a prelude to more substantial adoption and implementation initiatives. Thus, for instance, the research would address the following questions: which export sectors and products should harmonization take place first; Which minimum standards are required to protect human health?.
of an online resource but should also be distributed as a catalogue in the appropriate languages to various commercial and industry organisations.  

Once the prerequisites are in place, the SAARC can become more proactive in the standards setting process. Among other things this entails:

- For international standards under preparation, the SCCI should encourage a joint approach for voting on these draft standards.
- If international standards are not available, SAARC regional standards should be prepared and presented to ISO for deliberation. Provide a geographically convenient forum for South Asian countries to develop recommendations for communication to the international standards bodies, particularly ISO and Codex.
- Promotion regional standards for intra-SAARC traded goods for which no international standards exist. An analysis of trade flows and a regional comparison of the existence of national standards would inform this. An advantage of this would be that socio-cultural, economic, climatic and environmental considerations specific to the region could be factored into new standards. Related to this is the scope for technical equivalence agreements. While such agreements have proven very hard to negotiate in practice, it may be easier to do so if the development of standards in the region was coordinated/guided by a regional body.
- Form a consultative liaison with international standards bodies in order that the concerns and recommendations of regional members are communicated.
- Examine future requirements in international standardization and the changes in the current international structure that may be necessary to meet these requirements.

4.1.1 Impact on Small and Medium Enterprises (SMEs)

However, before international or regional standards are adopted and implemented, it is important to consider their social and economic impacts on various stakeholders. For example, given the rapid proliferation of international standards, how are SMEs likely to deal with costly investments in mitigation and/or social compliance? Evidence from an UNCTAD (Indian leather) and TKN-II (Bangladesh shrimp) study suggests that that international standards are leading to increasing market concentrations and sidelining of SMEs. On the other hand, other TKN-II (Pakistan leather) and SDPI (Pakistan surgical goods) studies highlight relatively cheap in-plant options which also generate efficiency gains. The study on surgical goods points to the quick turn-around time for compliance

4 As an example of where information can be sought, the US Food and Drug Agency (US FDA) monitors export consignments that have been detained for lack of compliance with international standards. The US FDA makes such data readily available to the public on a monthly basis with details on geographic region and reason for detention (for example, lack of food hygiene, failure to comply with labelling requirements, microbiological contamination, and pesticide residues).
with social standards. Other questions are do manufacturers of regionally traded goods demand standards? What standards are important to consumers? These questions demonstrate the necessity for impact studies to assess which standards are relevant for the region. There is scope for consumer groups and research organisations to undertake such assessments and communicate outcomes to a regional standards association for further action.

**Costs and Benefits of Regional versus International Standards.**

<table>
<thead>
<tr>
<th></th>
<th>Benefits</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>International Standards</em></td>
<td>Benchmarking national standards against international standards has the advantage of being backed by technical know-how of product, performance, quality, safety and environmental specifications. International recognition of national standards based on international standards, and for products that comply with international standards.</td>
<td>Lack of financial and technical resources to get involved in ISO, CODEX, OIE &amp; IPPC standards development, hence, the needs of developing countries are not represented adequately.</td>
</tr>
<tr>
<td></td>
<td>Regional customs (e.g. halal meat) and geo-climatic similarities can be taken into account and targeted at niche markets e.g., Muslims in Western markets.</td>
<td>Lack of scientific expertise to justify higher standards based on risk analysis and sound science.</td>
</tr>
<tr>
<td><em>Regional Standards</em></td>
<td>Products for which no international standards are available (e.g., banaspathee ghee), give, scope for technical equivalence agreements as long as they aim for the same objective.</td>
<td>‘One size fits all’ standards – little consideration given to SME’s in developing countries.</td>
</tr>
<tr>
<td></td>
<td>Regional standards cannot be effectively formulated without strong national institutions and access to transparent information, both of which are lacking in South Asia.</td>
<td></td>
</tr>
<tr>
<td>Benefits</td>
<td>Costs</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Scope for regional standards specifically for small-scale industries (agro products, textile) whose needs are not represented at an international level</td>
<td>Trade amongst developing countries is based mainly on price and not quality. It is the developed markets that demand compliance with standards.</td>
<td></td>
</tr>
<tr>
<td>Less stringent standards can be devised to aid regional trade for specific products that are traded regionally and not globally but should conform to a minimum standard. Trade patterns would reveal this. Also, there are products for which no international standards exist e.g. ghee. Through regional cooperation, a case can be made for international standards through ISO.</td>
<td>High political tension is an obstacle to inter-governmental dialogue on standards.</td>
<td></td>
</tr>
<tr>
<td>Regional standards based on international standards have a place in the global market.</td>
<td>Regional standards based on national standards have no place in the global market.</td>
<td></td>
</tr>
<tr>
<td>Regional standards could facilitate economic growth in SAARC region.</td>
<td>Regiona standards could facilitate economic growth in SAARC region.</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Conformity Assessment and Accreditation

From the research undertaken in the South Asian, it emerged that exporters do not view national certification agencies as being credible and recommend the use of internationally recognised bodies e.g., SGS and Moodys. Even this may not be sufficient and may be followed up with bilateral certification. The lack of credibility reflects the absence of national accreditation capabilities (lack of technical manpower and knowledge of up to date procedures).

In order to gain international recognition and involvement in internal accreditation activities, and the promotion of regional accreditation processes, a formally recognised regional accreditation association could aid this. Through the provision of a forum, consensus among regional accreditation bodies may be reached on matters related to accreditation and conformity assessment issues.
The potential advantages to be gained from such an association would be the elimination of technical barriers to trade and the promotion of regional and global trade through functions such as:

- Provision of institutional infrastructure for regional harmonization of accreditation in conformance with international guidelines.
- Promotion of regional and international acceptance of conformity certificates, inspection reports, and testing and calibration results issued by conformity assessment bodies accredited by its members.
- Establishment of a region-wide system of mutual recognition arrangements among accreditation bodies.
- Representation of South Asia in international accreditation forum.
- Provision of a database of accredited organizations, which would enable potential customers to access the services provided by such bodies.

Before such a regional body is instituted, national bodies need to liaise with other regional bodies to ascertain their experiences, positive outcomes, technical capacities required. This could be undertaken through workshops and seminars organised by the SCCI and through exchange of personnel for short-term training.

