



Standards or Hazards: Environmental Compliance and Market Access Concerns for India's Marine and Agricultural Products

Pavel Chakraborty*

Abstract

Trade liberalisation and improved access to the world's markets lie at the heart of the sustainable development paradigm, be it growth in aggregate income and its distribution across various economic segments of society, or efficiency in allocation of resources, or even generation of finances for development, and transfer to and application of improved technologies and best practices in developing countries. The establishment of the World Trade Organization (WTO) has led to the expansion and diversification of export opportunities, including diversification into higher value products, and has also intensified the debate over environmental protection measures and international trade. Among the various concerns related to trade and environment, usage of stringent environmental standards such as Non-Tariff Barriers (NTBs) against trade with developing countries has generated a lot of debate. The application of these standards has led to losses in exports for developing countries in Asia because of difficulties in complying with certain Sanitary and Phytosanitary (SPS) measures in the import markets. This article aims to address this debate relating to market access, in particular the impact of environmental measures on market access, from an Indian perspective, in the cases of two major-export oriented products: marine and agricultural. The main findings of the article can be outlined as: (i) the environmental measures used by developed countries have hampered India's exports to a certain extent; (ii) most of the standards set by the importing countries in order to maximise their welfare are inconsistent with either

* Doctoral Candidate, Department of Economics, Syracuse University, Syracuse, USA. This article is the result of two projects, executed during my tenure as Project Lead in TERI, New Delhi, India. First of all, I would like to thank my TERI colleagues for their support and encouragement and all those government officials and the SME representatives whom I met during the primary survey, for their critical input, which helped in a profound way to shape this article. Next, I would like to thank the British High Commission, New Delhi, India and the Ministry of Commerce, Government of India for their financial support. I would also like to thank the two anonymous referees for their invaluable comments and suggestions, which helped me in improving the quality of the article by a significant standard, and also to Dr Debashis Chakraborty for his useful comments on the earlier version of the draft. All errors remain my own.

the principles of the WTO or with the equivalence clause of SPS; (iii) there is an impending need to upgrade the domestic situation in terms of infrastructure and enforcement of domestic legislation; and (iv) international organisations such as the Codex Alimentarius Commission should be more active against this backdrop in order to set appropriate international standards, in consultation with both the exporting and the importing countries, and also to establish testing facilities, and provide information and advice in connection with sensitive products.

Introduction

The basic objective in establishing the World Trade Organization (WTO) in 1995 was to raise standards of living and incomes, ensuring full employment, expanding production and trade and optimal use of the world's resources.¹ The emergence of the WTO as the strongest multilateral trade body was one of the most crucial developments of the 1990s in that it (i) paved the way for free and fair trade by reducing tariffs and quantitative restrictions between nations; (ii) led to several agreements that sought to achieve a common objective of non-discriminatory trading at various sectoral and industry levels; and (iii) introduced the fundamental issue of the relationship between trade measures and environmental objectives.

The third objective, which deals with the issue of trade and environment, gained a greater importance, particularly in the context of the WTO. These trade measures for environmental purposes gave birth to a new type of administered protection in the context of environment-related trade measures, particularly known as Non-Tariff Barriers (NTBs) – quantitative restrictions, tariff quota, voluntary export restraints, orderly marketing arrangements, export subsidy, export credit subsidy, government procurement, import licensing, antidumping/countervailing duties, technical barriers to trade, to name a few.² Though the measures relating to technical standards and regulations in themselves may not amount to a trade barrier, their use as NTBs by the importing countries has become a major concern. NTBs taking the form of environmental and health-related requirements with attempts to bring in labour standards, pose significant constraints to trade in the case of developing countries, as the available evidence suggests.³ An added apprehension pertains to the national technical regulations and standards pertaining to the environment. Several debates in recent years have centred on understanding and drawing out parallels between the two broad areas of trade and environment.

1 Debashis Chakraborty, *Non-Tariff Barrier on Indian Agricultural Exports* (2001).

2 Rajesh Mehta, 'Non-Tariff Barriers Affecting India's Exports' in *Off the Starting Block to Hong Kong: Concerns and Negotiating Options on Agriculture and NAMA for India* (New Delhi, CENTAD, 2005).

The WTO has disseminated a document titled 'Understanding the WTO' which addresses these issues.⁴ The section on standards and safety states:

Article 2 of the General Agreement on Tariffs and Trade (GATT) allows governments to act on trade in order to protect human, animal or plant life or health, provided they do not discriminate or use this as disguised protectionism. In addition, there are two specific WTO agreements dealing with food safety and animal and plant health and safety and with product standards.

More specifically, Article XX of GATT⁵ is a general exceptions clause and states:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures

Article XX(b) mentions measures 'necessary to protect human, animal or plant life or health', the purview of Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT). Article XX(g) mentions 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption' and this is linked to the environment.

The trade regime ushered in by the Uruguay Round trade negotiations (1986-94) has opened up several inward-looking economies that have, in the process of deregulation and liberalisation, experienced an upsurge in growth and

3 See V Bharuchia, 'Impact of Environmental Standards and Regulations Set in Foreign Markets on Indian Exports' in Veena Jha, G Hewison, & M Undenhill (eds), *Trade, Environment and Sustainable Development: A South Asian Perspective* (2000) at 123-142; Veena Jha, 'Strengthening Developing Countries' Capacities to Respond to Health, Sanitary and Environment Requirements' *A Scoping paper for South Asia, New Delhi: United Nations Conference on Trade and Development* (2001); Charles Kittu, 'Issues on SPS and Environmental Standards for India', *Paper presented at the UNCTAD/World Bank Conference* (New Delhi, 2001); S K Mohanty & T R Manoharan, 'Analysis of Environment Related Non-Tariff Measures in the European Union Implications for South Asian Exports' *RIS Discussion Paper No. 38* (New Delhi, RIS, 2002); Sachin Chaturvedi & Gunjan Nagpal, 'WTO and Product Related Environmental Standards: Emerging Issues and Policy Options Before India' *RIS Discussion Paper No. 36* (New Delhi, RIS, 2002); Rajesh Mehta, 'Non-Tariff Barriers Affecting India's Exports' *RIS Discussion Paper No. 97* (New Delhi, RIS, 2005); Pavel Chakraborty, 'Environmental Requirements and Market Access Concerns for India, *Paper presented at the 4th IUCN Environmental Law Colloquium* (Pace Law School, White Plains, New York 2006) <www.law.pace.edu/environment/2006-colloquium-papers-index.html>.

4 WTO, *Understanding the WTO* (3rd ed, 2004), previously published as *Trading into the Future*.

5 *General Agreement on Tariffs and Trade* (Marakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1869 UNTS 190 (entered into force 1 January 1995) ('GATT').

development.⁶ Trade has been a significant propeller of growth for these economies, providing global market access for their goods and services. However, the imposition of environmental requirements as disguised trade barriers has slightly offset the global market access opportunities, opened up due to liberalisation for developing countries and thereby hampered the growth process and efforts to eradicate poverty. The debate concerning the impact of trade liberalisation has intensified with a growing literature on the conflicts between trade and environmental concerns. The issues of environmental regulation and international competitiveness revolve around the question of harmonisation of standards and it is generally observed that competitive deregulation could lead to downward harmonisation of environmental standards.⁷ Also, the distinction between environmental standards and health quality standards is gradually becoming blurred.⁸

For India and other developing countries, the concerns with regard to such environmental requirements are fourfold.⁹ The first is that imposition of trade sanctions or environmental requirements will not serve as the most efficient device to protect the environment. Efforts for environmental protection should be undertaken as part of national legislation, based on the developmental concerns of the nation. Second, environmental regulations could be used as NTBs to trade, thereby limiting market access for their export products. Third, the technical and financial capacity to conform with such environmental regulations is limited, especially in small and medium-sized enterprises (SMEs) in developing countries. Finally, in case of local environmental effects, using the same standard across countries, or even different regions within the country, may be wholly inappropriate. Such standards would be more effective and efficient if they took cognisance of specific environment and development conditions.

Among the concerns listed above, the most important area involves market access barriers created on account of non-product standards including environmental and health measures. This issue assumes importance in the light of the fact that the past decade has seen a global proliferation of environment and health related standards, along with a rise in the trade of environmentally sensitive goods.¹⁰

Another important area of concern regarding market access barriers has been created by non-product-related production processes and methods, which have few trans-boundary effects.¹¹ The WTO clearly rules out such camouflaged trade

6 TERI, 'Environmental Standards and Market Access Concerns', *Project Report Submitted to the Ministry of Commerce, Government of India, TERI Report, 2001EM63* (2003).

