

**WTO AGREEMENT ON AGRICULTURE AND ITS  
IMPLICATIONS FOR INDIA**

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in partial fulfilment of the requirements for  
the award of the degree of

**MASTER OF PHILOSOPHY**

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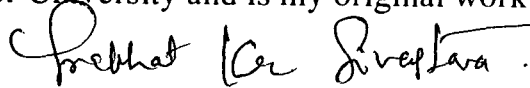
**CENTRE FOR POLITICAL STUDIES  
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## CERTIFICATE

This is to certify that this dissertation entitled 'WTO AGREEMENT ON AGRICULTURE AND ITS IMPLICATIONS FOR INDIA' submitted in partial fulfillment of the requirements for the award of the Degree of Master of Philosophy has not been previously submitted for any other degree of this university or any other University and is my original work.



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We recommend that this dissertation may be placed before examiners for evaluation.



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**Dedicated to  
my parents whose love, sacrifice and  
blessing enabled me to rise this position**

**- Prabhat Kumar Srivastava**

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*Prabhat Kumar Srivastava*

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# CHAPTER-1

## INTRODUCTION

### Background to Negotiations: Bretton woods

In the period immediately following World War II, three organizations were set up to monitor international trade and payments in the period following World War II. Since these organisations or building blocks emerged as a result of a UN-sponsored conference held in 1944 in a place known as Bretton woods, the system that emerged was known as the Bretton woods system. The first two organizations were the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD) popularly known as the World Bank. The third organisation that was supposed to be set was something known as the International Trade Organisation (ITO). ITO was never actually set up. Instead one had something known as the General Agreement on Tariffs and Trade (GATT). Unlike ITO, had it actually been set up, GATT was only a legal agreement. It was not a proper organisation.

The General Agreement on Tariff and Trade (GATT), to start with, was conceived as an ad hock negotiating body of different countries and initially only 23 countries participated in negotiation in Geneva in 1947. GATT's mandate was to liberalise World Trade. Barriers to World Trade can be of two types - tariffs and Non-tariff barriers (NTBs). Tariff work through price, that is, they Jack up the cost of imports through customs duties. NTBs are not price based. Examples are import licensing or quotas. They also

restrict imports, but not through increasing prices of such imports. As is understandable, unlike tariffs. NTBs are difficult to monitor, police or even quantify.

### **Multilateral Trade Negotiations**

GATT's mandate was to liberalize World Trade. It does this through a series of negotiations known as multilateral trade negotiations (MTNs). Every once in a while, GATT members come together and decide that a mutually acceptable liberalization will take place. These negotiations are also known as MTN rounds. So far, eight such MTN rounds have taken place.

Round	Year	Venue	Result
I	1947	Geneva	GATT Signed
II	1949	Annecy (France)	Tariff reduced
III	1951	Torquay (England)	Tariffs reduced
IV	1956	Geneva	Tariffs reduced
V	1960-61	Geneva (known as Dillon round)	20% tariffs reduced
VI	1964-67	Geneva (Kennedy round)	1/3 reduction on barriers
VII	1973-79	Geneva (Tokyo round)	Non tariff barriers, Subsidised exports tropical products covered.
VIII	1986-93	Geneva (Uruguay round)	Trade in services., Agriculture, releasing of all barriers to FI & Protection from the laws of third world, Bio-diversity and Technology.

At the first round in Geneva in 1947, 23 countries participated and these were founder-members of GATT, India being a founder member. At the Uruguay round the number of participating countries was 123, although

the number of WTO (World Trade Organization) members has now gone up to 134. More than 90 percent of World Trade now takes place among WTO members. Several countries (such as former socialist countries) are waiting to become members of WTO. Once that happens, perhaps, around 98 percent of World Trade will take place among WTO members.

When GATT was supposed to liberalize world Trade, it was supposed to eliminate both tariffs and NTBs. In fact first five rounds has been quite successful in reducing tariffs all round the globe. But because NTBs are much more difficult to pin down, GATT'S success in eliminating NTBs has been much more limited. But once tariffs began to come down, the focus shifted to eliminating NTBs. The Kennedy round is roughly when this focus shifted and the Tokyo round had several agreements on NTBs. Perhaps one should also mention that GATT was ostensibly supposed to look at external sector polices. But as international trade and business became much more complicated, it became difficult to differentiate external sector policies from domestic economic policies. Consequently, GATT increasingly began to discuss domestic economic policies and this trend was also clearly visible in the course of the Uruguay Round. This also made negotiations much more complicated and this was one reason why the Uruguay Round negotiations took eight years to be completed. For the first time, the Uruguay Round added the largest ever package of Market access, concessions, agriculture, trade in services (GATS) and Intellectual property system (TRIPS) and an agreement to replace GATT with WTO.



Thus the WTO came into existence with the completion of the talks for the Uruguay round of the GATT agreement in Marrakesh in Morocco in April 1994. From 1 January 1995, the WTO has come into being when the Uruguay Round agreement has come into force. Unlike the historical GATT, which was only a legal agreement, WTO is a proper organisation.

The WTO has three sub-organisations under it. First, there is something known as the General Council in Goods, overseeing a General Agreement on Goods. Before the Uruguay round, GATT never negotiated services, it was only concerned with goods. The Uruguay Round was the first MTN that talked about liberalizing World Trade in services. In a way, the General Agreement on goods is nothing but the old GATT. The second sub-organisation is the General Council in Services, overseeing a General Agreement on services. And the third suborganisation is an Intellectual property rights organization.

### **Some Additional points**

The WTO has its own dispute settlement mechanism. First, the General Council functions as the dispute settlement body (DSB). Second, the General Council also administers something known as the Trade Policy Review Mechanism (TPRM). At the TPRM, every country has to go and defend its Trade policy, which will be attacked by trading partners. How often a country has a TPRM depends upon its status. For example, a developing country like India has to go through a TPRM process once every

four years. Incidentally, WTO decisions are taken on the basis of consensus.

If that fails, there is voting on the basis of one country one vote.

The ministerial conference is a highest decision-making body of the WTO and is held once in two years. The conference charts out the course of the global trade policy agenda for the next round.

### Ministerial Conference

**So far three ministerial conference has been held**

I Dec, 1996	Singapore	Trade & Investment, trade and competition policy.
II. May 1998	Geneva	Transparency in government procurement, practices, trade facilitation & e-commerce.
III 30 <sup>th</sup> Nov. 3 <sup>rd</sup> Dec 1999	Seattle (Millennium Round)	Industrial tariffs, trade and environment, labour standards, transparency in WTO work.

In the first ministerial conference held in Singapore in December 1996. Working groups were appointed to study four new subjects – investment rules completion policy, transparency in government procurement, practices and trade facilitation. The second ministerial conference held in 'Geneva' in May 1998 brought e-commerce on the agenda of WTO. In between an information technology agreement (ITA) was concluded in order to eliminate tariffs on specified IT products.

However the Seattle conference was completely deadlocked. The issues in the forefront of this meeting were

1. Ongoing business from the Marrakesh meeting
  - (a) Implementation issues

- (b) Dispute settlement issues
- 2. The built in agenda from the Marrakesh agreement
  - (a) Trade in agriculture
  - (b) Trade in services
  - (c) TRIPS (Trade Related Intellectual Property System)
- 3. Trade problems of the poorest countries
- 4. New issues/New round of discussions.
  - (a) Trade & Completion policy
  - (b) Trade & investment
  - (c) Transparency in government procurement
  - (d) Simplification of trade procedures
  - (e) Trade & environment
  - (f) Core-labour standards
- 5. Other issues
  - (a) Information technology flow and tax on e-commerce.
  - (b) Entry of new members

That list shows that the agenda for the Seattle conference was complex and perhaps too unwieldy as some have argued, and therefore, according to this line of thinking, it is no wonder that the conference failed to produce a consensus document which could be put as a ministerial declaration.

## **Present Scenario**

At present, there are five different groups working within WTO – first group comprising of U.S. and Canada, says that it will be satisfied with future negotiations that liberalize only trade in agriculture and services. This is perhaps a negotiating position meant to put pressure on the European union because till very recently, the U.S was also very keen on two other proposals as well – greater transparency in government procurement and zero-tariffs in e-commerce. Second group comprising of European union and Japan, in direct opposition to the U.S. lays on the table an ambitious agenda. The group want the WTO members to engage in another round of talks on a further reduction of tariffs on all Industrial products and begin negotiations on a global pact on foreign investment as also competition policy – all in addition to a somewhat lukewarm support to the built in agenda of the WTO. But there is one thing that the E.U and the U.S. agree on. Both want the WTO to make the environment and labour issues a more central concern of the WTO rules.

Then there are some of the larger developing countries like India, Pakistan, Indonesia and Egypt (which together with a few other developing countries have formed the 'Like Minded Group' (LMG) that have attempted to make implementation issues the core of post-Seattle negotiations. The group would like a rapider and more meaningful dismantling of barriers to its textile exports (the multi-fibre Agreement) and a re-orientation of the existing provisions on patents, anti-dumping, subsidies and investment

measures to better address the interests of the developing countries. This would include, for example, a longer transition period for implementing the provisions on patents. The rationale of this stand is that since so little has been gained from the UR (Uruguay Round) even as so many difficulties have been experienced, It is better to first address the problems of implementation before negotiating on new issues.

Now, the fourth increasingly vocal group at the WTO is 'Cairns Group' of agricultural exporters. An alliance of 15 countries from three continents that comprises developed and developing countries and is led by Australia, the 'Cairns group' has a single point agenda further liberalization of trade in agriculture. The members of Cairns group are-Australia Canada, Newzealand, South Africa, Argentina, Brazil, Chile, Columbia, Fiji, Indonesia, Malaysia, Thailand, Uruguay, Paraguay and Philippines.

A fifth group consists largely of the 'Least Developed Countries' that looked to Seattle for a decision either there or later on providing duty-free access to their exports. If these are what each grouping wants, there are also particular antipathies.

Thus E.U. wants a very limited agenda on agriculture, the U.S. is dead against substantive talks on implementation issues and most developing countries are opposed to the WTO being asked to put its arms around environment and labour issues.