**International and Regional Accreditation Associations**

<table>
<thead>
<tr>
<th>Worldwide</th>
<th>International Accreditation Forum</th>
<th><a href="http://www.iaf.nu">www.iaf.nu</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>IAF</td>
<td>International Laboratory</td>
<td><a href="http://www.ilac.org">www.ilac.org</a></td>
</tr>
<tr>
<td>ILAC</td>
<td>Accreditation Cooperation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asia &amp; Pacific Rim</th>
<th>Pacific Accreditation Cooperation</th>
<th><a href="http://www.apec-pac.org">www.apec-pac.org</a></th>
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</thead>
<tbody>
<tr>
<td>PAC</td>
<td>Asia Pacific Laboratory</td>
<td><a href="http://www.aplac.org">www.aplac.org</a></td>
</tr>
<tr>
<td>APLAC</td>
<td>Accreditation Cooperation</td>
<td></td>
</tr>
</tbody>
</table>

| Africa                          | Southern African Development Community in Accreditation | www.aplac.org    |
| SADCA                           |                                                   |                  |

<table>
<thead>
<tr>
<th>Europe</th>
<th>European cooperation for Accreditation</th>
<th><a href="http://www.european-accreditation.org">www.european-accreditation.org</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>America</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Synopsis of Country Papers

5.1 Consistency of regulatory processes with the TBT and SPS Agreements

When developing technical regulations, members must base them on relevant international standards, or their relevant parts, unless they find they would be ineffective or inappropriate — e.g. because of fundamental climatic or geographical factors or fundamental technological problems (The WTO Agreement on Technical Barriers to Trade: Standards, Technical Regulations and the Quality Institutions)

The term consistency has two aspects. If a country is a “standards taker”, then it means using international standards as benchmarks and bringing national standards in line with them. Once national capacity is fully developed, for instance, to meet the criteria of sound science and risk assessment, the country can think more proactively of being a “standards maker.” At this stage it can participate in the work of international standards bodies and even make a pitch for higher standards.

The countries in the South Asian region clearly falls in the category of being a “standards taker” and the work that it has done on standardization reflects this. For instance, the Pakistan Standards and Quality Control Authority (PSQCA) BSTI IBS & NBSM in Pakistan, Bangladesh, India Nepal has stated its policy of bringing all their voluntary standards in line with ISO standards. The ISO series standards also provides a window of opportunity. For instance, the ISO 14001 environmental system standards are flexible in that they accommodate national environmental quality standards (NEQS).

The table provides a broad overview of the standards typologies, the areas where national standards are being brought in line with international standards and also where there is scope for such convergence. Clearly, at the end of the day, a lot still needs to be done.

### Consistency of National with International Standards

<table>
<thead>
<tr>
<th>Standards and Agencies</th>
<th>Technical Regulations (Mandatory standards)</th>
<th>Voluntary standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality (PSQCA, CRCP)</strong></td>
<td>Pakistan specific standards for which PSQCA, BSTI, IBS &amp; NBSM issues a label (National Standards Mark)</td>
<td>The national standard bodies is working on bringing national voluntary</td>
</tr>
<tr>
<td>Technical Regulations (Mandatory standards)</td>
<td>Voluntary standards</td>
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<td>---------------------------------------------</td>
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<tr>
<td><strong>Environmental</strong>&lt;br&gt;EPA (Pakistan)&lt;br&gt;DOE (Bangladesh)&lt;br&gt;IPCB (India)&lt;br&gt;DFQTC (Nepal)</td>
<td>NEQS (effluents, emissions, rules and regulations for disposal of industrial by-products and hazardous wastes, – packing, incineration, landfills, recycling)&lt;br&gt;The NEQS are folded into environmental management systems, such as the ISO 14001 series standards.</td>
<td></td>
</tr>
<tr>
<td><strong>Health</strong> (PSQCA, Ministry of Health, Ministry of Agriculture)&lt;br&gt;- Pakistan&lt;br&gt;• Ministry of Agriculture, Department of Agriculture European&lt;br&gt;• Ministry of Agriculture, Department of Agriculture European&lt;br&gt;- Bangladesh&lt;br&gt;• Agro-Enterprise Centre-Nepal&lt;br&gt;• Ministry of Agriculture&lt;br&gt;- Plant Protection Division&lt;br&gt;- India</td>
<td>The Plant Quarantine Department of the Ministry of Agriculture checks both exports and imports for pesticide residue content. A fair presumption is it uses an international standard as a criteria. This practice could be extended to a wider range of product embodied health impacts spelled out in the technical regulations of developed countries. (e.g. azo dyes, formaldehyde)&lt;br&gt;Concerned national departments need to develop sustainable harvesting practices, similar to those proposed in standards set by, for instance, the Forest Stewardship Council (FSC)</td>
<td></td>
</tr>
<tr>
<td><strong>Food and plants</strong> (Ministry of Agriculture, Forestry department, Ministry of Health)</td>
<td>Food Quality Standards govern physical characteristics (FAQ for wheat) as well as those characteristics specified in the SPS agreement for food items, plants and animals (preservatives, viruses, diseases).&lt;br&gt;Concerned national departments need to develop sustainable harvesting practices, similar to those proposed in standards set by, for instance, the Forest Stewardship Council (FSC)</td>
<td></td>
</tr>
<tr>
<td>Technical Regulations (Mandatory standards)</td>
<td>Voluntary standards</td>
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<td>-------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Standards, Marine Stewardship Council (MSC) Standards</td>
<td>Labor laws These govern minimum wages, health and safety. Need to bring them in line with SA 8000, OHSAS 18,000.</td>
<td></td>
</tr>
</tbody>
</table>

With regard to international standards, the national standard bodies initiative needs to be replicated across the board. In some areas national standards are inferior (food quality) with the result that bilateral export bans have been imposed. Similarly, national labor laws (affecting wages, health and safety) are out of sync with international social standards. In other areas there are no national laws but these are needed to reign in flagrantly extractive practices, such as in the forestry and fisheries sector. This is also an advantage as when a policy decision is taken to institute them, such laws can be based on international standards pertaining to sustainable trade.