7 Jagdish Bhagwati & Robert Hudec (eds), *Fair Trade and Harmonization-Prerequisites for Free Trade* (1996).

8 Jha, above n3.

9 TERI, above n5.

10 Chaturvedi & Nagpal, above n3.

barriers, with explicit mention of environment concerns in the Doha Ministerial Declaration,¹² which casts doubts on the stance of the WTO. The Committee on Trade and Environment (CTE) of the WTO has sought to address these very criteria and linkages. Market access is one of the areas identified by the Committee, and several countries have contributed to the discussion and the process of identification of its core importance.¹³ In this regard, the CTE has been instructed to pay particular attention to the effects of environmental measures on market access and trade. Since the inception of the WTO, some 2,300 notifications have been received, almost 11 per cent of them related to the environment.¹⁴

This article addresses the key issues relating to market access, in particular the impact of environmental measures on access, by focusing on marine and agricultural products in India. It is structured as follows: section 2 outlines the pattern of treatment of the environment in the WTO; section 3 highlights relevant environmental agreements and their implications for market access; section 4 describes experiences with specific NTBs that have given rise to market access concerns in the individual export sectors of India; and section 5 recapitulates India's submission on Item 6 of the CTE agenda relating to market access issues, and suggests a way to proceed.

Treatment of the Environment by the WTO¹⁵

The environment is a horizontal issue, cutting across different sectors and disciplines within the multilateral trading system of the WTO. The issue of the environment is one of the most noteworthy agenda items in the WTO negotiations, coming as it does within the principle of supporting sustainable development along with free trade as set out in the Preamble of the WTO.¹⁶ Today, the WTO has become the focal point for resolving the trade-environment interface, especially with regard to trade provisions within Multilateral Environment Agreements (MEAs), not least

11 TERI, 'An Analysis of the Environmental Goods and Services - A Case Study of India', *Project Report Submitted to Ministry of Commerce, Govt. of India, TERI Report, 2003EM63* (2005).

12 *Doha Ministerial Declaration*, WT/MIN(01)/DEC/1 (2001)

13 WTO, *Agenda of the WTO Committee on Trade and Environment* <http://www.wto.org/english/tratop_e/envir_e/cte00_e.htm>.

14 Hakan Nordstrom & Scott Vaughan, 'Trade and Environment' *WTO Special Studies 4* (Geneva, World Trade Organization 1999).

15 This section draws on information contained in *Early Years: Emerging Environment Debate in the GATT/WTO* <<http://www.wto.org>>.

16 *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1869 UNTS 190, Preamble (entered into force 1 January 1995) ('*Marrakesh Agreement*').

because it has ‘an integrated adjudication mechanism backed by trade sanctions as the ultimate enforcement tool’.¹⁷

The only reference to environmental conservation in GATT 1947¹⁸ is in paragraphs (b) and (g) of Article XX (General Exceptions), where departure from free trade could be made by a country provided the trade restriction was applied in a non-discriminatory manner against a product harmful to health (human, animal or plant) or exhaustible natural resources. The issue of the environment began to be discussed systematically in the multilateral trading system much later in 1971. A Group on Environmental Measures and International Trade (EMIT) was established in November 1971, based on suggestions by some of the GATT parties. Though it was open for participation for all the GATT members, no such meeting was held until 1991 when the participants sought to contribute to another international conference on environment scheduled in 1992, the United Nations Conference on Environment and Development (UNCED). While the EMIT may have been effectively defunct, the environment did feature in the Tokyo Round of trade negotiations (1973-1979), where the participants took up the question of the degree to which environmental measures (in the form of technical regulations and standards) could form obstacles to trade. At the 1982 GATT ministerial meeting, the members took up the issue of export of domestically prohibited products, following the concern of several developing countries on the grounds of environmental hazards, health or safety reasons. Meanwhile, in 1987 a report from the World Commission on Environment and Development, *Our Common Future*, introduced the term ‘sustainable development’ and recognised that international trade could help in the process of development to alleviate poverty and environmental degradation.¹⁹

While the Uruguay Round was still in progress, a major environmental conference took place – the 1992 UNCED at Rio de Janeiro. During the 1990 ministerial meeting in Brussels, the countries from the European Free Trade Area proposed a formal statement on trade and environment, with priority attention given to inter-linkages between environmental policy and a multilateral trading system and also to re-convene the EMIT Group to examine three issues including: (i) trade provisions contained in existing MEAs vis-à-vis the GATT principles and provisions, (ii) multilateral transparency of national environment likely to have trade effects, and (iii) trade effects of new packaging and labelling requirements to protect

17 Nordstrom & Vaughan, above n12.

18 *General Agreement on Tariffs and Trade*, opened for signature 30 October 1947, 55 UNTS 187 (in force provisionally under the Protocol of Application 55 UNTS 308).

19 World Commission on Environment and Development, *Our Common Future* (1987). This report is better known as the Brundtland Report.

the environment. The dialogue on trade and environment initiated by EMIT was taken up more formally in 1994 by the Sub-Committee on Trade and Environment (SCTE) of the WTO preparatory committee, with the GATT Study on Trade and Environment²⁰ identifying 17 MEAs containing trade measures and the WTO SCTE identifying another such one.²¹ It is also noteworthy that at the UNCED Rio Summit, states adopted an action program to promote sustainable development, which established a link between environmental protection and economic development at large.²² Thereafter environment issues were linked to trade in the new constitution of the multilateral trading system signed in 1994, with the term 'sustainable development' explicitly incorporated in the preamble.²³

The further evolution of debates on the environment and international trade, from Marrakesh in 1994 to Doha in 2001, exhibits a shift in emphasis from macro concerns about sustainable development to concerns about reform and trade liberalisation for economic growth and the alleviation of poverty. The 1994 Marrakesh Agreement²⁴ marked the signing of the final act in establishing the WTO in January 1995. That same year, comprehensive work on trade and the environment began with the establishment of the CTE, following largely from the Uruguay Round agreements. With respect to developing countries, the CTE focused on the implementation of trade provisions, on guidelines for technical co-operation, on freer participation of developing countries in the trading system, and so forth.

The decisions adopted by the ministers at Marrakesh on April 14, 1994, alluded to the WTO's undertaking trade liberalisation by reducing trade barriers, with the intention of improving relations in the fields of trade and economic endeavour. This would, it was hoped, raise standards of living, ensure full employment, and lead to a high volume of real income and effective demand, through an expansion of production and trade in goods and services. In terms of forging links with environmental issues, the Marrakesh Declaration²⁵ sought to be all-encompassing. Trade liberalisation was to be the main objective, along with the protection and preservation of the environment, using mechanisms consistent with the needs and concerns of individual member countries. The identification of relationships between trade measures and environmental measures for sustainable development, the need for positive interaction between trade and environmental measures,

20 GATT, *Trade and Environment* (1992) GATT Secretariat (GATT/1529).

21 WTO, *Trade Measures for Environmental Purposes Taken Pursuant to Multilateral Environmental Agreements: Recent Developments* (1994) Note by the Secretariat, PC/SCTE/W/3.

22 *Agenda 21*, UN Doc. A/CONF.151/26/Rev.1 (1992).

23 *Marrakesh Agreement*, above n16.

24 *Ibid.*

25 *Marrakesh Declaration*, 15 April 1994, <http://www.wto.org/english/docs_e/legal_e/marrakesh_decl_e.pdf>

monitoring of trade measures used for environmental purposes, and aspects of environmental measures with significant trade all found mention in the Declaration.

The CTE took over from the earlier EMIT group, with a broad mandate encompassing the establishment of trade rules, domestic environmental regulations, making MEAs, the protection of intellectual property rights and awareness of trade actions. With respect to developing countries, the CTE focused on initiatives such as implementing trade provisions and drafting guidelines for the technical co-operation and freer participation of developing countries in the trading system.

The Ministerial Declaration adopted on December 13, 1996, in Singapore, did neither cover, nor make explicit mention of, the environment; however, it did accept the substance of the CTE's report to the General Council (GC) and thus broadened and deepened the analysis on trade and environment.²⁶ The same was the case with the Geneva Ministerial Declaration (May 20, 1998), where market access issues were highlighted while no mention was made of the environment.²⁷ The Seattle Draft of December 3, 1999, touched on the interface between trade and environment when it emphasised the need to recognise the correlation among trade liberalisation, economic development and environmental protection.²⁸ The emphasis on the mutual supportiveness of trade and environment, which had been addressed in the Marrakesh Declaration and contained in the CTE Report of 1996,²⁹ was strengthened at this Seattle ministerial conference. This, in fact, marked the beginning of a serious consideration of the links between trade and the environment.

In 2001, the Doha Ministerial Declaration³⁰ (DMD) made the most explicit reference to the environment and emphasised negotiations involving linkages between trade and the environment in the context of the WTO. In paragraphs 31 and 32, the DMD provides a specific mandate relating to trade and the environment. It calls for an examination of the relationship between existing WTO rules and the specific trade obligations in MEAs, as applicable to parties in the MEAs. In doing so, however, it makes little reference to compliance with environmental measures, pursuant to the MEAs on market access.³¹

26 *Singapore Ministerial Declaration*, WT/MIN(96)/DEC (1996).

27 *Geneva Ministerial Declaration*, WT/MIN(98)/DEC (1998).

28 WTO Briefing Note, Summary, December 1, 2001 Meetings, <http://www.wto.org/english/thewto_e/minist_e/min99_e/english/about_e/resum02_e.htm>.