Thus so much of divergent interests are here to be reconciled . And at least this would follow a narrowing of differences between the two that

matter – the U.S & the E.U. even as the others are made to fall in line. This is what happened in the UR as also in subsequent negotiations at the WTO.

### **Objective of Study**

India continues to be dominantly an agrarian economy in terms of population dependency and labour force proportion even after more than five decades of independence. Though the primary sector's contribution to GDP has witnessed a substantial fall, yet the desired structural change with respect to the proportion of labour force has not taken place.

Nonetheless, in terms of total arable land, population and production of major crops, India is very well stationed in world agriculture. India owns 11.8 percent of total global arable land area and occupies the second position in the world. It also has the second rank in the world with its 16.4% share of population. It produces 10.6% of the total world cereals for which it stands third. Its ranking in the global community is second in the production of wheat ( 11.3%), rice, (21.5%), groundnut (26.7%), sugarcane (21.4%) and vegetables (9.2%). In terms of tea (28.9%) and pulses, it ranks first in the world. It stands third in the world in cotton and fruits production with 14.5% and 8.6% of global production, respectively (GOI, 2000).

So global agri-business, governed by the WTO regime, would have far reaching implications for Indian Agriculture. Its full effect would be realised with effect from January 1, 2005 when GATT Agreement 1994 would stand fully implemented. In fact, this agreement has brought, for the first time, agricultural sector and international trade of agricultural

commodities within the purview of GATT and WTO, thus integrating agriculture fully with the global market. The Agreement on Agriculture (AOA) under WTO, pertaining to subsidies, market access, sanitary and phyto-sanitary measures would have a direct bearing on Indian Agriculture. The bringing of Intellectual Property Right (TRIPS) in the purview of WTO would also have serious effects on Indian agriculture through patenting of seeds and the upcoming sui-generis system. Changing the period of patent from 7 (as per India's patent Act, 1970) to 20 (under WTO) years would make the situation bad to worse.

It has been tried to carefully examine the different implications of WTO's rules pertaining to agriculture. And How India could visualise the inherent profit and loss regarding these rules.

### **Methodology**

I have tried to first see the Agreement as it is then different interpretations by eminent economists, political scientist, trade experts has been sought. Then by taking comparative advantage principle, I have tried to analyze each issue in three main chapters. <sup>(I,II,III,IV)</sup> The first chapter deals with Introduction and basic outlines of every chapter. Second chapter gives overall view of Agreement on Agriculture and its possible repercussion. Third Chapter analyses implications of TRIPS and conflict between CBD (Convention of Biological Diversity) and TRIPS, its relation with sustainable development. Fourth Chapter have issues like Food Security,

Agribusiness and other Non trade issues related with Agriculture & Fifth Chapter is conclusion.

### **Review of Literatures**

As a founder member of WTO, India is committed to implement various agreement and provisions pertaining to Agreement on Agriculture (AOA). These include commitments on market access, domestic support and export subsidies, the agreement on sanitary and phytosanitary measures etc. As a result of the Agreement, all the quantitative restrictions have been abolished by 31 March, 2001. Non-tariff measures have to be replaced by tariff measures during the implementation period, i.e. from January 1, 1995 to 31 December 2004. The minimum market access quota is to be expanded to 3 percent of total domestic consumption by 31 December 2004. However, there are certain protection provisions in the form of 'safety trigger', custom duties, anti-dumping clauses and countervailing duty rights etc., available to India, as to other members of the WTO family.

Indian agriculture is going to be influenced by the WTO regime, both positively and negatively. Based on the available estimates of support to agriculture many experts like *G.S. Bhalla (1996)* and *Ashok Gulati (2000)* are of the view that AMS (Aggregate measures of support) would not affect Indian Agriculture as the total Indian AMS is much below the stipulated limits. It may be so in the present context, but given the falling trend in the global primary commodity prices (as shown in table) and measuring the AMS at border prices, the total AMS may exceed the upper



limit over the period of time. That may tantamount to reduction of subsidies and thus, affect the global competitiveness of Indian Agriculture. Just to mention a few, wheat price in the global market declined from US\$ 240 per ton in 1980 to 121 per ton in 1998 (see Table 4.4). The corresponding prices of rice were US\$ 571 against 293 of sugar US \$877 against 189; and of cotton US\$ 2843 against 1389 respectively.

*Kirit S. Parikh (1998)* finds that as a result of India's intervention in global rice market, global export prices would further fall and import prices would rise. This change, both in export and import prices, is likely to affect India adversely. (See Table 4.3)

However *B. Bhattacharya (2000) and FAO, (1999)* are apprehensive of food insecurity in many developing countries like India, owing to liberalization of agricultural trade under the WTO regime. However, *Ashok Gulati and G.S. Bhalla* have the view that India would gain from its participation in liberalized trade in agriculture. Their conclusion are largely based on the expected rise in the prices of world agricultural commodities. However another study by *S.S. Gill and J.S. Brar (1996)* concludes that the global competitiveness of Indian agriculture, in general, and that of Punjab agriculture, in particular, have been adversely affected under the liberalized trade regime.

With regard to market access clause, if 3 percent of the total consumption of, say, 200 million tonnes, is imported in India then agricultural prices in India may nearly collapse (*Ranjit Singh Ghuman*). As

regards, exports subsidy's effect on Indian Agriculture, it is largely non-applicable to the Indian situation and is likely to remain so in the near future.

It may, however be mentioned that IPR (Intellectual Property Rights) pertaining to seeds and seed technology may also adversely affect the India Agriculture. (*Vandana Shiva and Suman Sahai*).

*Mr. S.K. Verma* has opined that there is a conflicting provision in CBD (Covention on Biological diversity) and TRIPS Agreement. There should be review of TRIPS Agreement to conserve Bio-Diversity and Indigenous knowledge based on community living with certain biospheres and age old traditional knowledge of Flora and fauna and their uses.

Another study by *Utsa Patnaik* that liberalization of agricultural exports would shift crop patterns towards high value crops and result in diversion of foodgrains to livestock feed which would adversely affect food security of vulnerable sections.

From one study by *Deepak Nayyar and Abhijit Sen* (1994), it is inferred that dismantling trade barriers on imports would increase volatility of Indian prices and farm incomes and that majority of small and marginal farmers would not be able to withstand such price shocks.

*Rajesh Mehta* (2000) have studied the impact of removal of QR (Quantitative Restriction) on India's import, his inferences is that the India's import demand is likely to increase by 8.7 percent of her imports as a consequence of the removal of QRs. In other words, Indian producers of

all these items would have to face global competition in their own home market. To cope with the onslaught of cheap foreign goods, the GOI (Government of India) must impose tariff duties on the import of those items for which QRs have been removed, which would not go contrary to the spirit of WTO.

The generation of employment would be the most difficult task under the globalized regime governed by WTO and MNCs. *David C. Korten (1998)* has said on the basis of his study on employment by MNCs that world's 500 largest industrial corporations control 25 percent of the world's economic output by employing only 0.05 to 1 percent to the world's population.

Given the size of India's population, almost stagnating yield, diminishing returns, declining global prices of primary commodities, rigid cropping pattern and shrinking expenditure on research and development, Indian agriculture may have small export surplus and limited export competitiveness. So there is one way out is to prepare our agricultural and allied activities for the global competition with cost-effective production and efficient management. Another way out for Indian Agriculture is to normalize Indo-Pak relations, open Wagah border for land route trade to Pakistan and onward trade to Central Asia and newly independent countries from the formerly Soviet Union. It would give a big push to development in agricultural sector besides generating a large amount of employment, thus shifting a sizeable proportion of labour force from primary sector to

secondary and tertiary sectors which is of paramount importance to Indian economy.

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## CHAPTER-II

### WTO Agreement on Agriculture and Its Implication

The Agreement on Agriculture (AoA) forms a part of the final act of the Uruguay Round of Multilateral Trade Negotiations, which was signed by the member countries in April 1994 at Marrakesh, Morocco and came into force on the 1<sup>st</sup> January, 1995. India signed this agreement on 15<sup>th</sup> April 1994 at Marrakesh. This treaty introduced agricultural trade in Multilateral Agreement for the first time.

The long term objective of the Agreement is “to establish a fair and market oriented agricultural trading system and that a reform process should be initiated through the negotiation of commitments on support and protection and through the establishment of strengthened and more operationally effective GATT rules and disciplines.” It has been further stated that “the long term objective is to provide for substantial progressive reductions in agricultural support and protection sustained over an agreed period of time, resulting in correcting and preventing restrictions and distortions in world agricultural markets”.

The root cause of distortion of international trade in agriculture has been the massive domestic subsidies given by the Industrialized countries to their agricultural sector over many years. This, in turn, led to excessive production and its dumping in international markets as well as import restrictions to keep out foreign agricultural products from their domestic markets. Hence, the

starting point for the establishment of a fair agricultural trade regime has to be the reduction of domestic production subsidies given by industrialized countries, reduction in the volume of subsidized exports and minimum market access opportunities for agricultural producers world-wide. The obligations and disciplines incorporated in the Agreement on Agriculture, therefore relates to:

- Market Access** - The disciplines on import restraints and tariffs;
- Domestic Support** - Subsidies and other programmes, including those that raise or guarantee farmgate prices and farmers' income;
- Export subsidies** - and other methods used to make exports artificially competitive.

The agreement does allow governments to support their rural economies, but preferably through policies that cause less distortion to trade. It also allows some flexibility in the way commitments are implemented. Developing countries do not have to cut their subsidies or lower their tariffs as developed countries and they are given extra time to complete their obligations. Special provisions deal with the interests of countries that rely on imports for their food supplies and the least developed economies (see Table 2.1).

### **(1) Market Access: Tariffication**

There are three issues in market access:

- (a) issue related to tariff bindings
- (b) opening up of markets (establishment of minimum access tariff rate quota (TRQ) and allocation of TRQ)
- (c) special safeguards.