5.1.1 Are National Policies Consistent with the TBT and the SPS?

National policies pertaining to quality standards are the furthest ahead on the consistency criteria. The Pakistani National Quality Policy (2002) takes cognizance of the need to establish a sound institutional, technical and physical infrastructure, which is a precondition to addressing the requirements of sound science and risk assessment. The overarching policy context is one of upgrading quality practices, creating a quality culture and thereby improving the quality of life. More specifically, with regard to international standards, there is both recognition of the inherent merit of these standards as well as their imperatives for export viability. Thus one of the policy objectives is:

- To bridge the gap between the best local and international practices.

A number of activities are built around this objective:

- The Ministry of Science and Technology will undertake studies to identify the R&D requirements and shortcomings of industries and other key sectors of the economy. The priority of these studies will be for those sectors which have the potential for export.
- Enterprises will be encouraged to adopt international standards of management, such as ISO 9000 and work towards the continuous improvement of their management systems.
Incentive schemes will be launched in the public and private sector organizations to develop and implement best management practices by adopting national and international standards, including ISO 9000, ISO 14000, ISO 17025, SA 8000

National recognition of international standards is not as clearly evident in the case of environmental policies. In fact, the key initiatives appear to be coming mainly from industries and in an often hostile national policy environment. However, voluntary compliance is seen as a way of addressing the weak technical and enforcement capabilities of the federal and provincial environment protection agencies (EPAs) and the integration process has begun to gather momentum. The provincial EPAs have also begun to conduct training programmes and workshops for industries to create awareness about the TBT and SPS agreements, and it is planned to include trade dimensions in the industry self monitoring and reporting (SMART) software. Encouragingly the transition to voluntary compliance nationally replicates international trends towards voluntary standards, namely, the increased use of self-regulatory, consumer-based, and voluntary mechanisms to allow enterprises to move “beyond compliance.” (Rotherham, 2000).

5.1.2 Interdepartmental Coordination and Consultation

Clearly, within the country multiple standards for any single item need to be harmonized before efforts are made to bring them at par with international standards. The need for interagency coordination to harmonize regulations and definitions and minimize conflicts over jurisdiction is self-evident. In principle, this need is articulated in the National Quality Policy:

To promote quality the technical regulations play a key role with respect to consumer protection, health and the environment. These regulations shall be reviewed, updated and vetted by the relevant ministries including the ministry of environment, ministry of commerce, ministry of industries and ministry of health. Through mandatory technical regulations, the governments shall set requirements, aiming at ensuring the safety of the consumer, health and environmental protection. These regulations shall be revised from time to time and the government shall strengthen the mechanisms for notification procedures for technical regulations (National Quality Policy, 2002)

There appears to be an overlap of products and functions covered by the PSQCA Act 1996 and the Pure Food Ordinance. For instance, the Food Acts define ice cream as being made from pure milk, whereas the PSQCA uses a definition of emulsified fats. The Pure Food Ordinance defines foods for which mandatory laws are to be enforced, for example, biscuits, margarine, vanaspathi ghee, and edible oils.
To some extent consultation and coordination is taking place. The Ministry of Industries and the Engineering Development Board (regulates engineering products) also consult with the PSQCA over technical regulations for identical products. Similarly, the CRCP, works closely with the PSQCA to identify products for which mandatory standards are required. It disseminates the results of its research to the PSQCA, PNAC, Ministry of Science and Technology and other stakeholders concerned with consumer issues, and through media advocacy. Its involvement with the PSQCA began in 2000 when the CRCP started a campaign for safe drinking water. Standards for drinking water were subsequently formulated and adopted as mandatory standards by the PSQCA.

5.2 The standardization infrastructure

The existing standardization infrastructure in Pakistan is presently rather amorphous. It represents both the varying degrees to which the various standards setting or regulatory bodies are hooked into the international standardization process and the unrealized potential of other bodies to contribute to this process.

5.2.1 Access to information/Enquiry points

Some of the required characteristics of an effective information access/enquiry point are:

- Capacity to identify and understand the technical regulations and standards, usually through a central authority;
- Existence of a strong network between all concerned domestic stakeholders;
- Ability to identify private and public concerns for new standards;
- Access to information on existing international standards, including those being planned or developed;
- Ability for central authority to communicate requirements for different export markets to all relevant domestic producers;
- Relationship with foreign or international standard developer to obtain clarifications, information on implementation techniques and conformity assessment;

These requirements are fairly demanding and no single entity is capable of meeting them all, especially given the diverse standards typologies, institutions and stakeholders involved. Information provision and processing is done randomly. The Export Promotion Bureau and the Plant Protection Center are to some degree acting as enquiry points for standards under, respectively, the TBT and the SPS agreements. The Commission on Science and Technology for Sustainable Development (COMSATS) has established an industrial information network. Other actors with a potential role in information transmission between industry, the policy establishment and the international standards community are the federal and provincial chambers of commerce and industry and sector
specific industry associations, such as the All Pakistan Textile Mills Association (APTMA). All these different strands need to be streamlined. Presented below is a schematic for a simple information access/enquiry point architecture which takes account of this diversity.
As institutional and technical capacity develops a parallel reverse flow of information will begin to develop.

5.2.2 Bilateral Implementation of Standards– The Industry Perspective

*Large Exporting Firms:* Major international clients set their own standards through bilateral codes of conduct. ISO certification by internationally recognised firms is necessary but not sufficient to meet their requirements. Before orders are placed, check-lists on social and environment compliance (along the lines of ISO 14,001 and SA 8000) are issued and auditors of the customer’s choice are sent to check documentary and physical evidence of compliance. For existing clients, auditors make follow-up visits at least once a year. This practice has encouraged the streamlining of customer requirements with internal auditing procedures to simplify the process each time new clients approach. Without international pressure, it is unlikely that firms would comply with international standards due to the high resource requirements. In order to minimize these costs, firms undertake in-house measures (water and chemicals recycling) wherever possible. Where costly investment or system changes are unavoidable, there are still economic paybacks in the form of higher productivity associated with lower turnover and increased resource (energy, raw material) use efficiency. Firms have also developed plans for water treatment plants and, in some cases, installed state of the art structures.

Firms are instituting quality assurance (ISO 9000) and social and environmental management (ISO 14001, SA 8000) systems and have deployed more staff to implement them. While, as indicated, these are a part of bilateral requirements they also improve credibility with domestic clients.