29 WTO, *Report of the Committee on Trade and Environment* WT/CTE/1 (1996).

30 *Doha Ministerial Declaration*, above n 12.

31 Analysis of the outcome of World Trade Organization talks in Doha, Qatar, <<http://www.foe.org/international/qatar.html>>.

Market access has been a core concept within the WTO since its very inception.³² The DMD clearly sought to undertake an in-depth examination of ‘the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them and those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development’.³³ Market access issues gained substantive attention in the DMD, but it only reinforced the importance given to the protection of environment in the trade agenda. The DMD emphasised that the inclusion of environmental issues should by no means dilute the main agenda of the WTO. It is also noteworthy that the Doha agenda focused only on a few trade and environment issues, and avoided the more controversial ones, such as the process and production methods (PPMs) debate.

The onus lies with developing countries and the WTO, as far as possible, on the stance that could be taken on aspects of trade and environment, so that their economies do not suffer on account of reduced/constrained market access. However, the developing countries as a whole also tend to be intimidated by the trade-environment proposals, fearing that new environmentally-directed trade restrictions will tend to discriminate disproportionately against their exports, and potentially lead to other new bases for trade barriers.³⁴ The dialogue within the CTE of the Doha mandate did not make significant progress and was due to be discussed at the WTO ministerial conference in Cancun in 2003. But, it was entirely sidelined as the negotiators continued to debate sensitive issues such as agriculture and investment. Given the failure of the Cancun Round to reach any sort of agreement, there was a tendency to drop the whole area of trade and environment from the Doha Round, as the negotiators sought to reach an agreement on a smaller range of more ‘traditional’ trade topics.

Environmental issues were largely absent from negotiations in Hong Kong in 2005, with the exception of environmental goods and services (EGS). Eliminating barriers to trade in EGS is a key to improving environmental protection. The Ministerial Declaration issued after the Hong Kong meeting reaffirmed paragraph 31 of the Doha mandate ‘aimed at enhancing the mutual supportiveness of trade and environment’ and called upon members to intensify negotiations on all matters listed in the paragraph.³⁵ It recognised the progress that had been made in the CTE

32 TERI, above n10.

33 *Doha Ministerial Declaration*, above n12.

34 Duncan Brack & Thomas Branczik, ‘Trade and Environment in the WTO: After Cancun’ *Briefing Paper No. 9, Sustainable Development Programme* (London, The Royal Institute of International Affairs, 2004).

35 CRS, ‘The World Trade Organization: The Hong Kong Ministerial’, *CRS Report for the Congress* (Congressional Research Service, 2006).

on the relationship of WTO rules to MEA trade obligations and the work undertaken under paragraph 31(iii) through numerous submissions by members and discussions in special sessions of the CTE and in technical discussions, and instructed members to complete work expeditiously under that paragraph.³⁶ Other environment-related issues contained in paragraph 31 of the Doha mandate were left for negotiation at a later date.

The WTO ministerial meeting held in Geneva in 2008 aimed at reaching an agreement on agriculture and industrial products (non-agricultural market access, or NAMA) and signalling improvements in services. This was the largest WTO ministerial meeting since 2005. But the ministerial talks broke down completely on the issue relating to the agricultural special safeguard mechanism in some developing countries. There were no new developments on the trade and environment issue at this meeting.

Environmental Provisions and Market Access

The Marrakesh Agreement, which established the WTO system, took cognisance of sustainable development in its preamble, which entails that the multilateral trading system must recognise that:

relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner with their respective needs and concerns at different levels of economic development.³⁷

The Marrakesh Agreement also stipulated the establishment of the CTE under the WTO.³⁸

³⁶ GAO, 'WTO: Limited Progress at Hong Kong Ministerial Clouds Prospects for Doha Agreement' *Report to the Chairman, Committee on Ways and Means, House of Representatives* (United States Government Accountability Office, 2006, Washington DC).

³⁷ *Marrakesh Agreement*, above n16.

³⁸ The CTE is governed by the principle that the WTO is not an environmental agency but principally, a trade body, i.e., its role is limited to only those environmental policies which have implications for trade and that in case of dispute between the environment and trade instruments, the principles of the WTO system must be upheld; *Marrakesh Agreement*, above n16.

The deliberations on trade and environment within the GATT/WTO, with specific reference to safeguarding of market access, pertain to GATT Articles I (Most Favoured Nation Treatment), III (National Treatment) and XX (General Exception Clause).³⁹ In addition, there are specific WTO Agreements that contain provisions that have direct and indirect bearing on environment and sustainable development concerns.

GATT Article I codifies the Most-Favoured Nation (MFN) principle that:

any advantage, favour, privilege or immunity granted by an contracting party to any other country shall be accorded immediately and unconditionally to the 'like product' originating in or destined for the territories of all other contracting parties.

National treatment on internal taxation and between domestic and imported products underlies Article III, which aids in avoiding protection to domestic import competing sectors. As adopted by the WTO, both these provisions entail non-discrimination between like-products, even if the product is manufactured using differing PPMs, so long as a PPM does not have any bearing on the product itself. Increasingly, however, some interest groups have been demanding discrimination between products based on PPMs, and for a clause permitting this in a WTO agreement. This has been a cause for concern for developing countries at large, who fear that such a clause may prove to be a potent NTB.

Importantly, GATT Article XX states that 'nothing in this Agreement shall be construed to prevent the adoption or enforcement by any Member of measures: (1) necessary to protect human, animal or plant life or health', and (2) measures 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption', thus making a provision for such cases where human health or the environment could be affected. The only condition prescribed is that such measures should not lead to arbitrary or unjustifiable discrimination between countries where similar conditions prevail and should not cause disguised restriction on international trade. By means of Article XX, the GATT has incorporated a segment on general exceptions to trade, which provides a possible route for using the environment to restrict trade. Some other agreements on the WTO framework, which contain provision on the erosion of market access and environment, are discussed below.

The 1994 Uruguay Round Agreement on Agriculture (AoA) made the very first attempt to impose a degree of discipline on government support to agriculture.⁴⁰ As

³⁹ GATT, above n5.

⁴⁰ Agreement on Agriculture, (Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1869 UNTS 190, annex 1A (entered into force 1 January 1995)).

a result, the tariffs resulting from the Uruguay Round negotiations process and also the pre-existing agricultural tariffs were bound and were subject to reductions as specified in the members' schedules.⁴¹ Evidence bears out the conclusion that due to the effect of AoA, '[c]omparing the 1986-88 period with 1996, price support as a share of total assistance to agriculture in industrial countries decreased from 79 to 60 per cent, whilst the share of direct payments increased from 18 to 23 per cent'.⁴² Furthermore, other announcements in the AoA enlisted support in aid of conservation of agricultural lands through prevention of soil erosion, acidification and towards encouragement of use of organic fertilisers and also specific assistance for wheat, feed, grains, rice, cotton etc provided these are in conformity with the conservation goals⁴³. The extent to which these erode market access opportunities for developing and least developed countries is a matter of concern and requires a case-by-case analysis.

The Agreement on Subsidies and Countervailing Measures (SCM) was also concluded under the tutelage of the WTO.⁴⁴ The SCM Agreement also contains certain provisions on the environment. Article 8I.2 (c) of the Agreement recognises that subsidies to promote adaptation of existing facilities to new environmental requirements imposed by law and/or regulation that result in greater constraints and financial burden on firms (provided the assistance meets certain conditions) would be considered as non-actionable subsidies. Under the non-actionable category of subsidies, the SCM Agreement allows up to 20 per cent subsidies to implement new environmental laws or measures. Whilst the criteria that these subsidies have to satisfy are rather stringent, the likely impacts on market access of such provisions remain elusive for developing countries like India. The Agreement however, lapsed after a five-year period on January 1, 2000, since no discussion took place on this issue.

There are also sector-specific agreements, as in the case of the capital or the investment sector, which are now governed by the Agreement on Trade-Related Investment Measures (TRIMS),⁴⁵ and also the agreement on the services sector, namely the General Agreement on Trade-in-Services (GATS). TRIMS addresses the investment measures pertaining to goods attached to investment decision-making,

41 WTO, *Environmental Benefits of Removing Trade Restrictions and Distortions* (1997) Note by Secretariat, Committee of Trade and the Environment, WT/CTE/W/67.

42 WTO, *The Environmental Effects of Reforming Agricultural Policies* (1997) A Preliminary Report Directorate for Food, Agriculture and Fisheries and Environment Directorate, WT/CTE/W/67 at 8.

43 Id at 9.

44 Subsidies and Countervailing Measures Agreement (Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1869 UNTS 190, annex 1A (entered into force 1 January 1995)).