**(a) Tariff Bindings**

The Agreement primarily envisages tariffication of all non-tariff barriers. In other words, non-tariff barriers such as quantitative restrictions (Quota, import restriction through permits, import licensing etc.) are to be replaced by tariffs to provide the same level of protection and then progressive reduction of the tariff levels is to be made. The reduction commitments on import tariffs are as under:

Tariffs (Base 1986-88)	Developed Countries (1995-2000) (6 years period)	Developing Countries (1995-2004) (Ten Years period)
Average cut for all agricultural products	36%	24%
Minimum cut per product line	15%	10%

Note: Least Developed countries are exempted from any Tariff Reductions

**Tariffication of all Non-tariff Barriers(NTBs)** – The proposed method for setting tariff equivalents of NTBs in the Uruguay Round is based on a method of calculating the gap between the internal (domestic wholesale) and external price (international price taken as the unit value of import, inclusive of costs, insurance and freight in domestic currency. In the process of working out the tariffs, adjustment can be for the quality or variety of a commodity. However, as importing countries themselves, evaluated the tariff equivalents of non-tariff



measures, there was a tendency to state high initial tariffs. This was done in the following way:

- **By selecting a high base period:-** The Choice of 1986-88 as a base period tied tariffication to a time when protection was at its highest .
- **By overestimating the domestic price and/or underestimating the international price:-** Countries often inflated the gap between the two prices thereby increasing the 'tariff equivalent calculation'. This practice referred to as dirty tariffication.

As a result, the initial tariff bindings, are in many cases far higher than the actual tariff equivalent of the time. This effectively postponed the time when these countries would face any real international competition.

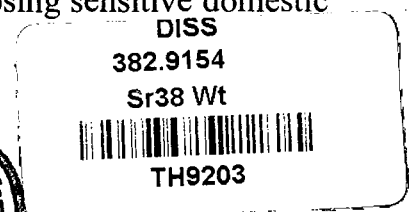
The market access schedules are not only an announcement of tariff rates. They represent commitments not to increase tariffs above the listed rates – the rates are bound. These bound rates serve as ceilings. The tariff levels have been bound by India for primary agricultural products, processed agricultural products and edible oils, with a few exceptions, at 100%, 150%, and 300% respectively for end period of the agreement. India had quantitative restrictions (QRs) on import of 825 agricultural products as on 1st April 1997, which it was justifying on balance of payment considerations. QRs have now been phased out and eliminated by 1<sup>st</sup> April, 2001. We will discuss it, when we analyze in details the implications of it on Indian Agriculture.

**Note:-** Developing countries have, however, been given an option: adopt either the above mentioned route to tariffication of NTBs or an alternative which allows them to offer bound tariff levels without any reference to the tariffication formula.

### **Reduction in Tariff Rates:**

As we know, countries were able to set bound tariffs at very high levels. It is obvious that reduction in bound tariffs would be modest because the rules were such that the tariff cuts of 36% for developed countries and 24% for developing countries were based on simple averages rather than weighted averages. This implied that countries will be able to meet the requirements of the agreement by reducing tariffs on some of the sensitive commodities by only 15% (minimum cut in the case of developed countries) and 50 or 100% on others for which the tariffs are already low or on the commodities that do not compete with domestic production. Let us take an example – A country has four items, three politically sensitive items and one low priority item. Three sensitive ones are subject to 100% duty rates and one with 4% duty. Reducing the three high rates to 85% (a 15% cut) and eliminating the 4% rate (a 100% cut) would give an unweighted average cut of 36.25%. This would fulfill the commitments of a 36% unweighted average reduction in tariff, without exposing sensitive domestic products to any serious international competition.

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## **(b) Tariff Rate Quotas (TRQs)**

In the pre-UR era many governments used to support domestic agriculture with some amount of quantitative import controls. The Uruguay Round Agreement on Agriculture, however prohibits quantitative restrictions on Agricultural trade. Member nations with NTBs in place at the time of agreement were allowed to adopt Tariff Rate Quotas (TRQs) (Where there was no binding of tariff) as a transitional instrument. The intent is that all TRQs will eventually be transformed into simple tariffs. TRQ is a system of a two stage tariff – lower tariff rates for specified quantities (quota), higher (sometimes much higher) rates for quantities that exceed the quota.

The second element in market access relates to setting up of a minimum level for import of agricultural products by member countries as a share of domestic consumption. Countries are required to maintain current levels (base 1986-88) of access for each individual product. Where the current level of import is negligible, the minimum access should not be less than 3% of the domestic consumption, during the base period and tariff rate quotas (TRQs) are to be established when imports constitute less than 3% of domestic consumption. This minimum level is to rise to 5% (of base period consumption) by the year 2000 in the case of developed countries and by 2004 in the case of developing countries.

This provision thus seeks to impose the condition of minimum import of primary agricultural commodities on countries even if they do not require to import at all or need to import only small quantities when the new GATT

Agreement comes into effect. This is an area where the rules of free trade enshrined in the Uruguay. Round Agreement have been given up completely. Instead of using market prices as guide-posts, the level of imports are sought to be influenced by compulsory import quotas.

In particular, there are three weaknesses with TRQs. **First** – the use of TRQs is nothing but legitimizing quantitative restrictions. Legalising quotas is against the principle of liberalizing trade and is not compatible with the objective of the removal of quantitative restrictions on imports.

**Secondly**, the purpose of TRQs is to provide “tunnel through the tariff wall” because the tariff bindings were set at very high levels. Hence it was thought that the establishment of TRQs would lead to greater market access for those countries, which have comparative advantage in producing certain commodities. The experience, however, shows that even within quota, imports are subject to high tariffs; i.e. there is a problem of tariff peaks.

**Tariff peak:-** It is defined as tariff rates above 12% ad valorem.

**Tariff escalation:** tariffs increases with the stages of processing. (See Table 2.2 and 2.3)

A study by the UNCTAD shows that despite national tariff reforms in most countries of the world, high rates of applied tariffs are still widespread (Table 2.2). For example 52% of the products in republic of Korea and 48% of products in the EU will continue to exceed the level of 12% ad valorem ~~after~~ full implementation of the Round. As ~~for~~ as the distribution of peaks in two categories 12 to 29% and above 30% is concerned, 54% of the peaks in

Canada, 42% of the peaks in Republic of Korea and 37 percent of the peaks in USA exceed 30 percent.

The major product groups where tariff peaks remain a major problem are – dairy products, fruits and vegetables, preparations of fruits and vegetables, meat and fish and food industry product, in which India has comparative advantage.

There is also problem of tariff escalation. For example, cereals and sugar based products, canned fruits and Juices in the EU and orange Juice, pea nut butter and tobacco products in the USA are the examples of this tariff structure (see Table 2.3).

**Thirdly:** It has been observed that there is a lack of understanding and lack of specific rules in the AOA on how TRQs should be administered. It has been found that the minimum access opportunities were provided at the aggregate level and these are normally distributed in such a way that they hurt the domestic producers the least. In addition, there are problems in the allocation of TRQs because quite often these are allotted to traditional trading partner, which in a way prohibits the entry of products from other countries.

### **(c) Special Safeguards (SSGs)**

The objective of Special Safeguard (SSGs) provisions is to allow the use of additional duties over and above bound rates to be applied if certain conditions relating to import surges or declines in external reference prices are

met. Under the AOA's safeguard clauses (Article 5), SSGs are available for only those countries that have bound their tariff levels using tariffication formula. This implies that these provisions are not available to the majority of developing countries. This is an issue of particular interest to developing countries because the main advantage of SSGs over anti-dumping and counter vailing duties is that SSGs can be used without taking much time. On the other hand, to impose anti-dumping and counter vailing duties, it has to be established that dumping has actually occurred, there is a threat of material injury and that dumping is the cause of injury. The investigation of all this takes time, therefore, these are not of much use in the agricultural sector.

#### **(d) Other issues in Market Access**

In addition to the above issues, there are three other areas of concern under market access.

#### **Special Clauses**

The current agreement allowed countries such as Japan, Korea and Philippines to postpone tariffication for rice and Israel for some cheeses and butter. If these countries get away with extension of the delayed tariffication, it will not be in the interest of countries such as India. Rice has emerged as an important export item in the country's export basket. Therefore complete removal of such special arrangement is one issue of interest for India. Though these countries consume Japonica rice, but still expansion of rice market will

be beneficial for India and diversify its exports if it is possible to produce and export Japonica rice in India. Even if it is not possible to grow Japonica rice, some of the existing competitors may diversify their exports from Indica to Japonica, which may open up new opportunities for India's rice. In the case of dairy products also, India has now become the leading producer of milk in the world. In the future, milk and milk products may gain importance in the country's export basket.

### **Commodity Specific Arrangement**

World market for agricultural products is also plagued with commodity specific preferential access arrangements, which are leftovers of the past colonial history (*Josling 1998*). Because these bilateral arrangements allow members to maintain domestic prices high through protection at border, they are trade distorting. Such bilateral arrangements also hinder exports from countries that are not part of the arrangement and are efficient producers. For example, in the case of floriculture, a number of countries such as Gambia, Kenya, Zambia and Zimbabwe benefit from preferences in the EU under Lome convention likewise, exports from Colombia and Ecuador get free access in the EU. These arrangements are hurting Indian exporters of horticultural commodities in particular.

## Sanitary And Phytosanitary Standards (SPS)

The provisions of the agreement on sanitary and phytosanitary standards state that the **“measures taken to protect human, animal or plant health, must be based on scientific principles and shall not be applied in the manner that would constitute a disguised trade restriction”**. However, there are no specific guidelines in this regard, which grants lot of discretion in the agreement on sanitary and phytosanitary standards. Though the aim of this agreement is to prevent member countries from using human, animal and plant health standards for protectionist purposes. Every country, however, has its own rules regarding these restrictions such as inspection of imported products, specific treatment or processing of products, fixing of maximum allowable levels of pesticide residues or permitted use of certain specific additives in food. To some extent this is unavoidable because variations in geographical and sanitary conditions among countries make it difficult to apply uniform sanitary and phytosanitary requirements of products originating from different countries. But, this also leaves room for discretion. To make matters worse, SPS standards are becoming increasingly complex and in majority of developing countries even the required technology to do basic testing and certifications is not available. It will be in the interest of developing countries to make developed countries agree for meeting the standards specialized in the Codex Alimentarius Commission’s standards commonly known as CODEX.