*Small and Medium Enterprises (SMEs).* In contrast to large firms, SMEs have access problems with regard to credit, manpower, technology -- to institutional and policy support in general, which places them at a disadvantage when it comes to complying with international standards. The Small and Medium Enterprises Development Agency (SMEDA) was established in 1998 for the commercial development of SMEs. While nominally a government organization it is dynamic and professional in its approach. However, it’s strategic focus is on improving the capacity of SMEs to cope in a challenging and competitive trade environment. SMEDA is attempting to establish a conducive policy environment for the growth and modernization of SME’s. SMEDA’s direct involvement in standards is limited to awareness-raising on Hazard Awareness Critical Control Point (HACCP) issues, ISO 9000, ISO 14001 and SA 8000. The standard-related interventions were

- Technological up-gradation of SME ginning units to improve process efficiencies and the quality of production. Financial assistance has been approved by the State Bank of Pakistan through a Locally Manufactured Machinery loan facility. Based on an impact assessment, Ginning Quality Standards will be formulated to ensure availability of high quality lint.
- Provincial Cotton Control Acts of Sindh and Punjab were amended to incorporate anti-contamination and quality clauses.
- Country-wide campaign for contamination free cotton was initiated, resulting in the reduction from 26 grams per bale to 6 grams per bale in Rahim Yar Khan District.
- Textile Vision 2005 identified the presence of a large number of shorter width power looms using obsolete technology. SMEDA initiated a lending programme to up-grade over 200,000 power looms to auto-looms in Faisalabad, the objective being to provide quality fabrics to the national and international markets.

On the whole, the SMEs are not as well able to cope with stringent international standards as their larger industrial counterparts, who have the financial, technical and human resources to do so. SMEDA’s innovative and relatively well-resourced services will have to meet the challenge of finding collective solutions. For instance, how can SMEs comply with process standards requiring waste and water treatment plants which are beyond their individual ability to acquire. How can SMEs access to up to date information on standards. How can they access up to date technologies and institute cost recovery processes which generate both environmental and economic gains.

5.2.3 Training on International Standards and Related Issues

Training on international standards is used here as a generic term to encompass training programs/awareness creation/seminars/workshops/website development and access. Both the public and private sectors are becoming increasingly involved in imparting such training.

- Relevant Public sector bodies include the MoS&T, PNAC, PSQCA, EPB, NPSL
- Industry representatives and associations and regional CCIs
- NGOs and policy research institutes.
- Private laboratories
- The SAARC CCI training which addresses both national and regional issues
- Participation in short and long-term international training programs

The training is conducted by national and international experts. Clearly there is a lot of overlap and duplication among the training programs. The costs of such training also varies a lot, from cost-recovery to subsidized training. The level of expertise is variable which leads to the need for training of trainers.

An audit of training courses pertaining to international standards issues needs to be undertaken. This could take the form of identifying reputable organizations that have regional and sectoral coverage such as the CCIs, SMEDA, and PNAC. This would enable the identification of the themes and overlaps of such courses.
and given the access to industry that these bodies have, research could be undertaken to identify the training needs of the private sector. Given the proliferation of training courses in the region, a registration and certification mechanism is required to create credibility and recognition of trainers in addition to a centralized database which organizations can access to identify resource persons according to their needs. Given the role of the PNAC as an accreditation body and its involvement in training courses pertaining to quality, it has the potential to oversee such a function. Commercial and public bodies could liaise with it in order to disseminate information to the industry level.

As discussed earlier, large exporters are highly conversant with and prepared for international standards and so their training needs will differ from those of the SMEs, not only in content but also the medium of communication and so issues such as local languages and literacy need to be accommodated for. The SME sector requires knowledge on the WTO regime, how it is affecting SMEs, the role of international standards and the importance of compliance. Industrial sectors and consumers require awareness raising according to the level of their needs in order to build a quality culture in Pakistan. Training development should be enhanced in tandem with institutional capacity building for standards so that the means are available to implement new knowledge.

The central body that would oversee the training capacity in Pakistan would require financial assistance to implement such a scheme and technical assistance to register and certify trainers, and to set up an online database. As discussed, the PNAC is well positioned given its network of stakeholders and MoU’s already signed (for example, SMEDA, EPB, CCIs, PCSIR). It is already providing training to various sectors and regions and so is institutionally empowered.

5.3 Conformity assessment and Accreditation Infrastructure, Including Technical Equivalence and Mutual Recognition

5.3.1 Metrology and Calibration

A number of public, autonomous and private bodies provide conformity assessment (certification, metrology, calibration) services.

PNAC: At present not a single laboratory in Pakistan is ISO 17025 accredited. Market access is restricted as trading partners require certificates by accredited laboratories for goods exported to their countries. In the absence of such facilities, items have to be tested by accredited laboratories abroad, which entails substantial financial and time costs. In particular, this is a problem for small exporters. A joint UNIDO/PNAC project has selected a number of public sector laboratories for upgradation and eventual accreditation:

- PSQCA laboratories at Karachi and Lahore.
- New PSQCA laboratories at Islamabad, Skardu, Peshawar, Quetta, Sialkot, Gujranwala, Faisalabad, Multan, Sukkur, Hyderabad.
- Pakistan Council of Scientific and Industrial Research (PCSIR) laboratories at Karachi, Lahore, Islamabad, Peshawar and Quetta.
- Council for Works and Housing Research (CWHR) Laboratories at Karachi (Cement and Building Materials).

The National Physical Standards Laboratory (NPSL): The NPSL is a unit of the Pakistan Council of Scientific & Industrial Research (PCSIR), a statutory body established under the PCSIR Act No. XXX of 1973. It is under the administrative control of the Ministry of Science and Technology and was established in 1974. Although not accredited with ISO 17025, the NPSL has been pre-assessed for ISO 17025 accreditation. It is responsible for maintaining physical standards of measurements and materials and, hence, acts as a focal point for calibration and testing needs in the country. It is the only organization in Pakistan, which can certify whether a particular measuring instrument conforms to the specifications required for measuring instruments. The NPSL employs 35 scientists, which include physicists, chemists, engineers and technologists (Ph.D., M.Sc. and B.E. degree holders). Most of them have been trained in standards laboratories in Australia, Japan, China and Korea.