45 Trade Related Investment Measures Agreement (Marrakesh Agreement, annex 1A, above n44.

which faced rough weather from developing countries like India, although, there is a great need for investments in terms of technology-transfers, know-how skill transfers, etc. In the specific context of the environment, India has expressed apprehensiveness regarding the environmental effects. This is so because, to a large extent, the Agreement has placed the burden of environmental standard enforcement on the host country and does not include that as an important provision under the agreement itself. One of the prime suggestions coming from India is the inclusion of 'common minimum standards' of environmental protection from the host countries. In light of the new round of negotiation within the GATS, in respect of the environment, the issues for developing countries are two-fold: first, developing countries have to identify those EGS and, secondly, the linkages to 'environmentally-friendly goods and services'.⁴⁶

The negotiation on Agreement on SPS Measures⁴⁷ took place in the Uruguay Round whilst provisions of the Agreement on Technical Barriers to Trade (TBT)⁴⁸ - earlier evolved in the GATT in 1979 – were revised in the same Round. These two agreements have been found to be effective in curbing trade in goods which have caused environmental damage, thus proving that trade facilitating agreements under the WTO make enough room for the protection of environment and that there is little need for unilateral environmental measures to be taken up by the importing countries.

The TBT Agreement gives each country the right to set product and industrial regulation requirements (technical regulations)⁴⁹ on the exporting countries, for the protection of public health or safety, animal or plant life, health or environment, national security requirements, and for the prevention of deceptive practices. These technical standards are subject to the requirements of the MFN and national treatments and should be non-discriminatory, non-arbitrary and least trade-restrictive. In cases, where international standards exist, members shall use them as a basis of their technical regulation unless such international standards are ineffective to fulfil the legitimate objective, due to some reasons such as climatic or geographical factors or technological problems.

The SPS Agreement, subject to the requirements such as risk assessment, non-discrimination and transparency, permits governments to set and maintain desirable

46 General Agreement on Trade in Services (Marrakesh Agreement, annex 1B, above n44.

47 Sanitary and Phytosanitary Agreement, annex 1A, above n44.

48 Technical Barriers to Trade Agreement, annex 1A, above n44.

49 These include measures for pollution abatement, waste management, energy conservation; standards and labelling (including eco-labels); handling requirements; economic instruments and regulations; measures for the preservation of natural resources, and measures taken for the implementation of the multilateral environmental agreements.

levels of health and hygiene standards to ensure that food is free from risks arising out of additives, contaminants, toxins or disease-causing organisms in order to prevent the spread of plant, animal or other disease-causing organisms and to prevent or control pests. The Agreement encourages members to adapt their SPS measures to the areas that supply their imports. Like the TBT Agreement, governments are expected to harmonise their SPS requirements, i.e. to base them on international standards set by international organisations, such as the Food and Agricultural Organisation (FAO)/ World Health Organisation (WHO) Codex Alimentarius Commission, the International Office of Epizootics and the International Plant Protection Convention. Governments are permitted to set more stringent national standards in case the relevant international norms do not suit their needs. Such SPS measures must be based on scientific evidence recognising the right of governments to take precautionary provisional measures while seeking information. As far as international standards (which found mention in TBT and SPS Agreement) are concerned, developing countries argue that environmental standards differ from country to country and hence the solution lies in mutual recognition of only product-related standards rather than harmonisation of environmental standards. Although the Agreements do not compulsorily mandate the use of international standards, in practice these standards are becoming a *de facto* requirement in international trade.

These existing WTO provisions and agreements allow sufficient flexibility to countries to raise their domestic environmental standards, and impose certain trade restrictions, in cases where their own environment is adversely affected, provided they do not lead to discrimination and trade barriers and thereby harm the market access provisions for the exporting countries. However this is not the case for process-related requirements in the exporting countries unless there is an environmentally harmful effect within the product itself that is harmful to the importing country. However, some of the process-related requirements and the use of unilateral trade measures are being legitimised through the dispute settlement body of the WTO and the debate on 'mainstreaming' the environment into the WTO has been transformed.⁵⁰ The debate on trade and environment in the WTO context,⁵¹ or mainstreaming the environment into the WTO, is multi-faceted and is currently dominated by some major issues, such as market access, competitiveness, and

50 Aparna Sawhney, 'WTO-Related Matters in Trade and Environment: Relationship Between WTO Rules and MEAs' *ICRIER Working Paper No 133* (New Delhi, ICRIER, 2004).

51 These issues are part of a larger and more enduring debate on the impact of trade liberalization and environment. The liberal economists believe that environmental objectives and trade goals are complementary and that the environment is one of the many factors of production which affects a country's comparative advantage.

legitimacy of multilateral action for achieving environmental objectives.⁵² Among these, market access is regarded as the main concern for developing countries. The unilateral trade measures for environmental purposes can be viewed as another form of conditionality and as a means to raise protective trade barriers and restrict market access. According to the concerns raised by developing countries, self-regulating action for achieving environmental objectives contains an inherent danger of protectionism, as the environment can be a convenient justification in the hands of domestic industry to impose import restrictions. Furthermore, developing countries also fear that environmental pretexts may be used to impose certain environmental standards, which may in effect amount to the loss of exporting values.⁵³ However, these legitimising unilateral actions for environmental purposes in international trade can be detrimental to the market access provision for developing countries and may also act as NTBs.⁵⁴

Export Sectors and Unilateral Environmental Measures

Unilateral environmental measures,⁵⁵ coined ‘environmental standards’, are the responses and outcomes to society’s increasing consciousness against the inappropriate usage of resources and the resulting adverse environmental impact. This environmental impact is often manifested as adverse impact on animal-plant life, and human health. The term ‘standard’ commonly encompasses a well-defined protocol based on a laboratory test procedure which ascertains specific criteria that have a direct bearing on the quality of the product. Standards and regulations aim at minimizing risks, providing information to consumers about the characteristics of the products and to the producers about the market needs and expectations, facilitating market transactions, raising efficiency, contributing to economies of scale, serving as a benchmark for technological capability and network compatibility,

52 Other issues of concern are the relationship between the multilateral trading system and environmental policies with trade impacts (such as charges and taxes for environmental purposes; and other requirements relating to products, including standards and technical regulations, packaging, labelling and recycling); transparency of trade measures used for environmental purposes and environmental measures with significant trade effects; the issue of exports of domestically prohibited goods; relationship between TRIPS Agreement and trade in services.

53 WTO, *The Study of the Effects of Environmental Measures on Market Access: Communication from India* (2000) Committee of Trade and the Environment WT/CTE/W/177.

54 UNCTAD, *Asian and Pacific Developing Economies and the First WTO Ministerial Conference: Issues of Concern* (New York, United Nations, 1996).

55 Unilateral measures are those measures that are taken atomistically by a country in order to maximise its own domestic gains or welfare.

and enhancing technology diffusion.⁵⁶ Environment and health-related standards are typically applicable across sectors and cover a broad spectrum of goods and services. In the past, many importing countries have introduced Environment-related Non-Tariff Barriers (ETBs) to protect their environment as well as the health and safety of plants, animals, and humans and also to protect their domestic markets or welfare. Measures such as pesticide maximum residue levels permitted in foodstuffs, emission standards for machines, and packaging requirements impede the trade of developing countries, either implicitly or explicitly.

Given the nature and depth of the existing regulatory structures in developed countries, developing countries allege that environmental measures often impede trade and market access. The SPS measures potentially act as significant barriers to trade in agricultural and food products since in many instances they are incompatible with prevailing systems of production and marketing in developing countries. Furthermore, developing countries often lack appropriate scientific and technical expertise to deal with such standards and as a result lose export opportunities. Also, the multiplicity of standards in developed countries further compounds the problems being faced by developing country exporters.

As the liberalization of tariff and quantitative restrictions on trade in agricultural and food products has progressed, such stringent technical standards as food safety regulations, labelling regulations and quality and composition standards have proliferated. For instance, the regulation of aflatoxins in food products has gained considerable attention in recent years. In 1997, the European Commission (EC) proposed a harmonization of maximum acceptable level of aflatoxins in certain foodstuffs. The standard ranged from 4 ppb⁵⁷ in cereals, edible nuts, and dried fruit, to 10 ppb for nuts that are subject to further processing. The EC proposal led to concerns among food exporters about the new and more restrictive standard's effect on trade patterns. Countries such as Bolivia, Brazil, Peru, India, Argentina, Canada, Mexico, Uruguay, Australia and Pakistan requested detailed risk assessments used in designing the standard, which compelled the EC to relax the proposed aflatoxin standard.⁵⁸ However, the aflatoxin standard suggested by the Codex Alimentarius is significantly more relaxed than the EC standard. These varied and high levels of standards increase the cost of meeting these standards prohibitively. In a study conducted by the World Bank, it was predicted that the implementation of a new aflatoxin standard in the European Union (EU) would have a negative effect on African exports on cereals, dried fruits and nuts and the econometric analysis

56 TERI, above n5.

57 Parts per billion.

58 Tsunehiro Otsuki, John S Wilson & Mirvat Sewadeh, 'Saving Two in a Billion: Quantifying the Trade Effect of European Food Safety Standards on African Exports' (2001) 26 (5) *Food Policy* 495 at 495-514.

showed that the EU standard, which would reduce health risks by approximately 1.4 deaths per billion a year, would decrease African exports of these products to the EU by 64 per cent or US\$670 million.⁵⁹

Compliance with standards imposed by importing countries often requires large investment and recurrent costs for exporters, resulting in high production costs and reduced profitability. For instance, the costs of upgrading sanitary conditions in the Bangladesh frozen shrimp industry to comply with EU and United States hygiene requirements was estimated to be US\$17.6 million in 1997/98⁶⁰ and the total industry cost to maintain HACCP (Hazard Analysis Critical Control Point) was \$2.2 million per annum. It has also been contended that standards are kept strategically high to check exports, no matter how 'unlikely and inconsequential' the risk is.⁶¹ The European standards are more stringent than HACCP methods. In the case of marine products, EU regulations concerning implementation of food safety systems, additive requirements, and other process controls are of very high order. As a result, many of the Indian companies have been required to upgrade their facilities, amounting to a huge expenditure with heavy investments, with only 90 out of 404 plants in India approved for fishery exports to the EU. The Bharuchia study⁶² in 2000 concluded that compliance with external eco-standards often necessitated the import of inputs and technology, which were likely to raise the cost of production and price of output. Since competitiveness of Indian exports is price based, such a rise in costs could hamper India's competitiveness. The competitiveness effects of increased environmental compliance costs largely depend on the share of corresponding cost categories in total production costs. Thus low value-added products may be relatively vulnerable.⁶³ For example, packaging requirements may have more significant effects on certain fruits and vegetables than on high-value added products.