## **Implications For India**

**Tariffication and tariff reduction:-** India has committed for tariffication of 686 agricultural commodities under AOA at 6 digit, or sub group of 6 digit, of HS classification. The bound rates for all the commodities were advalorem, except for two commodities ( HS codes 080211, 080212) whose bound rates were committed in the form of specific amount in Rs/Kg.

To understand the present state of the tariff rates of the commodities committed in the Uruguay Round, the UR bound rates should be compared with the present level of India's tariff rates. As is well known the government of India (GOI) levies two main types of custom duties on imported goods basic custom duty (BCD) and additional custom duty (ACD). The GOI's budget for 1999-2000 announced a surcharge of 10% on BCD (SCD). In the budget of 1998-99, a special additional duty (SAD) was announced in addition to earlier announced categories of import duties. The objective at SAD was to offset the sales tax on domestic goods. The standard rates of duty defined in the schedules however do not determine the actual duty rates applicable on different products. The BCD, ACD, SCD, SAD and various exemption notifications issued by the government determine the actual applicable duty rates called the 'effective duty rates'. The exemptions maybe use-specific, country-specific, commodity specific or value-specific. In the Table 2.4, those exemptions have been taken into consideration, which apply to all items under a tariff heading at 6-digit level of HS codes (see Table 2.4).

Table 2.4 presents the frequency distribution of the number of UR committed product lines, based on the level of difference in India's MFN rates for 2000-01 and the UR final bound rates. The distribution clearly shows that against 686 agricultural commodities for which India stood committed for tariff reduction, the 2000-01 levels of her MFN tariff rates are lower than those of Uruguay Round final bound rates for as many as 676 commodities (*Dhar, Chaturvedi, 1999*), in fact, differences was more than 50% and above for 85.6 percent of commodities numbering 587 out of 686. It reveals that India has not only maintained the UR bound rates, but has unilaterally reduced the MFN tariff rates substantially, compared to the level of UR final bound rates. (see Table 2.5).

From Table 2.5, it is seen that only 10 commodities for which India actual rates were higher than negotiated bound rates were largely hard drinks such as Whisky, Rum, Gin, Vodka, other compound alcohol, etc. (*Gulati – Narayan, 1999*).

India's unilateral decision to 'over-comply' with its tariff reduction commitment, could, perhaps, be interpreted as a tactical lapse. For example, in the case of some selected edible oils, whereas the bound rates of duty go as high as 300 percent, the applied rates are as low as 25 percent, even when the country was flooded with import of edible oils, as in 1999-2000. Similarly, for pulses, the bound rate is 100% but they are being imported under OGL, at zero import duty. Finally, India had to re-negotiate bound tariffs for 15 tariff lines (e.g. rice, skimmed milk powder, coarse cereals such as maize, sorghum,

millet, etc) which stood bound at zero import duty earlier due to India's commitments given in the previous GATT rounds under the hope that agriculture may never come under the GATT discipline, as indeed it did in the Uruguay Round.

However, if we take a view of developing world we find that while the developing world have been cajoled to remove non tariff barriers to smoothen out the international trade environment, the developed world has been consistently expanding the network of their non-tariff measures and imposing various trade restrictive impediments including the latest outcry of environmental concerns, labour standards, child labour, and so on. For example going by the 1998 UNCTAD estimates, as many as 22 non-tariff barriers were operative in Japan, as many as 16 in the EU, 9 in Australia, 4 in the USA, and so on (Panchamukhi, 2000:61). The story about tariff reduction is perhaps more depressing. A large and influential part of the developed world (notably Japan, USA and the EU) has not gone in for full tariffication of agricultural products; instead they have gone in for the so called tariff rate quota system for several commodities which, in essence restricts their entry and deny legitimate gains to the developing economies. The US tariff schedule, for example includes as many as 192 tariff lines to administer product specific tariff quotas, used particularly for dairy products, sugar, peanuts, tobacco, cotton, etc. The implicit hurt to the developing world can thus be imagined. The most telling example comes from the dairy sector. In 1999, the peak tariff rate for milk powder, granules etc. (fats < = 1.5%) was 99% in EU, 336% in Japan, 213% in

Canada, 211% in Korea against zero percent in India. Again for the same tariff line but with (fats  $\geq$  1.5%) the peak tariff rate in 1998 was 58% in US, 171% in the EU, 557% in Japan, 313% in Canada, 211% in Korea against zero percent in India.

### **QR Commitments**

In the Uruguay Round, it was decided to remove all types of quantitative restrictions (QRs) or prohibitions (other than tariff), whether maintained through quotas or import-export licenses. India had also agreed to phase out QRs on all commodities except for around 632 commodities for reasons related to security, religion etc. However India maintained QRs on import of some more items (around 1429 tariff lines) under provisions of Article XVIII:B of the URA until February 2000. This article recognizes that member whose economies can only support lower standard of living and are in the earlier stage of development may “apply quantitative restrictions for balance of payments position ... (and)...shall be free to deviate temporarily from the provisions of the other articles of this agreement”. The provisions relating to BOP also provide that a member has to announce, publicly, time schedules for the elimination of QRs. India presented time schedule of nine years for elimination of QRs. Although it was acceptable to most of developing countries, a number of developed countries had objection to a phased out period of even seven years. The US, EU, Canada, Australia, New Zealand and Switzerland (and Japan as third party) started the dispute settlement

proceedings against India. India reached mutual agreements with all countries except the US. Under this agreement, India agreed to phase-out its QRs over a time schedule of six years period i.e.. 1997-2003. But the US filed a dispute against India. A panel was constituted in November 1997 to examine the US allegation that the continued maintenance of QRs on India's imports was inconsistent with India's obligations under the WTO agreement. In a recent report of the Appellate body it is recommended that "India bring its balance of payments restrictions, which the panel found to be inconsistent with Articles XI: 1 and XVII: 11 of the GATT 1994, and with article 4.2 of Agreement on Agriculture, into conformity with its obligations under these agreements". As a result GOI, agreed to phase out QRs on the remaining 1429 tariff lines by March 2001. In the export – Import policy for 2000-2001. India has already removed 714 items from the quantitative restrictions. The remaining 715 items were made free of QR from 1 April 2001.

The possible impact of QRs removal on imports and safeguards measure can be analyzed in terms of following parameters.

- For the bulk of the commodities that have been freed for import over the last two Exim policies, tariffs have been set at level up to 70 percent. These are well within the binding commitments (or "bound tariffs") that have been given by India to the WTO – which represent the customs duty rates beyond which recourse is not permitted. India has renegotiated bound tariffs on 15 tariff lines with its major trading partners, having initial negotiating rights. These commodities range from rice, skimmed milk

powder to coarse cereals like maize, sorghum, millet, and so on (see Table 2.6)

These were major agro-commodities, and India was worried about the impact of lifting QRs on imports of these commodities at zero import duty. It is worth noting here that in case of rice, in its different forms, the renegotiated rate has been raised from zero to 70% to 80%. In the course of other coarse cereals also, the renegotiated rates is fairly high. For example Sorghum has 80%, millet 70% and maize 60% (maize seed 70%). In the case of maize, it is important to note that India has gone in for tariff rate quota (TRQ) system, whereby a quota of maize ranging from 350,000 MT in the first year to 500,000 MT in the fourth year would be imported at a duty of just 15 percent. TRQs have also been agreed in the case of two tariff lines of milk and cream powder, whereby 10,000 MT of each of these lines would be importable at 15% duty After that, the duty can go up to 60%. There is one more commodity of which TRQ has been agreed upon and that is rape, colza and mustard oil, other (HS 1514.90). A TRQ of 150,000 MT has been agreed to at 45% import duty, after which the duty can go up to 75%. The introduction of these TRQs in just three commodities is unlike the bound rates of duty on the rest of agro-commodities. The average basic duty rate for all agricultural tariff lines, however, is 34.9% in 2000-01 vis-à-vis a bound tariff of 114.9%. If SAD and SCD are also added, the applied rate would be a bit higher and still way below the bound rates.

- Another safeguard that has been built into the Exim policy is the reservation of certain tariff lines for import through 'State trading Enterprises'. This list is limited to the most sensitive commodities such as rice, wheat, maize, coconut and coconut oil. The commerce ministry is convinced that this mode of conferring an import monopoly on certain enterprises is well within WTO rules.
- Quoting a study by the food and agriculture organization (FAO), India's submission to the WTO notes, for instance, that the six year record of liberalization in agriculture has been asymmetric in its impact: "while trade liberalization has led to an almost instantaneous surge in food imports, (Developing) Countries were not able to raise their exports". This, in turn, has led to "small producers" being "marginalised" and "added to unemployment and poverty".

As a remedy, India has proposed that developed countries should adopt "tariff bindings that effect a substantial reduction in all tariffs". Concurrently developing countries should be allowed to maintain appropriate levels of tariff bindings, keeping in mind their development needs and the high distortions prevalent in international markets". And in addition, a special safeguard mechanism is urged that would allow for the "imposition of quantitative restrictions under specified circumstances".

- The QRs removal can also have a resource allocation impact. As production in the affected sectors get squeezed due to higher level of import penetration, the resources from those sectors may flow to other sectors with higher level of competitive efficiencies.
- Higher level of competition through imports can also act as a catalytic agent for enhanced efficiency.

### **Implications of Removal of QRS**

**Impact on domestic prices:** The impact on domestic prices would, to a large extent depend on reduction in aggregate measure of support to agriculture stipulated under GATT. As the Uruguay Round seeks to boost agricultural trade via substantial reduction in protectionism. Prices in member countries are expected to move closer to international prices.

**Price Volatility** Studies show that world prices have been more volatile than Indian prices (*Nayyar and Sen 1994*). Based on this it is inferred that dismantling trade barriers on imports would increase volatility of Indian prices and farm incomes and that majority of small and marginal farmers would not be able to withstand such price shocks.