The NPSL is certified by the international measurement system (S.I. Units) and carries out comparisons of its standards with international standards to ensure that any measurement made with equipment tested by the NPSL conforms to the same equipment internationally. It is also a member of BIPM, France, which requires acceptance of test reports internationally to conform to the same standards.

In addition to its calibration mandate, the NPSL provides testing and certification facilities to industries exporting commodities to countries such as Japan and Saudi Arabia and issues quality test reports and certificates according to their respective national standards (JIS and SASO). For example, the NPSL is in a position to certify and test the quality of rice for export to Iran as per the requirements of Iranian standards. Its wider engagement with public and private stakeholders occurs through the provision of training courses such as environmental monitoring pollution, capacity building for adoption of ISO 14000, and chemical metrology.

Cleaner Production Center Analytical and Monitoring Laboratory: The Cleaner Production Center in Sialkot, a project of the Export Promotion Bureau/NORAD has set up an Analytical and Monitoring Laboratory for testing effluents. A standards operating procedure has been established and consultants are preparing the laboratory for accreditation.

Global Environmental Laboratories (GEL): The GEL is the first private environmental laboratory in Pakistan and was established in 1993. Its main services to industry are:

- Effluent sample testing
- Design of treatment plants
- Monitoring air quality
- Hazardous waste disposal from industrial sites
- Waste disposal
- Initial environmental examination and environmental internal audits
- R&D

Although no laboratories in Pakistan are currently accredited with ISO 17025, GEL aims to be the first accredited private sector laboratory in Pakistan. It has made substantial investments in new technology and mobile testing facilities. and is currently in the process of developing quality manuals and procedures for ISO 17025 accreditation (it already has ISO 9002 certification). In terms of calibration of equipment, foreign laboratories are used as the NPSL is not equipped enough to deal with GEL’s state of the art equipment.

In recent years GEL’s clientele has increased to include multinational and large nation exporting firms. These companies can afford to invest in environmental friendly practices and technology.

5.3.2 Certification

PSQCA: The PSQCA provides metrology and certification services. It signed an MOU with AOQC Moody International in 1998 covering joint certification and auditing activities. In addition, AOQC Moody International is assisting the PSQCA to set up its own independent ISO 9000 certification facility. However, PSQCA’s role in conformity assessment and enforcing compliance with mandatory standards is questioned. There is some merit in the view that it should focus exclusively on standards setting.

Certification -- Textiles Industry: In Pakistan, there are approximately 25 foreign and local certification agencies. Large exporters use exclusively the services of the former (or certifiers based abroad) as Pakistani firms lack credibility with international clients. The lack of accreditation of ISO 9000 certification bodies has led to a feeling that sometimes lax surveillance methods are being used for awarding certification status. Although the certification agencies are foreign and are accredited by their own country’s accreditation bodies, it is generally felt that insufficient controls are applied when the same bodies are operating in developing countries.

The main certifiers are SGS, URS, Lloyds and TUV. International reputation for checking compliance and provision of value-addition services (for example,
suggestions on how to improve QMS and EMS efficiency) are major determining factors in the choice of certifiers. Currently, no local certifier can meet these requirements and their awareness on up to date compliance requirements is low. International certifiers are a one-stop shop for acquiring knowledge on international standards, laboratory testing facilities, QMS and EMS enhancement services, and documentation templates. Large industries are prepared bear the higher costs for the diversity of services offered.

Compliance requirements have a somewhat inconsistent flavor. In many cases clients are not content with ISO certification and require compliance with their own bilateral codes of conduct. In some cases, if clients note the firm is on track with regard to some of the compliance parameters, they will issue anticipatory certification on the understanding that other requirements will be met some way down the line (for instance, high cost water treatment plants).

Bangladesh Standard Textile Industries (BSTI)

The BSTI provides metrology certification services. It has adopted ISO, however it lacks capacity infrastructure and accreditation to certifies. The main foreign certifiers are SGS, Lloyds and ISO. Although the certification agencies are foreign and are accredited through their own country’s accreditation bodies, it is generally believed that not enough control is excessive by then developing countries.

5.3.2 Accreditation

The Pakistan National Accreditation Council (PNAC) is an autonomous public body that was established under the Ministry of Science and Technology by Gazette notification in March 1998. In 1999, under the ADB assisted Trade Export Promotion & Industry (TEPI) Project PNAC launched the following services:

- To accredit the certification agencies for ISO-9000/14000
- To accredit laboratories for testing and calibration
- To register auditors & training organizations in the quality/environment management area

The PNAC will seek registration with the International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC) to enhance its credibility, traceability and acceptability. Consequently, PNAC aims to act as a focal point for coordination with international accreditation bodies, which will ensure that ISO 9000 certification by indigenous bodies will gain international recognition. This is currently non-existent and, over the long-term, will facilitate local companies to obtain ISO 9000 certification and reduce the costs involved by using international certifiers.
This mandate of the PNAC is constrained by its inability to attract and retain staff due to low salaries and incentives. However, it has been working around this constraint by networking in various ways. It had entered into joint assessment, accreditation and mutual recognition arrangements with the Chinese government. Hence, if a laboratory or a certification agency in Pakistan needed accreditation, Chinese experts could be called in under the PNAC umbrella to do so. In addition, PNAC received consultancy assistance under an Asian Development Bank funded project through which the PNAC quality system documentation has been completed.

The PNAC was also working on building its capacity. It had hired contractors to: a) strengthen its capacity to accredit laboratories and certification agencies and; b) build the capacity of laboratories, prior to accreditation. It was also negotiating salary increases for its core staff with the government in order to retain them.

UNIDO/UNDP and PNAC have entered into a technical assistance agreement in order to strengthen the national infrastructure for standard metrology and testing (SMT) to meet the growing demand for such services in Pakistan. According to the agreement, UNIDO will select major laboratories in the country to be developed for accreditation, and provide suitable guidelines to set up laboratory procedures according to ISO 17025. In addition, UNIDO will provide technical support to the PNAC in issues related to laboratory accreditation and mutual recognition schemes.

Capacity Building Needs: In order to increase participation at international fora and hence, regional capacity to meet the SPS and TBT requirements, the accreditation bodies requires funding to attend these meetings and its staff requires training on the latest accreditation procedures and corresponding standards. Exchange programmes should be encouraged between accreditation bodies within the region and in the developed countries to share experiences that could be beneficial for improving accreditation procedures.