While developed countries vouch to meet these standards, there has been an increasing concern by developing countries about the impact of these technical measures. For instance, in the food sector, what may be described as quality standard for food may also fall into the category of environmental standards.⁶⁴ A RIS

59 Tsunehiro Otsukri, John S Wilson & Mirvat Sewadeh, 'A Race to the Top? A Case Study of Food Safety Standards and African Exports', *Policy Research Working Paper Series, No 2563* (Washington DC, World Bank, 1998).

60 James C Cato & Carlos A Lima Dos Santos, 'European Union 1997 Seafood Safety Ban: The Economic Impact on Bangladesh Shrimp Processing' (1998) 13(3) *Marine Resource Economics* at 215-227.

61 Kajli Bakshi, 'SPS Agreement Under the WTO: Indian experience' in J K Mittal & K D Raju (eds), *WTO and India: A Critical Study of its First Decade* (2005).

62 Bharuchia, above n3.

63 Veena Jha & Ulrich Hoffman, *Achieving Objectives of Multilateral Environment Agreements: A Package of Trade Measures and Positive Measures 2000*.

64 Jha, above n3.

(Research and Information System for the Non-Aligned and other Developing Countries) survey shows that production costs would go up by 35 to 40 per cent due to compliance with these types of standards.⁶⁵ The consumer movement across the world, especially in the developed countries has become very strong, which has led to the growth of consciousness for quality products. This has compelled national governments to take adequate precautions in terms of product specifications for both the domestic producers as well as for the exporters to these economies. At the global level, 185 products have been identified which face environment related trade barriers at least in one importing country.⁶⁶ World imports in these products amounted to US\$286 billion in 2001, of which 49 percent of the total value was affected by ETBs.⁶⁷ In the case of India, these were largely agricultural commodities and constituted almost 62 per cent of India's total agricultural exports (26 per cent of which is exported to the United States, 7 per cent to the EU and 5 per cent to Japan).

In another similar case, such as *EC-Bananas*,⁶⁸ the large revenues of the Costa Rican banana industry have come at the expense of one of the world's most biologically diverse rain forests suffered serious setback. The EU installed a quota system for bananas predominantly from Latin America. The Costa Rican banana industry has been hit hard and the delicate balance between business and environmental protection has been affected. The United States Government is now at the forefront of forging negotiations in the trade dispute because United States fruit conglomerates are suffering, whereas the European fruit counterparts are benefiting. The resolution, if any, of the greater international dispute over the world banana trade will inevitably have an effect on the ecological/banana industry relationship in Costa Rica. Not only have the developing countries suffered from the enforcement of environmental standards, but the developed countries have also been affected. For instance, in the late 1980s, the EC and its Member States began banning the sale of hormone-treated meat in response to consumer health fears from the United States and Canada.⁶⁹ Shortly after this, the United States instituted a WTO complaint. It alleged that the importation restrictions on certain meat products violated the WTO SPS Measures Agreement because they neither reflected an international health standard nor were scientifically justified by an EC risk assessment—one of which is necessary for validity under the SPS.⁷⁰ On appeal, the Appellate Body found absence of a risk assessment justifying the EC prohibition and

65 Based on the Primary Survey of Industries conducted by RIS (2001-02).

66 Chakraborty, above n1.

67 Chaturvedi & Nagpal, above n3.

68 EC - Regime for the Implementation, Sale and Distribution of Bananas, WTO Doc WT/DS27/R(1997).

69 Gerald C Nelson et al, *The Economics and Politics of Genetically Modified Organisms in Agriculture: Implications for* WTO 2000 (1999) Annex 5 at 96 <<http://www.aces.uiuc.edu/wf/GMO/GMO.pdf>>.

rendered the EC legislation inconsistent with the WTO mandate. In arbitration, 'the level of nullification or impairment suffered' by the US as a result of the offending measures was found to be \$116.8 million per year.⁷¹

Indian exporters have expressed serious concerns regarding the use of SPS and TBT measures as NBTs. The potential problems that could arise are primarily because of lack of timely and accurate information, simultaneous application of multiple standards and regulations, costs and difficulties of testing and verification procedures, and lack of scientific data for specific thresholds or limit values. Regulations and standards on food may create market access problems on account of lack of transparency and inconsistent application of procedures.⁷² Some of the cases are discussed in brief below:

- A German ban on products containing pentachlorophenol (PCP) resulted in a short-term setback for Indian leather exports in 1989-90. The costs involved in substituting this chemical were exorbitant.⁷³
- The Netherlands, Austria and Germany have adopted national legislation banning the use, import and sale of carcinogenic azo-colorants. At present, there are 24 amines which fall under this ban.⁷⁴
- India's tea exports have also been affected by concerns from importing countries regarding the pesticide residue level in Indian tea.⁷⁵
- Japan had imposed a zero tolerance clause on certain insects and also with regard to the quarantine of flowers. The Quarantine Authority in Japan takes a lot of time for clearance due to the elaborate fumigation process it imposes, which leads to low price realisation for the Indian flowers. This kind of measure acts as NBTs with regard to market access on flowers.⁷⁶
- More stringent limits on DDT residues in tobacco prescribed by Japan of 0.4 ppm⁷⁷ against the international allowable levels of 1-2 ppm that India was complying with, restricted India's exports to Japan.

70 Under SPS, a violation can be founded on the imposition of a measure that is not based on existing international standards or a risk assessment, or that exhibits 'arbitrary or unjustified distinctions in the levels it considers to be appropriate in different situations.' SPS Agreement Art.5

71 Suzanne Bermann, 'EC-Hormones and the Case for an Express WTO Postretaliation Procedure (2007) 107 (131) *Columbia Law Review* at 131-168.

72 Veena Jha, 'Environmental Regulation and the WTO' in Bernard Hoekman, Aaditya Mattoo & Philip English (eds), *Development, Trade and the WTO: A Handbook* (2002) at 472-481.

73 Jha, above n3.

74 TERI, above n5.

75 Jha, above n63.

76 Agriculture and Processed Food Products Export Development Authority (APEDA), <www.apeda.com/scripts/newscentremodule.html>.

77 Parts per million.

- India exports Basmati rice and papads, based on cereals, to the United States. According to United States regulations, each exporter and their products are to be registered to be examined thoroughly for impurities like sand particles, human hair, rodent excreta, etc. The level of presence of these contaminants in the products is very low and poses severe difficulties in complying with these requirements. If any consignment is found to be contaminated with slightly higher levels, the entire consignment is rejected and causes a total loss to the exporter. The procedures followed by USDA are unreasonable and uneconomical, thereby, causing trade restriction.⁷⁸
- Recently, a large number of rejections of consignments from Spain and Italy have taken place due to the presence of 'bacterial inhibitors'. However, bacteriological inhibitors can be any of the permitted antibiotics used in the seafood industry. There is no clear justification for the rejections of these consignments.⁷⁹

Another major issue of concern *vis-à-vis* these measures is that the line distinguishing between environmental, health, and quality standards is diminishing.⁸⁰ For instance, there may be overlap where food quality standards may also fall into the category of environmental standards.⁸¹ The subsequent sections of the article will focus on the experiences of selected major export-oriented industries in India, such as marine and agricultural products in India, with SPS standards developed by other countries. The choice of the products is deliberate. Agriculture is one of the oldest and prominent export commodities of India. It is highly dependent on land and water and hence is affected by environmental regulations. Similarly, the seafood industry, being one of the noteworthy foreign exchange earners of the country, has attracted some legislation on the environment in India, as it did have some harmful effects on the environment.