The impact of freeing of imports on domestic price volatility would depend on a number of factors. **The foremost among these is incidence of dumping.** This can occur when there is bumper harvest in some country or at global level or when some big dealers (MNCs in agricultural trade) offload



their inventories. There is a provision in GATT to use antidumping measures if the produce is offered for sales at a price lower than the normal price in the domestic market of exporting country. Therefore, the extent of impact of variations in world prices on Indian Prices would depend on the domestic policies to check.

- (1) Dumping when there is glut at international level and
- (2) Speculative buying, when there are shortages

**Second** the impact on domestic price volatility would depend upon the correlation between domestic and global production. Suppose in a year international price of some commodity is at normal level but its output in India is below normal. In this situation <sup>Indian</sup> price would be above normal. Import in this situation would stabilize Indian Price but raise international price when a big country like India goes for (large) import. Similarly in the reverse situation (global prices at normal level and production in India above normal) India would go for export to stabilize domestic price, which would put downward pressure on international price. In such situations India would pass on some of the price volatility to international market. Thus there is situation in which trading with international market can help in reducing price volatility in domestic market.

### **Impact on produces, consumers and net social welfare**

Agricultural producers and consumers would be affected by trade liberalization through prices, production efficiency, subsidy benefit to farmers and subsidy burden on tax payers. Removal of QRs on imports would lead to some imports. A section of our society in high income bracket is non-sensitive to price but they prefer high quality, well packaged, hygienic and reliable food. MNCs can win over consumers in this group by selling well advertised branded and attractively packaged produce

### **Impact on Human Nutrition and Food Security**

Quite a few scholars have analyzed impact of trade liberalization on human nutrition resulting from export promotion, but little attention has been paid to the impact due to import liberalization. Some calculations taking into account nutritional requirement and projected population and farm output show that even at 3% growth in output, under nutrition would continue to afflict roughly half the population in year 2000 AD and there may not be much by way of exportable surplus (*EPW, August 27, 1994*).

Lot of attention has been paid to the impact of trade on food security, which is an important concern for every nation. Studies on impact of trade liberalization on food security have focused on impact of export orientation of agriculture. The views emerging from these studies is that liberalization of agricultural exports would shift crop pattern towards high value crops and

result in diversion of food grains to livestock feed which would adversely affect food security of vulnerable sections (*Patnaik. Utsa*).

**Policy Instrument** The policy instrument available to government to rectify this ambiguities include.

1. have access to safeguard measures as allowed under article XIX of GATT 1947.
2. impose anti-dumping duties if justified, under article VI of GATT 1947.
3. attempt renegotiation of special safeguard measures in WTO so far as agricultural imports are concerned.
4. introduce flexible tariffs subject to the bound tariff requirement under the WTO.
5. convert ad-valorem duties to specific duties in the case of those products which are more price sensitive, thereby giving constant level of protection to the domestic industry.
6. can think of intervention in the foreign exchange market, subject to other macro economic objectives, to have a lower exchange rate which will indirectly increase the level of protection from imports.
7. develop support measures which are WTO consistent such as subsidy for research and development, financial help for fighting anti-subsidy and anti-dumping cases, introduce measures to reduce transaction costs such as EDI and simplification of regulatory process.

8. Improve infrastructure and better operational efficiency of the existing infrastructure

### **Domestic Support**

Provisions of the agreement on domestic support measures have <sup>two</sup> main objectives:-

- to identify acceptable measures of support to farmers
- to discipline trade distorting support to farmers.

These commitments regarding domestic support are primarily aimed at containing the high levels of domestic agricultural support in developed countries. This objective is to be achieved by quantification of domestic support, that is, the aggregate measure of support (AMS) and then by progressive reduction of the AMS. The agricultural agreement distinguishes between support programmes that stimulate production directly and those that are considered to have no direct effect. Domestic policies that do have a direct effect on production and trade have to be cut back. WTO members have calculated how much support of this kind they were providing (using calculations known as 'total AMS') for the agricultural sector per year in the base years of 1986-88.

### **Product Specific AMS**

The AMS is calculated on a Product Specific basis for each basic agricultural product receiving market price support, non-exempt direct payments or any other subsidy that is not exempted from the reduction commitment (other non-

exempt policies). Market price support is computed as the gap between a fixed external reference price (based on years 1986-88, it is the average fob unit value in a net exporting country and the average cif unit value in a net importing country, adjusted for quality differences) and the applied administered price multiplied by the quantity of production eligible to receive the applied administered price. Budgetary payments made to maintain this gap, such as buying-in or storage costs are not to be included in the AMS. Non-exempt direct payments which are dependent on a price gap are computed using the difference between the fixed reference price and the applied administered price multiplied by the quantity eligible to receive the administered price. Those non-exempt direct payments that are based on factors other than price are to be estimated using budgetary outlays. The aggregate measure of support (AMS) is the subsidy/tax, net of direct taxes or levies provided to producers expressed as a percentage of market value of total output of each commodity.

$$AMS = [Q_d(P_d - P_b) - AF] / (Q_d \times P_d)$$

Where  $Q_d$  is the quantity produced of a particular commodity,  $P_d$  and  $P_b$  are the domestic and border prices of the same commodity for which the market support/tax is being calculated and  $AF$  is the associated fees or levies charged on that particular commodity. In the AMS only subsidy/tax provided through price support and direct taxes is taken in to account.

**Non-Product Specific AMS:-** Since crop-specific allocation of input subsidies such as fertilizers, electricity, irrigation etc. is difficult, therefore these are put into one non-product specific AMS, which measures total indirect support for the agriculture sector. It is calculated as the gap between the price of the subsidized good or service and its representative market price multiplied by the quantity of the good or service.

**NOTE : I**

- (a) Subsidies include both budgetary outlays and revenue foregone by governments or their agents.
- (b) Supports at both national and sub national levels are included.
- (c) Specific agricultural levies or fees paid by agricultural producers are deducted from the AMS.
- (d) For each basic agricultural product, a specific AMS is established.  
Expressed in total monetary value terms.
- (e) AMS is calculated as close as practicable to the point of first sale of the product concerned.
- (f) Those measures that are directed at agricultural processors are included to the extent that such measures benefit the producers of the basic agricultural products.
- (g) The AMS for the base period, calculated in the manner above constitutes the base level for the implementation of the reduction commitment on domestic support

**NOTE : II**

There is an alternative method to AMS is PSEs (Producer Subsidy Equivalents). They summarise the effects of different forms of governmental programmes and interventions in a single number. This method is superior to other tools like nominal or effective rates of protection since these often account for only a small proportion of the transfers between government and the producers of agricultural commodities Symbolically, PSE can be defined as:

$$\begin{aligned} \%age \text{ PSE} &= \text{Total Transfers} / \text{Value to Producers} \\ &= [Q * (Pd - Pw * X) + D + I] / (Q * Pd + D) \end{aligned}$$

Q is the quantity produced.

Pd is the producer price in domestic currency units

Pw is the World Price in World currency units

X is an exchange conversion factor.

D is direct government payments.

I is indirect transfers such as input subsidies,

Marketing assistance and exchange rate distortions.

It may be noted that the PSEs reported here differ from estimates of AMS. The difference emerges because PSE take the reference world prices of the same year as the domestic prices, which vary over time. In AMS, the reference world prices are fixed for the years 1986-88.

Under AOA, A country whose product-specific and non-product specific AMS does not exceed the de-minimis level, that 10% of the total value of agricultural produce in developing countries and 5% in developed countries, is not subject to any reduction commitments. If, on the other hand, the AMS exceeds the de-minimis level, the country is committed to reduce domestic support: by 13.0% in the case of a developing country over 10 years and 20% in the case of a developed country over 6 years. It may be noted that the obligation is on total AMS and within that there is flexibility to choose products covered and extent of support measure and quantity of products that benefit from them. No reduction is required for the least developed countries. The base period external reference price on which the reductions were calculated is 1986-88.

Domestic Support (Base 1986-88)	Developed Countries (1995-2000)	Developing Countries (1995-2004)
AMS	20%	13%
	Deminimis level 5%	Deminimis level 10%

### **Ambiguous AMSification**

The procedure for estimating AMS is not foolproof. It has a lot of ambiguity.

- First of all, in calculating market price support external reference remains fixed based on the years 1986 to 1988. Since the world prices during 1986-88 were quite low, the estimated AMS for that period turned out to be quite high. Reducing that by 20% by developed countries over six years does not



really mean anything when world prices during mid-1990s went up. This process sometimes is referred as “**dirty AMSification**” (*Pursell, 1999*).

Obviously, the estimates of AMS would differ depending upon whether one uses a fixed (1986-88) external reference price or a varying reference price.

- Developing countries like India have another problem in correctly estimating AMS because of the nature of exchange rate regime. During 1986-88, India followed fixed exchange rate system. The official exchange rate was about 15 to 20% below the “free exchange rate”. And such a situation existed in most of the developing countries suffering from chronic shortage of foreign exchange. Depending upon which exchange rate one uses, the estimates of AMS would differ.
- The legal text states that the fixed external reference price is cif if the country is net importer and fob if it is net exporting. But what if the country was a net importer during 1986-88 but has become a net exporter during 1995-99? Should one keep using the cif price as the relevant reference price or should one switch to fob price? If one switches to fob price, should it be of 1986-88 fob price or of 1995-99, when that country emerged as net exporter? Further how sound is the assumption of taking each country as a price-taker in the world market, especially when the country is large?
- The AOA also states that the difference between external reference price and domestic support price should be multiplied by the ‘quantity of production eligible for support’ to estimate product-specific support. It is well known that in developing countries a substantial portion of production

is used for home consumption. In that case should one use total production of the commodity as the relevant quantity or the marketed surplus or the quantity actually purchased by the government agency at the support price.