The PNAC and other accreditation of the region has outlined areas in which it wishes to expand its scope to ensure a more robust accreditation infrastructure in Pakistan:

- Social accountability
- Product certification
- CE Marking
- Health safety standards, HACCP (Hazard Analysis and Critical Control Point)

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- Accountability standards (AA-1000)
- Proficiency testing

In Bangladesh, formulation of an accreditation board is under process. The board after being formed will cooperate, through mutual recognition agreement (MRA) with regional or Industrial Accreditation bodies for equivalency.

**Inventory of laboratory equipment**

A lack of physical infrastructure to promote the necessary quality control to international standards is a major challenge, however, the scale of this is unknown given the many public and private laboratories, for example, various government ministries, hospitals, universities, industries and independent laboratories. An inventory of the key laboratories (which cover the main sectors and regions) and laboratory equipment is necessary to ascertain what infrastructure is required for upgrading them to ISO 17025 standards.

The PNAC and selected private laboratories should be trained for laboratory accreditation requirements according to ISO 17025. This would enable these organizations to develop their laboratories according to international standards and seek international accreditation. The ADB funding to support PNAC’s activities was a useful start to enable it to build its credibility. However, it will take time before its services are fully recognised internationally given that it is not yet a member of IAF and ILAC. One suggestion would be to accredit a group of pilot laboratories with recognised foreign accreditation bodies, which would increase the acceptability of lab services by importers.

6. **Building Confidence and Trust Relationships: A Menu of Small but Achievable Steps**

6.1 **Standards**

Aims and objectives

The long-term objective is to establish an institutional mechanism to oversee harmonization of standards across the region. There was consensus that SCCI should be the incubator organization for regional standards activities due to its intra- and extra-regional recognition and infrastructure availability. Short-term achievable objectives were defined as sequential steps leading to the establishment of an institutional mechanism. Before any long-term initiatives are established, it is vital to establish trust and reciprocity amongst the regional actors. The two key short-term activities identified are:

*Consolidation of information on social, environmental and quality standards:* There are many repositories of information but they are disparate and disorganized, hence, the need for information to be coordinated, housed and
disseminated. Intended consumers of this information include exporters, importers, consumers, SMEs, government bodies and civil society. Basic information that needs to be addressed include:

- What standards are and how they relate to the WTO.
- Simplified explanation of the TBT/SPS Agreements (distinctions between the agreements, common misunderstandings, provisions for technical assistance).
- Important timelines.
- The impact of standards on trade – case studies of positive and negative experiences of compliance (increased export revenues versus detained consignments).
- Inventory of the relevant regional and international stakeholders with description of functions, contact details and web addresses (enquiry points, standards setting bodies, accreditation bodies, laboratories, metrology and testing laboratories).
- Signposts for further information such as research reports (FAO, UNIDO, IISD, etc) on SPS/TBT issues and implications.

Matrix of regional priority export sectors/goods and corresponding national and international standards: A need was expressed at the workshop for product and sectoral research into the volume and nature of intra-regionally traded goods along with corresponding national and international standards. This would enable identification of important commodities where no or inadequate standards exist, the possibilities for mutual recognition agreements and the requirement for new international standards (for example, there is no CODEX standard for ghee).

Impact Assessment of Standards: Such research could include any difficulties associated with particular trades – why was a particular consignment detained and by which country? What remedial steps need to be undertaken? How are SME’s being/likely to be affected by standards.

7. Consolidated findings for Bangladesh and Nepal

Bangladesh and Nepal are predominantly agricultural economies. Both countries have significant potentials for exporting agro products in the future provided they can maintain quality as per international standards. At present they are facing increasing trade barriers due to lack ability to cope with standards set by the importing countries, especially in the developed world. Therefore, compliance with the SPS requirement is essential for market access and sustainable export for both Nepal and Bangladesh.

Bangladesh and Nepal do not have the adequate technical capacity in scientific (sound science, risk assessment) organizational and financial capacity to
• Develop internationally comparable national standards and regulations
• Participate and contribute to the activities of various international standards bodies who are responsible for developing and harmonizing technical regulations and standards
• Establish technical equivalence as per TBT and SPS agreement.
• To take advantage of existing dispute settlement mechanisms under WTO rules.

In both countries the Ministry of Commerce have been entrusted to deal with WTO affairs and nationally coordinating WTO activities. Nepal is not yet a member of WTO but the Ministry of Commerce is responsible for compliances leading to accession of Nepal to the WTO.

Bangladesh, a member of WTO since its inception and the Ministry of Commerce plays the coordinating role with WTO. More recently the BSTI which is the National Standard Bodies (NSB) has been made the enquiry point for TBT. The key institution in Nepal is the Nepal Bureau of Standards and Metrology (NBSM). Both BSTI and NBSM have similar functions and responsibilities including standard formulation, quality standard certification, laboratory accreditation, celebration services and providing access to information. Both BSTI and NBSM are members of ISO, however, they cannot play an effective role in ISO system due to financial and other constraints.

Although the NSB’s in Nepal and Bangladesh play the role of apex organization in standardization affairs, other organizations and institutions also play vital roles in specific areas, for example, in Nepal Department of Food Technology and Quality Control (DFTQC) is responsible for conducting inspection of industries, import, export and marketing. The DFTQC have regional food laboratories for quality control. They are also involved in setting and defining food standards.

However in Bangladesh, standardization of food items is being done by BSTI. Out of approximately 1800 standards set by BSTI, the majority are for food items. It may be noted that both Nepal and Bangladesh are standard takers in the international market. They have to comply with the standard set by importing countries. Lack of harmonization of the domestic standard with international standard is a serious barrier to promotion of export trade from both these countries.

The exporters generally do not have adequate knowledge and often do not get information at the right moment. As a result the cost of adopting international standards in high. For example in Bangladesh the shrimp export sector suffered great setbacks and incurred increased substantial financial losses due to rejection by importing countries for not compliance of their quality standard. HACCP has gradually been adopted by shrimp exporters. The small and medium scale exporters find it difficult to adopted HACCP due to high cost. Adoption of...
HACCP poses a challenge for small and medium scale exporters both in Bangladesh and Nepal. This problem is more acute in Nepal.