Marine Products

Fishery, seafood and marine products have traditionally formed a major component of the Gross Domestic Product (GDP) in India. Marine exports including fish, shrimp, squid, lobster, crab, cuttlefish, etc. contribute to over Rs 70, 000 million in Indian exports. The Indian seafood industry has been growing at a rapid pace in terms of production and its exports have also witnessed a dramatic rise. The share of

78 APEDA, above n67.

79 The Export Inspection Council of India, 2003.

80 Jha, above n63.

81 Jha, above n3.

marine product exports in the total exports from India is around 2.1%, with current exports contributing US\$1075.96 million in 2007 (April-Oct). With domestic deregulation in the 1980s, accompanied by the blue revolution and liberalisation, the fisheries sector in India gradually moved from dried fish, dried shrimp, and shark fins to exports of frozen and canned items with products shipped to more sophisticated markets like the United States, France, Australia, Canada, and Japan. Of the total fisheries exports to the world, 84 per cent comes from Asian countries, and of this percentage nearly 30 per cent comes from India, making India a key marine-products exporter, ranking only second to China among Asian countries.⁸²

Due to the impact of the seafood industry on the environment and ecology of an area, this industry comes under the ambit of certain environmental legislation as well. There have been several instances where India's seafood exports have been banned under the guise of environmental concerns. In the last few years, the country has suffered huge losses in terms of erosion of market access. Several consignments of India's marine exports have attracted automatic detention in the United States. More specifically, the US has stipulated that marine products be sampled and tested before gaining entry into the country, which has meant that there are long delivery delays, storage costs and a substantial refusal rate with the risk of import consignments being cancelled, as fish is typically a perishable commodity.

In another instance, the United States asked seafood-exporting countries to install Turtle-Excluder Devices (TEDs) within a six month period whilst the same was installed in the United States over a much longer span of about 10 years.⁸³ The United States restricted the imports of shrimps from countries not using TEDs, justifying it as a measure towards conservation of endangered species of sea turtles. This, however, was opposed by India, Pakistan and Thailand who argued that the embargo on shrimps by the United States was inconsistent with Article XI of GATT prohibiting quantitative restrictions that are not duties, taxes or charges. There was also no difference between shrimps harvested using TEDs or by other means, making them like-products under Article XIII of GATT. The Panel and Appellate Body ruled that the United States must bring the measure in conformity with the obligations under the WTO Agreement.

There are also cases where consignments are being rejected due to the presence of certain micro-organisms such as *Vibrio parahaemolyticus*, where a 'zero' limit has been laid down. *Vibrio parahaemolyticus* inhabits the marine environment of the tropical waters and this organism is likely to be present in raw fish and fishery products. However, it is generally destroyed during chilling/freezing or by heating at

82 World Review of Fisheries and Aquaculture, *Fisheries Resources-Trends in Production, Utilization and Trade* <<http://www.fao.org/docrep/w9900e/w9900e02.htm>>.

83 TERI, above n5.

60 degrees Celsius. In addition, the organism is not considered a potential hazard in raw frozen products that are to be cooked before consumption. Some countries, like Japan, have specified limits for *Vibrio parahaemolyticus* only for ready-to-eat cooked products or seafood for raw consumption and at levels ranging from 1,000 to 10,000 per gram,⁸⁴ which is acceptable. However, there are countries that have specified limits for *Vibrio parahaemolyticus* in products that are to be cooked before consumption and that too, as low as 100 per gram.⁸⁵ Also, the EU has not laid down any specification for this micro-organism. However, many consignments have been rejected at the ports of Italy, Spain and France due to its detection.⁸⁶

In recent times, there have been concerns regarding excessive harvesting, unsustainable aquaculture, and deep-sea fishing policy. Deep-sea fishing is marked with significant costs and overexploitation of resources. Aquaculture farming typically entails high use of manure and fertilisers for achieving higher productivity levels. The flow of excessive levels of these ingredients into near bodies can result in eutrophication,⁸⁷ which is a major threat to the environment. Moreover, the use of fish seed, anabolic steroids, antibiotics, probiotics and other chemicals in aquaculture farms poses a significant threat to agriculture by causing serious land pollution in the vicinity of the farm. Another domestic environmental concern that has grown over time relates to the impact of deep-sea fishing on marine resources. Inviting foreign vessels to exploit deep-sea resources initially was considered advantageous as it provided India with an opportunity to expand and develop existing harbours besides utilizing the resources of the Exclusive Economic Zone (EEZ) without much domestic capital. The benefits of allowing deep-sea fishing are, however, alleged with significant costs and primarily overexploitation of resources.⁸⁸ To protect the marine environment the Government of India issued the Coastal Regulation Zone notification under the *Environment Protection Act 1986*, which regulates various activities in the coastal zone. In addition, the Supreme Court, in 1996,⁸⁹ banned all aquaculture activities except for certain traditional ones practiced in the coastal zones of up to 500 metres in most places along the coast.

84 FDA and EPA Regulations and Guidelines (2001): HACCP.

85 Bureau of Indian Standards, 2003.

86 EIC, 2003.

87 When sediments, sewage or fertilisers are introduced into a waterway, the concentration of available nutrients in that system will increase, resulting in a condition called eutrophication; MPEDA: <<http://www.mpeda.com/news>>.

88 TERI, 'Trade Liberalization - Impacts and Opportunities for the Small and Medium Scale Enterprises in Leather, Textile and Seafood Sectors in India', *Project Report Submitted to the British High Commission, TERI Project Report 2005GL21* (2006).

89 *S Jagannath v Union of India* (1997) AIR, SC 811.

It has been seen that in many cases, SPS measures can easily be used to restrict the import of food products, as in the case of marine products, which are also food products. Most of the unilateral measures imposed by developed countries call for stringent hygiene, sanitary requirements, and compliance to HACCP and other standards set by international standard-setting bodies. Many South Asian and African countries that were predominantly exporting marine products have lost-out on trade and market access as a result of such unilaterally imposed measures and requirements that have been stipulated by countries in the EU and the United States. The Indian marine industry, like many other South-Asian and African countries which have lost-out on market access as a result of failure to comply with unilateral measures, is facing similar threats.

The United States imposition of HACCP, and its demand that exporters draw up and implement a plan for environmental measures within one month,⁹⁰ was clearly unreasonable and an impediment to market access for India. In 1997, the EC banned fishery products from India on grounds that serious deficiencies with regard to infrastructure and hygiene were found without guarantee of the efficiency of controls by competent authorities, potential risk for public health, and possibility of contamination by micro organisms constituting a hazard to human health. Certain standards are not feasible for developing countries. For instance, the requirement of washing floors and ceilings of the processing unit with potable water is not imaginable for a country where drinking water is not easily available. Besides, some norms such as the requirement of conducting 62 tests to check water standards used in processing fish seem irrelevant, unnecessary, and unjustifiable for product safety. Most of the standards are bound to cause substantial increase in the cost of production. As observed in a 2001 study,⁹¹ the compliance costs for meeting EC norms was 15 per cent to 40 per cent of the free-on-board (FOB) value, with the cost being higher for existing units.

Compliance with EC-imposed standards has caused significant increase in production costs. Adhering to EU norms involves heavy investment in infrastructure and equipment besides incurring higher running costs. The Seafood Exporters Association of India claims to have spent US\$25 million on upgrading their facilities to meet the regulations, exclusive of appropriate training of the personnel involved at various stages of production and processing.⁹² Although one view is that part of these costs could be considered as necessary investments, while a range of foreseeable

90 Debashis Chakraborty, 'Non-Tariff Barriers on Indian Primary Exports' *RGICS Working Paper Series No. 27* (New Delhi, RGICS, 2001).

91 P D Kaushik & M Saqib, 'Environmental Requirements and India's Exports: An Impact Analysis' *RGICS Working Paper Series No. 25* (New Delhi, RGICS, 2001).

92 TERI, above n79.

and unforeseeable costs might arise from adoption of different technologies and systems,⁹³ one cannot ignore the fact that it results in unavoidable financial and social costs for the marine sector in India, with the small players being the hardest hit, as most of the units are in the small-scale sector. However, such an investment would be advantageous to India only if it is allowed by some price premium for the cost incurred in complying with such regulations. Otherwise it would only be to the detriment of the Indian marine industry in terms of loss in market access.⁹⁴

Agro-products

Prior to the 1970s, India was a major importer of food and food-related items, namely cereal, pulses, edible oil and dry fruits. However, since then, India has gradually transformed itself into a net exporter of a wide array of agricultural products like spices, coffee, tea, marine products, soya, groundnuts etc. Scientific advancements in research and development, and their ground application in agriculture and allied areas have led to a quantum leap in productivity. Hence, increases in production have boosted the potential of exportable surpluses, and presently India is one of the major exporters of cereals, milk products, meat products, fruits and vegetables, nuts & oil seeds etc along with the United States, Australia and various European countries.