- In case of non-product specific support, say for fertilizers, the issue is: should one use the budgetary support under the title (Fertilizer subsidy) or estimate it as the difference between external reference price (fixed or variable?) and domestic price paid by the farmers? This is important in India as almost half the fertilizer subsidy shown in the budget is given to fertilizer companies (on flat rate basis or through retention price scheme) to cover their high costs of production compared to the import parity prices. (*Gulati, 1999*). Is the farmer being subsidized or is it the fertilizer industry? Similar problems arise in the case of estimating non-product specific support through power-supplies to agriculture, canal irrigation and rural credit. In case of power, for example, it is well known that consumption figures for agriculture sector are worked out on 'residual basis', and that these government estimates overestimate the real consumption by a wide margin, anywhere from 20% to 80%, depending upon the state.

There is lot of confusion in the interpretation of the negative values of the product specific support and adding negative values of product specific support and positive values of non-product specific support, again due to lack of clarity in the agreement. As per the agreement a member shall not be required to include in the calculation of its current total AMS and shall not be required to reduce the product specific support which would otherwise be

required to be included in the calculation of current AMS, where such support does not exceed 5% of total value of production of a basic product during the relevant year. This implies that all negative values would be treated as zero. The problem with this interpretation has significant implications for those countries, which do not subsidize their agriculture.

- It is well established in literature that most of the developing countries have taxed their agricultural producers, whereas the developed countries, have subsidised their agricultural producers. This policy has prevented developing countries from exploiting their true potential in agricultural production and exports. Treating large negative numbers of product-specific support in the developing countries as zero would imply that these countries would be penalised for taxing their agriculture because they are not being allowed to compensate negative product-specific support with positive non-product specific support. On the other hand, countries that subsidise their agriculture and have to reduce domestic support will be rewarded, because they can continue to subsidise their production to the tune of 5%.
- In fact, there is no economic logic for the arguments as to why a negative number cannot be added to a positive numbers. If the difference between the external reference prices and domestic prices turns out to be positive, the producers are being subsidized and if this difference turns out to be negative, the producers are being taxed. The agreement clearly says that the basis for reduction of domestic support is the 'Total AMS', which is

defined as the sum of product specific and non-product specific, then why these cannot be added?

- Further, there is lack of clarity in the interpretation of even the negative values of Total AMS. It is mentioned in Article 7.2 (b) – “where no Total AMS commitments exist, the member, shall not provide support to agricultural producers in excess of the relevant de minimis level set out in Article 6.4”. This means that countries, which don’t have reduction commitments, are eligible to raise their domestic support up to the de minimis level. But Article 13b (II) states that domestic support that conforms to the provisions of the agreement will be non-actionable provided that such measures do not grant support to specific commodity in excess of that decided during the 1992 marketing year. Because of this ambiguity, it is not clear whether countries could even avail, the de minimis level of support allowed in the agreement.

So, Even if in theory one comes to an agreement on these issues, it is difficult to obtain accurate information on many of these in developing countries.

- Finally, under AOA (Article 6, para 2) Article 6.2 – agricultural input subsidies generally available to low income or resource poor farmers in developing countries are exempt from domestic support reduction commitments. This also applies to domestic support granted to encourage diversification from growing illicit narcotic crops is also exempt from reduction commitments. The problem with this clause, however, is that how

to define a low-income or resource poor farmer? This is not mentioned in the agreement. In a country like India, can one say a farmer cultivating less than 10 hectares or 4 hectares or 2 hectares is a resource poor producer? By global income standards, even farmer with 10 hectares of land and Indian level of yields is perhaps a resource poor farmer. If this is accepted, 90% of India's non-product specific support should be exempted from AMS calculations. However, even if one takes a very conservative estimate of low income and resource poor farmers in India, all those with 4 hectares or less land would fall in this category. This is the size of the holding in India which can be considered as a minimum breakeven size, which is necessary for a farm family to make both ends meet. Even on this conservative basis, almost 60% of the non-product specific support would be exempt from AMS calculations. (see Table 2.7)

It may be noted that the estimates of domestic support to Indian agriculture have been negative in all the years, ranging from -28% in 1997 to -65.8% in 1992. Also, the estimates given here are different from the ones that are submitted by GOI to WTO, although both shows negative AMS. The reasons for this difference are many. But the important ones are: one, the commodity coverage in GOI's estimates is different than what we have here; second, there are some major mistakes in GOI's estimates of AMS, for example, in the AMS calculation while the product-specific support is estimated for selected commodities in the numerator, it is divided not by the value of these very selected commodities but by the value of all agricultural

production in denominator. Obviously, the negative product specific support in percentage terms gets underestimated.

The Trade Policy Review of India by WTO (1998) also puts its product-specific AMS for 19 commodities in 1995-96 at -38.47% of the value of production (WTO, 1998) which is somewhat different than that presented in Table 2.7 presumably due to differences in commodity coverage. India's non product specific AMS was shown as 7.52% of the total value of agricultural production, which differs from the estimates in Table 2.7 because the Trade Policy Review did not take into account the exemption allowed to 'low income and resource poor producers'. In any case since the AMS remains less than the 10% de-minimis level for developing countries India has no reduction commitment whatsoever with regard to either total domestic support, product-specific or non-product specific support.

It would therefore be in India's interest to take a stand on the issue of 'Total AMS'. Currently, reduction commitments are on 'Total AMS', which implies that a country can offer substantial domestic support to one or more commodities and yet have an overall 'Total AMS' that meets the commitment levels. Reduction commitments do not, therefore ensure that domestic support measures are free from trade distorting effects of all commodities. It has been observed for instance, that highly protected commodities like sugar, meat and milk show little or no liberalization. Oil seeds, fruits and vegetables, which were less protected, were further liberalized (*Hathway and Ingco. 1995*). The implication is that for products that have high product specific. AMS, domestic

support for that product is still a trade distorting measure. India should therefore press for reduction commitments on product-specific AMS rather than total AMS, arguing for a ceiling of 30% on product-specific domestic support.

### **Comparative studies of different groups giving high protection to agriculture**

Most of the major industrial countries of the OECD pursued costly trade-distorting agricultural support policies right through the decade of the 1980s. The level of support to agriculture increased sharply in 1986 when the Uruguay Round was launched and remained like that until the 1990s. (Kelly and McGuirk 1992). This increasing trend continued until 1995, when the implementation of AOA was to begin. For instance, in 1986-88, the producer subsidy equivalent (PSE) for the OECD countries as a whole was 39% increasing to 41% in 1995. It has been declining ever since. When the OECD (excluding Hungary, Poland, Czech Republic, Mexico and Korea) is considered, the PSE level has declined gradually but consistently from 45% in 1986-88 to 35% in 1996.

Despite declines in protection and support to agriculture, it remains a fact that several developed countries have exceedingly high protection levels. Four broad groups of countries can be identified depending on the extent of protection offered to their agricultural sectors.

1. **European Countries:** Particularly the countries that belong to the European union and the European Free Trade Agreement. The European

Union has a level of support that is just above the OECD average. There has been a clear downward trend in market price support, especially since the 1990s, which can be attributed in roughly equal parts to decreases in producers prices and increases in world prices expressed in ECUs. In 1997, just over half of support was in the form of market price support, as compared to more than three-quarters in 1986-88. Direct payments have increased fourfold and now account for nearly a third of all support.

The countries belonging to EFTA (European Free Trade Association) have among the highest PSEs in the world. The EFTA was established in 1958 with a view to removing tariffs on goods produced in and traded among member states. The current members comprise Iceland, Norway, Switzerland and Liechtenstein.

2. **East Asia Group:** It comprised of Japan, South Korea and Taiwan among others. These countries are essentially net importers of agricultural produce although there has been liberalization in some agricultural products in Japan, basic food products continue to be highly protected. In fact agricultural transfer-accounted for a greater proportion of GDP than that of agricultural GDP itself. The percentage of agricultural GDP to total GDP was 1.4% in 1995 (provisional), while estimated share of transfers in total GDP was higher at 1.8 percent (WTO 1998).
3. **U.S., Canada, the Visegrad countries (the Czech republic, Hungary and Poland):** They have succeeded in reducing previously high PSEs. In the



US, the PSE has fallen by almost half since 1986-88. Recent developments have been marked by the shift from set-aside and deficiency payments for crops to digressive direct income payments.

Canada is net exporter of agricultural produce and is pro-reform. However Canada which is also a major importer, has a high PSEs and has in place an extensive income support system for its heavily protected domestically oriented agricultural sector.

**4. Cairns group:** This group of countries consists of members of the net food exporting countries. These countries, particularly Australia and Newzealand, have very low protection levels and strongly advocate free trade. New Zealand, with a PSE of 3%, provide the lowest level of support of all the OECD countries. In Australia, the PSE is second lowest in the OECD area in 1997. Less than half of Australia's PSE is from market price support, the remainder being provided in the form of input subsidies and expenditures on infrastructure and general services.

This review clearly shows that it is important for India to seek reduction - in high domestic support by the developed countries most notably European and the east Asian countries.

Another important issue regarding Agreement on Agriculture is given in part XIII of Annex-2 which details the basis for exemption of a prescribed list of measures from reduction commitments. There are three categories of support measures that are not subject to reduction under the agreement, and support

within specified de-minimis level is allowed. These three categories of exempt support measures are:

**1. Green Box Measures:** Measures which have a minimum impact on trade and which meet the “basic and policy specific criteria” set out in the Agreement.

- (a) the support in question has to be provided through a publicly-funded government programme (including government revenue forgone) not involving transfers from consumers; and
- (b) the support in question shall not have the effect of providing price support to producers..

These measures include “Government assistance on general services” like.

- (i) Research, pest and disease control, training, extension and advisory services;
- (ii) Public stockholding for food security purposes
- (iii) Domestic food Aid
- (iv) Direct payment to producers like Decoupled income support, governmental financial participation in income insurance and safety nets, relief from natural disasters, and payments under environmental assistance programmes. Structural adjustment assistance, payments under regional assistance programmes limited to producers in disadvantaged region.

**2. Special and Differential Treatment Box (S&D Box)-** Developing country measures otherwise subject to reduction which meet the criteria set out in paragraph 2 of Article 6 of the Agreement. Examples of these are:

- (i) Investment subsidies which are generally available to agriculture in developing countries;
- (ii) Agricultural input services generally available to low income and resource poor producers in developing countries.
- (iii) Domestic support to producers in developing country members to encourage diversification from growing illicit narcotic crops.