Both countries have contact points for CODEX. However for full adoption of CODEX standards, substantial capacity building in terms of trained human resource, infrastructure, testing equipment, access to information and participation in ISB’s meetings.

The key issues addressed in this research involves capacity building pertaining to human resources, institutions and organizations, which are as follows:

1. The regulatory processes are consistent with TBT and SPS agreements.
2. Robust standardization infrastructure
3. Robust conformity assessment and accreditation infrastructure, including technical equivalence mutual recognition.
4. Participation in international standard body (ISBs).

All these four aspects are highly interlinked. In developed countries capacities to address all these issues exist and faces little or problems in adopting the multiplicity of new and emerging international standards. However least developed countries like Nepal and Bangladesh are lacking way behind in coping with all the four issues. Although it is not too difficult to make the regulatory processes consistent with the international standard on paper, on the other three aspects dealing with standardization infrastructure, conformity assessment and accreditation infrastructure and participation in ISBs meetings are much more difficult to materialize. The real achievement of these issues would require significant capacity building in terms of human resource, organization and institutional strength. The current infrastructure available in terms of equipment testing, metrology calibration etc. is not sufficient to fulfill the standards required to fulfill the TBT and SPS agreements.

Regionally, a major concern is the capacity of the Small and Medium Term Enterprises (SME’s) to comply with international standards due to lack of access to information on the subject. There is requirement of general awareness building on the emerging international standards. Additionally cost of testing and certification are major barriers for the SME’s, to comply with international standards. The situation becomes more different because of multiplicity of standards from different importing countries. Addressing of these issues concerning the SME’s is vital since it accounts for majority of industries in the region and from the sustainable development point of view.

7.2 Capacity Building Requirements:

The common elements of capacity building in Nepal and Bangladesh are as follows:
• A serious constraint to industrial production and trade is the multiplicity of acts, rules and regulations requiring potential entrepreneurs to obtain innumerable permission, approval etc in conducting business activities. A major reform which can substantially free industry and trade from the existing regulatory framework is itself can be effective catalyst in growth of industrial production and trade. Hence capacity building is required with regards to administrative reforms, improvement of present regulatory mechanisms, simplification of rules and regulations streamlining of enforcement of law.

• A common constraint of all relevant institutions is the shortage of capable manpower (both managerial, technical expertise etc to deal with TBT and SPS related measures. The capacity building of the policy makers is also urgently needed through awareness raising about the needs of policy instrument, reorienting industrial sector on the importance of upgradation in the context of globalisation of trade, suggesting appropriate technology choice and the mechanism for active private sector participation in the implementation of technology related policy.

• Inadequate physical infrastructure including analytical facilities has been a common concern of all the relevant institutions. A great deal of capacity building in terms of upgradation of laboratory equipment, testing since in standards and metrology is required.

• Development of scientific and trade information system, documentation of data at national, regional and international level to guide policy and decision makers and those involved in trade and industry.

In Nepal the specific capacity building requirements are as follows:

• The capacity building needs of Nepal Bureau of Standards and Metrology (NBSM) include technical assistance in formulation of native standards, adaptation of international standards, consumer education, upgradation of laboratory equipment, technical education in testing and metrology. Technical assistance is also required quality control, certification and harmonisation and in areas of MRA and risk assessment based on sound science.

• Capacity building of DFTQC will be needed strengthening national food control system including formulation of revised Food Act and Regulation and develop training manuals in the area of inspections, quality assurance, particularly concerning application of HACCP concept in food and agricultural sector.

• The specific area, identified for DOAH’s capacity building include strengthening of its capacity on risk assessment and communication, nationalising private and public sector veterinary services meet WTO requirements and disease surveillance and quantitative epidemiology.

• Capacity building is required of DOPP in relation to interpretation of WTO rules and regulations. In relation to trade in Plant Promotion and international trade, adjustment and administration of plant protection and
quarantine programme to conform with IPPC and SPS obligations. Capacity building is also required in scientifically based plant guarantee procedure as well as pest risk analysis to ensure that adopted photo-sanitary measures are scientifically sound.

- The capacity building of SQCC is required for its accreditation with regional and international seed associations, formulation of seed policies. Technical Assistance is required in plant breeding and seed/plantation material protection, regulation and system assistance variety maintenance and on technical aspects of seed testing certification.

- DOPP will need capacity building in the following areas
  
  - Awareness building programmes for farmers, collectors, process and traders about TBT/SPS, HAACP and its monitoring.
  - Legal and Technical Assistance in formulation of standards and technical regulations.
  - Establishment of conformity assessment procedures
  - Transfer of Technology in production processes and quality testing.
  - Registration of plant resources and to ensure intellectual property rights.

- In view of the increasing role of the private sector, it is vital that the private sector should be incorporate in planning and policy formulation on issues of standards, technical regulations, conformity assessment, accreditation and metrology and testing. The level of private sector involvement at present is sporadic and non committal. To be able to conduct meaningful and informed participation, the apex business bodies like FNCCI and CNI industry association and trading bodies must have component research cells on secretariat. Priority should be given to strengthen their capacities through Technical Assistance from International Agencies.

- The AEC was established and FNCCI with the technical assistance from USAID/N to assist Nepalese agro-based entrepreneurs to improve their market competitiveness. This center should be upgraded and trained to deal with TBT international and national standards and other issues under TBT and SPS agreement.

In Bangladesh and Nepal there is a need for awareness raising on emerging standards on trade specially those related to TBT and SPS issues among all categories of stakeholders including Government, Business Bodies, Exporters, Civil Society, Academics and NGO’s.