India's export of agriculture and allied products was in the order of US\$5749.52 million during 1999-2000, constituting 14.6 per cent of total exports; which shot up to US\$7608.17 million in 2004 and again to US \$9198.12 million in 2008 (April-Oct). This sector, on the one hand has been making rich contributions to the foreign exchange earnings of India and on the other, has also witnessed a number of changes since the economic reforms program in 1991.⁹⁵ The most dominant amongst them has been the conscious attempts to address the WTO obligations in a whole set of activity spectrum, starting with the domestic farm and farmer level to the consumers. Primary products from the agricultural sectors lend themselves to a series of opportunities to create various time, form and space utilities and the Indian producers are serious in addressing trade related challenges in this sector.⁹⁶ Since the new order of trade requires planned and sustained exports, quality consciousness and such technicalities are gaining primacy across the spectrum. Application of SPS

93 Steven Jafee & Henson Spencer, 'Agro-Food Exports from Developing Countries: the Challenges Posed by Standards' in Ataman Aksoy and John Beghin (eds), *Global Agricultural Trade and Developing Countries* (2005).

94 Kaushik & Saqib, above n82.

95 Bhupat M Desai, 'Terms of Trade and Technical Change: Strategies for Agricultural Growth', *Economic and Political Weekly* (2002).

96 CII-McKinsey, *FAIDA: Modernising the Indian Food Chain* (2nd ed, 1998) at 1-78.

measures run through this wide spectrum of production, processing and distribution. Lately, the shares in exports have dwindled, mainly because of the imposition of higher quality standards by importing countries. Recent years have also witnessed cancellation of agricultural import orders and consignments of physical, chemical and microbial contaminations. Consumer movements, environmental protection agencies and food safety enforcement agencies in importing countries are increasingly prescribing stricter standards for macro cleanliness, microbial loads, aflatoxins, pesticide residues etc.

The Government of India has taken measures to tide over the situation by setting up the National Codex Alimentarius Committee under the Department of Health, Ministry of Health and Family Welfare so as to create a body which would meet the stipulations set up by the Codex Alimentarius Commission which is the global agency under the auspices of the FAO/WHO which develops standards, guidelines and other codes of practice for protection of consumer health and ensuring fair trade in food products. Product-specific export development and other national agencies such as the Spices Board, Agricultural and Processed Foods Export Development Authority (APEDA), Directorate of Vanaspathy, Vegetable Oils and Fats, Central Food Technological Research Institute (CFTRI) etc. have also undertaken substantial work and have brought forth observations pertaining to environmental issues in these sectors. Some actions have been initiated in terms of institutionalisation of training in areas of HACCP, Good Manufacturing Practice (GMP- Fisheries, Fruits & Vegetables), revision of PFA standards based on grade specifications for export including parameters for microbial limits and maximum tolerance limit/maximum residue levels for pesticide residue, aflatoxin etc. to address the same.

These organisations and research institutes have also initiated action to ensure physical characteristics and cleanliness in the production process, allocation of food codes, setting up of analytical laboratories and strengthening of existing ones in all food sectors, initiatives to meet Bureau of Indian Standards (BIS) levels, harmonisation of maximum tolerance limits for pesticides under the *Prevention of Food Adulteration Act (PFA) 1954*, and Codex and Multi-centric study on use of edible colours in food products (CFTRI & National Institute of Nutrition (NIN)). A shadow committee on general principles and a steering committee for setting up standards for organic foods have also been set up for various categories of agro-products. However, whilst the standards are being met to the best possible extent at the national level, instances where importing countries have used SPS as trade barriers on grounds of harmful effects to health and environment continue to prevail. For example, Australia, China and Japan, not allowing Indian mangoes and grapes on the grounds that certain fruit flies are present, which, ironically do not even exist in India. Again, the Japanese stipulation of Vapour Heat Treatment (VHT)

of fruits is yet another instance of SPS being instrument for non-tariff barrier.⁹⁷ The technological upgrade to meet the VHT protocol is a story of significant financial investment for at least six years. This is in spite of the fact that success at the end is not assured. The introduction of regulation by the EU prescribing unreasonably low levels of Ochratoxin-A (OTA) in coffee; method and sensitivity of estimating pesticide residue in vegetables, fruits, honey etc. are indeed unreasonable. The sum total of all these instances is that the exporting country will have to bear the cost without any expected commensurate return. Many European nations have used SPS measures as a device for restricting market access for Indian agro-exports. Recently Spain detained numerous consignments of chilli exported from India on the grounds that it contained aflatoxin, a substance had serious health and environment impacts. Furthermore, Spain put Indian chilli exports on rapid red alert that led to a drastic fall in chilli exports from India and eroded market access for the country for a substantial period of time.⁹⁸

Another incidence of unilateral environmental measures has been in Europe, where production, processing and sale of food in each country is subject to food laws specific to each European country. Typically there are two kinds of laws, namely horizontal regulations, which include regulation of food standards, stipulations for the usage of additives, prevention of food contamination/adulteration and labelling of food etc, and vertical regulations, which include product-wise application of regulations. Apart from food regulations, there are codes of practice and standards that are necessary for fulfilling the requirements under the GMP. The spices industry in India has been affected to a large extent as a result of such country-specific codes and serves as an appropriate example to bring out the usage and imposition of such measures.

Europe thrives on trade in ground spices, which are used as food ingredients. This entails horizontal regulations on food processing and sales finding widespread application to spices, which are traded among the European nations. Though vertical regulations are not currently in place for spices, codes of practice and standards are very much in existence for these countries with regard to the spices trade. The European Spice Association (ESA) has been taking efforts to lay down uniform standards and codes of practice in collaboration with the spice trade associations of individual European countries. However, these efforts are yet to find wider acceptance at EC levels. Until a common European regulation and code of practice is established, traders have to follow regulations laid down by individual countries. In this way, most restrictions and unilateral environmental measures in

97 TERI, above n79.

98 Anirudh Singhal, 'The Sanitary and Phytosanitary Measures Agreement' *RGCIS Working Paper Series, No. 12* (New Delhi, RGCIS, 2000).

the spices trade have come from EC countries and as a direct result of such stipulations, the Indian spice industry has lost huge segments of the market in the spice trade. Similarly, other Indian agro-products like spice oils, oleoresins and other spices like nutmeg, vanilla, ginger, asafoetida, curry powder, mustard and cumin have suffered some loss in the market on the grounds of such country-specific environmental standard-setting on exports.

Another example in relation to spices has been the unilateral measures taken by Italy and Germany on spice exports from India where import consignments have been cancelled on the grounds of the presence of high pesticide residues. Both Italy and Germany have, at various points of time, failed to convince the Indian exporters on the changes they have made on their existing regulations on microbial contaminations and contamination due to pesticide residue. This is a clear denial of facilities offered under Article 7 (prior notification) of the SPS regulations. This has tended to cause difficulties for India not merely in its regular export markets but may have had an adverse effect on India's image as an exporter of spices elsewhere. Indian chilli is yet another commodity which suffers from multiple standards and stipulations of the European countries. For example, the aflatoxin levels are to be less than 4 ppb in Germany, whereas in Sweden and Finland the requirement is 5 ppb and below, whilst in Spain it is prescribed to be 10 ppb and below. CFTRI and APEDA are of the opinion that some of the standards (especially the microbiological standards) are high and unrealistic such that, in most cases, it may not be feasible to achieve the same even in Europe.

India is the world's largest producer, consumer and exporter of seed spices. Almost 10 per cent of the total production is exported as raw or value-added products to nearly 70 countries. The opportunities for market access foreseen earlier for the country in the spice trade seem to have been diluted with the imposition of such bans. Thus, there is a clear need to address issues with regard to SPS, especially the unilateral measures that have been posed. The limits on pesticide residue are another major stipulation facing rice exports to the EU and Japan. During the first half of 2000, roughly 22 consignments of basmati and non-basmati rice exports to the United States were rejected on the grounds that they were 'filthy' and contained 'foreign matter'. Some problems relating to aflatoxin were also reported in the rice. The United States had stipulated some norms for compliance in order to continue importing Indian products, however the cost of such compliance was roughly estimated to be 3 per cent of the free-on-board value per metric tonne of rice exports.⁹⁹ This is yet another example of environmental measures which constitute a significant barrier to trade.

99 APEDA, above n67.

As can be inferred from the above, most of these environmental stipulations come from the EU; in fact, it has been found that aflatoxin standards set by the EU are far more stringent than those set by the international standards of the Codex Alimentarius Commission.¹⁰⁰ Moreover, the costs of testing the presence and levels of aflatoxin have been found to be high and prohibitive by agro-product units in developing countries like India. All these clear manifestations of the usage of environment as a trade barrier thus justify the need for the WTO to undertake a serious examination of such measures and the scientific basis and justification for the imposition of the same in the name of the environment.

The Way Forward

Until now, India has made three important submissions to the CTE on Item 6 of its work programme, which envisages all issues relating to the environment and market access. The first submission made in June 1996, was in the form of a non-paper that articulated the vulnerability of developing countries to adverse effects of environmental measures on market access and the need for CTE to re-examine its environmental measures under the various agreements concluded under the aegis of the WTO, namely the Agreements on SPS, TBT, SCM, few clauses under the AoA and environmental measures comprising eco-labelling, eco-taxes and border tax adjustment. The submission primarily focused on reiterating to the CTE the need to look into those impacts which these measures, clubbed under the broad band of environment, would have on market access opportunities of developing countries, on the one hand, while on the other, seeking further reductions in tariff levels.