**3. Blue Box Measures:** It refers to direct payments, to producers under 'production-limiting' programmes given in Article 6.5 of the Agreement. These are relevant from the developed countries point of view only. It includes payment, not linked to production, structural adjustment assistance provided through investment aids to compensate for the structural disadvantage, through resource retirement programmes, through producer retirement programmes. These shall relate solely to income and not to either the level of production or to prices, domestic or international.

Such a wide range of support measures that are exempt from reduction commitments thus offers enormous possibilities for member countries to alter their domestic support structure in a manner where there is apparent reduction in domestic support as measured by the AMS but a corresponding increase in exempt measures like direct payments of the sort mentioned above.

The growing use of direct payments supposedly represents a shift away from production-linked and towards direct income payments in providing support to farmers. While direct payment measures have improved market orientation to the extent that there is a decline in output-related price support, they have not always reduced the dependency of the agriculture sector on support. What these Blue Box payments do is to cover the fixed costs of the farmer, leaving him to bear only the variable cost. This makes even the most inefficient farmers competitive. Thus although in terms of resources allocation, these programmes are supposed to achieve dissociation from production and weaken the policy incentive to increase agricultural production at the margin, they end up encouraging the farmers in the industry. Increased production results in these countries exporting more at lower prices harming other competitors who may be more efficient producers of a commodity.

The fact that European countries are disguising trade distorting domestic support under the Blue Box canopy, therefore, is an issue that India must put forth in strong terms in forthcoming negotiations.

### **Export Subsidies**

Export subsidies are special incentives provided by governments to encourage increased foreign sales. Export subsidies are provided by a country to make its commodities globally competitive. Export subsidies are particularly prevalent in the countries which support high internal prices above world price level. Export subsidies and domestic subsidies are considered to be the root cause of distortion in the world agricultural trade.

### What is Distortion

The concept of 'distortion' is used a lot when agricultural trade is discussed. Essentially, trade is distorted if prices are higher or lower than normal, and if quantities produced, bought, and sold are also higher or lower than normal – i.e. than the levels that would usually exist in a competitive market. For example, Import barriers and domestic subsidies can raise crop prices on a country's internal market. The higher prices can encourage over production, and if the surplus is to be sold on world markets, where prices are lower, then export subsidies have to be paid. When some countries subsidize and others do not, the result can be that the subsidizing countries are producing considerably more than they normally would. Governments usually give three reasons for supporting and protecting their farmers, even if this distorts agricultural trade:

- to make sure that enough food is produced to meet the country's needs.
- to shield farmers from the effect of the weather and swings in world prices.
- to preserve rural society.

But the policies have often been expensive, and they have encouraged gluts leading to export subsidy wars, countries with less money for subsidies have suffered. In negotiations, some countries have argued that trying to meet any of these objectives is counter-productive. Others have attempted to find ways of meeting the objectives without distorting trade too much.

The Agreement on Agriculture prohibits export subsidies on agricultural products unless the subsidies are specified in a member's list of commitments. Where they are listed, the agreement requires WTO members to cut both the amount of money they spend on export subsidies and the quantities of exports that receive subsidies. Taking average for 1986-90 as the base level, developed countries have agreed to cut the value of export subsidies by 36% over the six years starting in 1995 and 24% over 10 years for developing countries. Developed countries have also agreed to reduce the quantities of subsidized export by 21% over the six years and 14% over 10 years for developing countries. Least developed countries do not need to make any cuts.

Export Subsidies (Base 1986-90)	Developed Countries (1995-2000)	Developed Countries (1995-2004)
Subsidy value	36%	24%
Subsidized quantities	21%	14%

The export subsidies in the AoA (Part 5, Article 9) that are subject to reduction commitments include direct subsidies to agricultural producers contingent on export performance; subsidies on agricultural products, contingent on their incorporation in exported products; provisions on favourable terms of internal transport and freight charges on export shipments (developing countries are exempt from commitments on this form of subsidy provided that it is not used to circumvent reduction commitments), subsidies to

reduce the cost of marketing exports of agricultural products excluding export promotion and advisory services (here again, developing countries are conditionally exempt from reduction commitments) sales or disposal for export of non-commercial stocks of agricultural products by the government or its agencies at a price lower than the comparable price charged for a like product by buyers in the domestic market; and payments on the export of an agricultural product that are financed by virtue of governmental action whether or not a charge on the public account is involved, including payments, that are financed from the proceeds of a levy imposed on the agricultural product concerned or on an agricultural product from which the exported product is derived.

Export subsidies not listed above (including export credits, export credit guarantees or insurance programmes) can be used, but not in a manner that results in or threatens to lead to circumvention of reduction commitments nor may non-commercial transactions be used to circumvent such commitments.

Export subsidies of the kind listed in the agreement which attract reduction commitments are non-existent in India. Exemption of export profits provided in India from Income tax under section 80-HHC of the Indian income tax act is not among the listed subsidies. It is also worth noting that developing countries are free to provide certain subsidies, such as, reduction of export marketing costs, internal and international transport and freight charges. India is making use of these subsidies in certain schemes of Agricultural and processed Food Products Exports Development Authority (APEDA), specially

for facilitating export of horticulture products (Fruits, Vegetables and flowers). India has, however, capped its export subsidies and is required to notify the WTO on its direct export subsidies once in two years.

High export subsidies in developed countries continue to be a major constraint inhibiting exports from efficient producers despite agreed reductions in export subsidies by the developed countries. Because of export subsidies a handful of countries are able to maintain their competitiveness at the expense of those, which are not able to use export subsidies but are efficient producers of a wide variety of agricultural commodities. In the period 1986-90, the world's top five users of export subsidies for any given major product account for almost the total of such subsidy in the world and for almost all commitments for reduction. For example, of the total export subsidies on wheat in the world, the share of the top five countries (the US, the European Union, Canada, Turkey and Hungary) was 95%. For rice the figure was 100% and the countries subsidizing their rice exports most were Indonesia, the European Union, Uruguay, the US and Colombia. For most of the product, the European Union is the largest user of export subsidies particularly for sugar and dairy (Hathway and Ingco, 1995). Similarly, in the case of coarse grains 58 percent of the volume reduction is accounted for three exporters, the EC, Hungary and Canada. Thus, it is evident from the fact that only 25 of the 136 current WTO members have the right to use export subsidies. Thus India's interest lying in complete wiping out of export subsidies by the developed countries especially the EU and Eastern Europe.



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**Table-2.2: Tariff Peaks in Selected Countries**

Sr. No.	Country	Number of items	Number of peaks	Share in total items	Percentage of distribution of tariff peaks		Major items and their shares in tariff peaks
					12-29 %	> 30%	
1.	EU	2726	1273	46.70	61	29	Prep. F&V (20), Meat (17), Fish and Fish products (11), Fruits and Vegetables (10) and Dairy products (10)
2.	Japan	1890	718	37.99	71	29	Food Industry products (24), Prepared F&V (20), Dairy products (18), and Cereals and cereal products (12)
3.	USA	1779	334	18.77	63	37	Dairy products (42), Food industry products (16) and sugar and cocoa preparations (12).
4.	Canada	1429	164	11.48	46	54	Dairy product (23), Fruits and vegetable (16), Cereals preparations (13) and Food industry products (13)
5.	Brazil	939	271	28.86	100		Food Industry products (21), Prepared fruits and vegetables (19), Beverages and tobacco (16), and Dairy products (13)
	Republic Korea	1575	816	51.81	58	42	Food Industry products (21), Prepared F&V (19), Beverages and tobacco (16) and Dairy products (13)
6.	Malaysia	1252	263	21.01	76	24	Prep. F&V (27), Beverages and tobacco (17), Canned and prepared meat, fish etc. (15), Food industry products (14), and Fish and crustacean (11)

Source : Developed from UNCTAD(1997), by Anil Sharma

Note : 1. Tariff peak is defined as rates above 12 percent *ad valorem*.

2. Figures in parentheses in last column are the shares of each product group in tariff peaks.

**Table-2.3: Tariff Escalation in Selected Countries**

Sr. No.	Country	Basic Product		Processed Product	
		Product	Tariff (per cent)	Product	Tariff (per cent)
1.	EU	Milk	113	Cheese	120
		Oranges	16	Orange Juice	52
		Pineapple	6	Pineapple Juice	46
		Grapes	18	Grape Juice	215
		Apples	11	Apple Juice	63
2.	Japan	Milk	280	Yoghurt	370
		Pineapple	17	Pineapple Juice	30
		Grapes	12	Grapes Juice	30
		Apples	17	Apples Juice	34
3.	USA	Milk	66	Milk in powder	179
				Cheese	133
		Oranges	4	Orange Juice	31
		Pineapples	3	Pineapple Juice	12
		Grapes	1	Grape Juice	14
4.	Canada	Milk	241	Butter	300

Source : Developed from UNCTAD (1997) by Anil Sharma.

**Table-2.4: Difference in MFN Tariff Rates and UR final Bound Rates:**

**Number of Lines by different Range Groups (FY 2000-01).**

Range (UR-TR)	No. of Lines
UR-TR $\geq$ 75	296
50 $\leq$ UR-TR $<$ 75	291
25 $\leq$ UR-TR $<$ 50	19
10 $\leq$ UR-TR $<$ 25	32
0 $\leq$ UR-TR $<$ 10	38
UR-TR $<$ 0	10
Total	686

TR = MFN Tariff Rates (BCD) as announced in G.O.I, Budget 2000-01, read along with other notifications in force.

UR= Uruguay Round final bound rates.

Notes: (i) Tariff lines at 6-digit HS or sub-groups of 6-digit HS.  
(ii) Includes only agricultural products.

Sources of data : (i) WTO,  
(ii) G.O.I, Customs and Central Excise Budget, 2000-01.