The initial identified capacity needs of Nepal are as follows:

- Reviewing and updating of existing legislation in line with WTO’s SPS / TBT Agreements
- Harmonization of regulations at the regional level taking account of CAC, OIE and IPPC principles, guidelines, and recommendations.
• To expedite the process of regional harmonization by institutionalizing the SAARC Regional Network for Food Safety and take initiative in building up regional capacity in SPS/TBT related matters.
• Capacity building in standard formulation procedure and risk assessment, considering regional exposure data to reveal in Codex work.
• Strengthening of infrastructure for SPS requirements (Inspection, Testing, Certification, Method Validation, Equivalence Mutual Recognition of Laboratory Services SPS related information and Biotechnology etc.)
• Establishment of Regional Referral Laboratory System to provide competent services in the region.
• Development of human resources for import/export inspection, certification, accreditation, and food analysis.
• There is a need for National Food Control Authority at the apex level for the facilitation of standard formulation, food contaminants, adulteration, and pollution.
• There is a need to develop special packages for food control management including food inspection, research on food contaminations, GMP, HACCP and generation of food analytical database and their interpretation.
• Food control services is in urgent need of strengthening laboratory services with modern equipment such as Gas Liquid Chromatography (GLC), High Performance Liquid Chromatography (HPLC), Atomic Absorption Spectrophotometer (AAS), Ultra Violute/Infra-Red (UV.IR) spectroscopy etc. to cope with emerging problems on food trade involving SPS/TBT requirements.

In Bangladesh, capacity building is required in the areas of human resource, laboratory equipment, testing and metrology and calibration. Enhancement of capacity of the various institutions dealing with standards and exporters in the private sector is also required. Specifically the following departments/Institutions should be targeted for capacity building.


The Training Center of BSTI should be strengthened for conducting training on standardization, testing, quality certification, metrology, quality, management, calibration, accreditation, ISO 9000, ISO 14000, HACCP etc. “ISO 9000 lead auditor course” should have to be conducted regularly.

7.3 Strengthening of other Laboratories of Bangladesh

**Public Health Laboratory of the Directorate of Health services.**

The existing Public Health Laboratory under the Directorate of Health Services situated at Mohakhali, Dhaka should be strengthened, so that it can perform tests as per SPS & TBT requirements.
Plant Protection Wing of the Directorate of Agriculture Extension.

The Plant Protection Wing of the Directorate of Agriculture Extension is responsible for execution and implementation of the national and international Plant Quarantine Legislation and Agreement. There are five sections in the Plant Protection Wing with Plant Quarantine Section, Pesticide Administration and Quality Control, Operation (Aerial and Ground), Surveillance and Forecasting and Integrated Pest Management. There are one Director, five Deputy Directors, several Senior Quarantine Pathologist, Quarantine Entomologist, Plant Pathologist, Plant Quarantine Inspector and technical staff. At present there are sixteen Plant Quarantine Stations functioning at different entry point of the country. The laboratories of the PPW should be strengthened both in terms of equipment and human skill so that it can conduct the tests on pesticide residue and quality as an accredited laboratory.

Directorate of Livestock services of Ministry of Fisheries & Livestock.

The Laboratories of the Directorate of Livestock Services in responsible for inspection of locally produced and imported animals and poultry and look for sign and symptom of pests and diseases. These laboratories should be strengthened both in terms of equipment and human skill and accredited.

Laboratories of the Directorate of Fisheries.

The Laboratories of the Directorate of Fisheries arranges inspection of locally produced, imported and export items of shrimp, frozen fish, fish fries etc. and look for sign and symptoms of pests, microbial diseases as per international standards. The Directorate also certifies shrimp processing plants on HACCP requirements. These laboratories should also be strengthened.

Laboratories under the Ministry of Agriculture.

There are several laboratories under the Ministry of Agriculture. These laboratories include research and development activities under a council called the Bangladesh Agricultural Research Council. Strengthening both in terms of equipment and human skill and accrediting of these laboratories are needed.

Laboratories under the National Board of Revenue.

There is a small custom laboratory in Chittagong. This laboratory is required to be strengthened and accredited. NBR and Customs Administration should evaluate the PSI agents performance in consultation with the relevant Ministries and laboratories working under these ministries.

Drug Administration of the Ministry of Health and Family welfare.
Existing Drug Testing Laboratory under the Drug Administration should be strengthened so that it can perform tests for pharmaceutical products/medicine as per international standards. It may be mentioned that Pharmaceutical Sector is having high export opportunity for Bangladesh because of the provisions of the TRIPS Agreement.

Laboratories of BCSIR, BUET, BAEC, DU, ICDDRB etc.

Laboratories of Bangladesh Council of Scientific and Industrial Research, Bangladesh University of Engineering and Technology, Bangladesh Atomic Energy Commission, Dhaka University, International Center of Diarrhoeal Disease Research of Bangladesh etc. should be strengthened and accredited.

Conclusion:

Both Bangladesh and Nepal are in the initial stages of adopting international standards and infrastructure both in terms of equipment and manpower in seriously racing to meet the requirements of TBT agreement and SPS measures of the WTO. In Nepal and Bangladesh accreditation bodies do not yet exist. Its essential that accreditation bodies are formed and national laboratories should be accredited by international accreditation bodies for equivalency. Some laboratories and institutions although have the capabilities for carrying conformity assessment because they do not have international accreditation their tests may not be recognized by international buyers. It is recommended that the actor accreditation bodies in order to lessen the problem of individual accreditation with different trading partners through Mutual Recognition Agreements as encouraged by the WTO. It is imperative that countries of South Asian region get their technical equivalency of standards and conformity assessment from developed countries who are their major trading partners.

The SCCI, in conjunction with national standards bodies, should prepare a list of international standards, especially basic standards that pertain to health and safety, testing methods, quality and the environment.

Undertake baseline research to identify products and sectors on a priority basis for the adoption of international standards. A key part of this research would be an analysis of global and regional trade patterns. The SCCI is well-placed to access the relevant data in view of its links with national commercial organisations and multi-lateral bodies, for example, the Asian Development Bank and the World Bank.

To encourage a broader consultative process, each member country should make standards information public via an online database.

The SCCI should establish sector committees dealing with the economic and legal aspects of important industries e.g., textiles, food, and fisheries. These
committees should also monitor blocked exports due to non-compliance and the associated reasons. This information could be communicated back to the industry associations of the member countries to improve compliance.

The approach to international standards should be holistic. The SCCI needs to address consumer issues. In substantive terms this means including national consumer groups in the consultative loop for the formulation of standards and in sensitising them to the health and environmental requirements and impacts embodied in traded goods processes.

For international standards under preparation, the SCCI should encourage a joint approach for voting on these draft standards.

If international standards are not available, SAARC regional standards should be prepared and presented to ISO for deliberation. Provide a geographically convenient forum for South Asian countries to develop recommendations for communication to the international standards bodies, particularly ISO and Codex.