The second submission made to the CTE on market access dates to October 2000; the submission reiterated the concerns that were addressed in the previous submission, with special focus on the links between trade and sustainable development and how trade is typically the means to the end of sustainable development. The submission quotes a set of developing country examples to buttress its arguments for the reduction of environmental measures. It points to the cases of environmental measures faced by the South African wool industry, the problems faced by the Philippines on account of ISO certification and also on account of the Basel Convention. It also points to the Indian case where the country's marine exports had been affected due to EU regulations.

100 Rajesh Mehta, M Saqib & J George, 'Addressing Sanitary and Phytosanitary Agreement: A Case Study of Select Processed Food Products in India' *RIS Discussion Paper No. 39* (New Delhi, RIS, 2003).

The third and the most important submission also voices the above-mentioned concerns with greater emphasis on the inability of developing countries, due to lack of infrastructure, limited technological choices, inadequate access to environmentally-friendly raw materials, small size of export units etc, to conform to environmental measures imposed unilaterally or multilaterally by member countries. It also propounds, quite emphatically, that trade measures are not the best option for addressing global environmental concerns.

Based on the submissions by India, the policy response can be categorised into two broad angles- an internal one and an external.¹⁰¹ While, in the case of the internal one, there is an impending requirement for India to upgrade its infrastructure facilities, set up domestic standards in order to comply with the external ones, enforce legislation, dissemination of information etc, whereas for the external, India should ensure appropriate standards through its trade policy and more importantly, sharpen its negotiating skills to put forward its concerns in a more concrete form.

First, India should raise the need for the CTE to re-examine GATT Article XX¹⁰² (Exception Clause) as well as the Agreements on SPS (Articles 4 and 5.2: Equivalence and Risk Assessment respectively), TBT (Articles 2.2 and 2.10: part of Preparation, Adoption and Application of Technical Regulations and Article 5.4: part of Procedures for Assessment of Conformity) and the SCM (Article VIII.c: Non-actionable Subsidies) and to re-look into specific clauses of the agreements, which can be used as indirect barriers to trade. In particular, the scope of Article XX of the GATT Agreement may be tightened, so that the burden of proof by the imposing country is offered prior to the imposition of the regulation. The cases quoted in the various sections of the paper on industry analysis allude to a range of experiences- such as Spain detaining Indian chilli on the basis of high aflatoxin levels, lack of harmonisation of unilateral measures/standards across the countries in the EU which has marred a chunk of Indian food agro-exports under the SPS agreement and the bans by the EU on Indian rice exports etc.- that vividly point out that unilateral environmental measures have been taken against the preamble of the WTO. So is the case with the TBT Agreement, where unrealistic and non-harmonised country-specific standards have been used under the TBT as in the case of tyre-products from

101 Bibek Debroy, 'The SPS and TBT Agreements-Implications for Indian Policy' *ICRIER Working Paper No.163* (New Delhi, ICRIER, 2005).

102 Subject to the requirement that such measures are not applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination between countries, members can adopt measures which are necessary to protect human, animal, or plant life or health; and relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

India and the regulations imposed by Brazil and the United States, and the well-known case of regulations on TEDs followed by the ban on Indian seafood exports. Hence, India should strongly emphasise the need for re-examination of such clauses in the agreements under the WTO.

Second, with regard to SPS and TBT, there is a need to specifically look into those aspects of the agreements which relate to precautionary principle, risk assessment and equivalence,¹⁰³ as provided in the SPS and conformity assessment of the TBT, and lay down uniform standard mechanisms or criteria for the same. The case of spice export bans on Indian spices, whereby Germany has specified pesticide residue levels which are far higher than the levels stipulated under the Codex Alimentarius Commission, is a typical example which calls for the need to establish standard conformity and risk assessment procedures under the shield of the WTO.

Third, it is imperative to have greater transparency in mechanisms that enable the implementation of the agreements of SPS, TBT and SCM as well as environmental requirements such as eco-labels, eco-taxes, product related-PPMs, packaging etc. This would ensure that the agreements themselves do not become instruments that impede fair trade and hinder market access opportunities of developing countries. It has been suggested that there is a need to harmonise standards and make those available at the WTO so that countries are not allowed to take unilateral environmental measures or lay-down country specific standards. To the extent possible, developed countries should take the developing countries on board in evolving the environmental criteria, standards and requirements from the outset, which would go a long way in reducing hardships to the complying party and also minimise trade distortions.

Fourth, it would be useful for India to suggest a mechanism to the WTO that requires prior notification to all the member nations, on the imposition of new measures by any member under the SPS or TBT. The mechanism would allow for upfront review and discussion of the measure(s) in light of the broader trade rules set by the WTO and would check for conformity or conflicts, as the case may be, within the individual agreement. Apart from the review by the respective WTO departments, the CTE could also encourage member nations to submit their considerations, reviews, and concerns with regard to that measure. Once the measure is recognised and included under SPS, the measure(s) would automatically apply to all member countries. Specifically, this mechanism would serve to address the concerns of developing and least developed countries by, firstly, enabling a cut in the information costs, secondly, by means of giving these countries an opportunity

103 The SPS agreement encourages countries to give positive consideration to accepting the SPS measures of other members as equivalent to their own, even if these measures differ from their own.

to voice their concerns with regard to such measures and giving room for the integration of such concerns, and thirdly by enabling the provision of longer timeframes for the implementation of such measures.

Fifth, India should emphasise at the CTE and the WTO the need for a well-integrated information system on various measures of SPS requirements, which have been adopted to date. This could take the form of an information resource base which would provide all details of the measures and regulations submitted by the member countries and also linkages with international standard-setting bodies like WHO Codex, International Plant Protection Convention etc. This would aid in reducing the cost of accessing requisite information for these countries, which, in general, are disadvantaged by the lack of proper infrastructure facilities and suffer from the lack of adequate resources to adopt technologically better devices for information exchange. This would be a key proposal for India as it would serve as an indirect move to enable the sustenance of market access opportunities; besides, such a resource base would also serve as a reference benchmark for India to set-up regulations and measures under the SPS for items of import by the country.

Sixth, there is an impending need to carry out an in-depth sectoral analysis (through case-studies) of the impact of each type of environmental or health related regulation on market access opportunities for India.

Seventh, India should raise the need to the CTE to set-up bilateral and multilateral funds, to be pooled by developed countries or those countries which impose such standards, to enable the adoption of environmentally-friendly technologies in compliance with such measures, as otherwise the costs of adoption of such technologies is typically high for developing countries like India. Agenda 21 adopted at the Earth Summit in 1992, recognised the need for a substantially increased effort both by the countries themselves and the international community, for the implementation of sustainable development programmes.

Eighth, India has too many SMEs, which account for a major portion of its total exports, and in general, the SMEs find it difficult to bear the compliance costs associated with standards.¹⁰⁴ These compliance costs have both fixed and variable cost elements. Fiscal support from the government is near to impossible, and even if fixed costs can be recovered from export markets, this will lead Indian export prices to be uncompetitive. Again, there is also multiplicity of external standards. India should provide some government-funded infrastructure such as refrigeration, cold-storage, transport¹⁰⁵ and post-harvest facilities and information dissemination, and

104 Inputs from a Primary Survey conducted by the author himself in Chennai (Leather), Surat (Textile) and Bhubaneswar (Marine) areas, India. However, there is no need to presume that the SMEs or the small scale sector will wither away in the face of competition. In production, when there are diseconomies of scale, the small scale sector will continue to exist.

develop some domestic standards in order to upgrade its own product to cater to the international standards without further compliance costs. Furthermore, there are problems with testing and certification, due to capacity-constraints in both. Many consumer organisations now have research wings that routinely undertake product testing¹⁰⁶. This illustrates that there is scope for outsourcing both testing and certification to the private sector, subject to certain regulatory norms, which could reduce problems such as rent-seeking.

The above would be the primary concerns for India with regard to market access as seen to be affected by GATT Article XX and the WTO agreements on SPS and TBT. India should strongly put forth its concerns as a developing country that lacks the kind of infrastructure and technical assistance which it would need to become an environmentally friendly producer of goods and services. Further, there is an impending need for the CTE to look again at WTO agreements, and how they lay down rules and procedures for protecting specific concerns like environment and human health. A formulation of criteria by the CTE would enable fairer and cleaner trade, failing which there is a chance that these could take the form of potential barriers to trade. Simultaneously, India should steadily voice the need for such assistance from those countries that impose unilateral environmental measures, to enable the transfer of technologies, and technical assistance, which will primarily help India, a developing country, to sustain and augment its market access opportunities. This would enable India to launch itself into the trajectory of economic growth on the lines of sustainable development while also meeting the needs of liberalised trade and cleaner environment.

105 NSS (National Sample Survey) data from 1993-94 to 1999-2000 shows that this has already begun to happen in India. However, this transition needs to be facilitated through relaxation of entry barriers against private sector entry into food processing, which has started in the past few years.

106 Consumer Education and Research Centre and Voice are two examples.