**Table-2.5: Difference between MFN Tariff Rates (TR) for 2000-2001 and Corresponding UR final Bound Rates: List of Commodities with TR>UR**

HS Code	Description	UR Bound Rate	MFN Rate	(UR-TR)
080620	Dried Grapes	100	115	- 15
210690	Other Food preparation not elsewhere specified	60	170	- 110
220710	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 per cent of vol or higher	150	210	- 60
220820	Spirits obtained by distilling grapes wine or grape marc	150	210	- 60
220830	Whiskies	150	210	- 60
220840	Rum and Taffia	150	210	- 60
220850	Gin and Geneva	150	210	- 60
220860	Vodka	150	210	- 60
220870	Liquors and cordials	150	210	- 60
220880	Other compound alcohols	150	210	- 60

TR = MFN Tariff Rate (BCD) as announced in G.O.I., Budget 2000-01, read along with its notifications.

UR = Uruguay Round Final Bound Rates.

Notes: (i) Tariff lines at 6-digit HS or sub-groups of 6-digit HS.  
(ii) Includes Agricultural products.  
(iii) Based on final bound rates.

Source of Data : (i) Same as in Table

Sources of data : (i) WTO,  
(ii) G.O.I, Customs and Central Excise Budget, 2000-01.

**Table-2.6 : List of products for which Bound Rates have been Renegotiated**

Tariff item	Description	Original WTO Bound rates (%)	Renegotiated bound rates (%)	INR	Basic Customs Duty	Effective Duty	Import Policy	Special Remarks
0402.10	Milk and Cream in powder, granular or other solid forms – of fat content, by weight, exceeding 6%	0	60	AU, US, CA, EC	60	0		A tariff quota of 100000 MT at an in-quota tariff rate of 15% applicable cumulatively to both the tariff lines 0.402.10 and 0.402.21 same as above.
0402.21	Milk and Cream in powder, granules or other solid forms of a fat content by weight exceeding 1.5% - Not containing added sugar or other sweetening matter	0	60	AU, US, EC	60	0		Same as above
0806.10	Grapes	30	40	US	40	25		
Ex 1000.90	Fresh Spelt	0	80	TR	90	0		
1005.10	Maize (corn) seed	0	70	ID	70	0		
1005.90	Maize (corn) other	0	60	ID	60	0	Restrict-ed	India establishes a global TRQ at an quota rate of 15% for the following quantities Year 1: 350000 tonnes; Year 2: 400000 tonnes; Year 3: 450000 tonnes; Year 4 and beyond : 500000 tonnes
1006.10	Rice in the husk (paddy or rough)	0	80	BR	80	0		040590.02 Restricted
1006.20	Husked (brown) rice	0	80		80	0		Restricted
1006.30	Semi-milled or wholly milled rice, whether or not polished or glazed	0	70	BR	70	0		
1006.40	Broken rice	0	80	BR	80	0	SIL	
1007.00	Grain sorghum	0	80	US	80	0		
1008.20	Millet	0	70	TR	70	0		
1314.10	Rape, colza or mustard oil, crude	45	75		75	35		
1514.90	Rape, colza or mustard oil other	45	75		75	35		Tariff Quota of 1500000 tonnes at an in quota rate of 45% Restricted.
1901.10	Preparations for infant use, put up for retail sale	17.5	50	CA, US, EU	50	15		

Source : Ministry of Commerce, GOI.



**Table-2.7: Aggregate Measure of support to Indian Agriculture (Selected Crops)**

Year	Product Specific Support as % of total agricultural output (selected crops)	Non-Product Specific as % of total agricultural output (selected crops)	Aggregate Measure of Support as % of total agricultural output (selected crops)
1986	- 34.29	2.25	- 32.04
1987	- 32.08	3.20	- 28.88
1988	- 35.54	3.32	- 32.22
1989	- 36.97	3.39	- 33.58
1990	- 31.78	3.36	- 28.42
1991	- 62.23	3.60	- 58.63
1992	- 69.31	3.46	- 65.85
1993	- 54.75	3.14	- 51.85
1994	- 43.27	3.40	- 39.87
1995	- 44.09	3.90	- 40.19
1996	- 45.84	3.62	- 42.22
1997	- 32.16	4.12	- 28.04
1998 (E)	- 41.89	3.49	- 38.40

Source : Gulati *et al.*, (1999).

Notes: (E) means estimates using projections.

- (i) All figures are expressed as percentage of total value of production of selected commodities in Indian agriculture. Selected commodities include rice, wheat, maize, sorghum, bajra, gram, archar, soyabean, rapeseed and mustard, groundnut, sunflower and cotton, which comprise roughly of 60 percent of the value of output in the Indian crop sector. The value of production is computed by multiplying quantity of production by applied administered price – procurement prices or minimum support prices as the case may be.

## **CHAPTER-III**

### **SUSTAINABLE DEVELOPMENT: CONFLICTS BETWEEN BIODIVERSITY CONVENTION AND TRIPS AGREEMENT**

The preamble establishing the WTO recognizes the importance of preservation of the environment and sustainable development while promoting the multilateral trading system as evident from its text:

“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 the 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 consistent with their respective needs and concerns at different levels of economic developments’ (Preamble in the Final Act of the Uruguay Round 1994, p.9).

The concept of "sustainable development" in most simple terms, means "making things last, making them permanent and durable." In the foreword to the 'Brundtland Report' (our common future), it is stated to mean a development appropriate to the needs of today's generation, yet without jeopardizing future generations: chance of satisfying their own needs and choosing their life style. The demand that the development be made 'sustainable' applies to all countries and all people. The concept thus, includes normative elements such as its acknowledgement that all people,

now and in future, have the same right of sustainable environment that is worth living in and to an adequate standard of living.

The concept has also been described as a pattern of social and structural economic transformation (i.e. development) which optimises the economic and other societal benefits available in the present without jeopardizing the likely potential for the similar benefits in the future. For 'sustainable development' the developmental goals have to be pursued in a manner which should not destroy the earth's ecological bases. This form of development is seen both as urgently necessary and feasible in principle for developed and developing countries alike. In this respect "development policies" cannot be confined to developing countries alone but are to be applied to the whole world. Their environmental priorities should reflect the environmental and developmental context to which they apply. In developing legal regulation, growth and development need to be balanced with environmental protection and the conservation of natural resources.

This balance between development and environment has been strived in the convention on biological diversity.

### **Convention on Biological Diversity (CBD)**

At the Earth summit held in Rio de Janeiro on June 5, 1992, the Convention on Biological Diversity was concluded to which India is a party. The basic objectives of the CBD are: conservation, sustainable use of

biological diversity and equitable sharing of benefits arising from the use of biodiversity. It further mandates the signatories to it to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices. CBD in its preamble, categorically reaffirms that nation states have sovereign rights over their own biological resources.

The convention was adopted in the background of increased threat to the genetic resources of the world by the new developments in biotechnology, particularly DNA technology (recombinant deoxyribonucleic acid). However immediately after the adoption, it raised a serious controversy in the developed countries for its alleged negative impact on the further research and development of biotechnology. The United States even refused to sign it for its failure to protect adequately the interests of the technology holders. This cast a shadow on the enforceability of the convention and the attainment of its objectives for sustainable development. A conflict situation has arisen between the Bio-diversity Convention and TRIPS Agreement which has come into effect on 1 January 1995 as a part of the agreement on WTO.

The Biodiversity Convention is aimed at safeguarding the biological diversity of the earth which is primarily concentrated in the tropics i.e. developing countries. It is a well established fact that developing countries

are rich in world's "flora and fauna" which are the raw materials for biotechnology. On the other hand, most of the biotechnology research and development (R&D) are confined to developed countries particularly in private hands (MNCs) For their R&D, they generally fall back on the genetic resources provided by developing countries, which were available to them free of charge till recently from the farmers and plant breeders from developing countries. The products or plant varieties created or developed from these genetic resources are protected through patents and plant breeders' rights in these countries to which the developing countries will not have free access.

In this respect, it is also important to note that genetic resources are a store of knowledge. As 'genotypes', i.e. information embodied in the genetic constitution of plants and animals, they become the subject matter of patent and plant breeders' rights since they can possess exclusivity even though their patentability is questionable per se on the grounds of novelty and disclosure. There are two political conditions to which Bio-diversity convention has given rise. First, it has recognized the national sovereign rights of countries to their biological wealth. Second, it has recognized the contribution of indigenous communities knowledge about the utilization of bio-diversity.

### **TRIPS Agreement:**

The preamble of the TRIPS (Trade Related Intellectual Property Rights) Agreement, on the other hand, recognises IPR (Intellectual Property Rights) to be private rights. The two pillars of WTO - The Most Favoured Nation (MFN) treatment and National treatment are incorporated into this agreement also. MFN treatment means non-discrimination towards the member nations and National treatment means same treatment to the nationals of other member countries as what a country accord to its own nationals. This has a bearing on technological development in two ways. Since special protection cannot be given to domestic innovations over foreign innovations, Foreign investors can now use foreign innovations which enjoy equal treatment as domestic innovations. The domestic innovators devoid of protection umbrella may also become competitive.

The Indian patent Act 1970 permits only 'process' patents in food, pharmaceutical and chemical sectors (i.e. product patents are not available in these sectors). The duration of a patent (from the date of patent application) is only 7 years in food and pharmaceutical sectors, while it is 14 years in other sectors. Every patent granted in these three sectors would be deemed to be endorsed with the words the 'License of right' so that any person can work the patent without the authorization of the patent owner. On the other hand, TRIPS agreement requires products patent to be given in all fields of technology without exception and the duration of the patent to be at least 20 years uniformly. India under the obligation of WTO'S compliance has to

amend Indian patents Act of 1970 by 2005. In the meantime it has to grant Exclusive Marketing Rights (EMRs) for a period of 5 years or until product patent is granted or rejected by India (i.e. after 2005) whichever period is shorter subject to the fulfilment of two conditions. One, the product covered by the application must have obtained a patent in any WTO member country and two, marketing approval for the product must have been obtained.

Under the TRIPS (Trade Related Intellectual Property Rights Agreement – Annexure-C to the Marrakesh Agreement establishing the World Trade Organization) grant of product and process patents are obligatory.

**Para (1) of Article 27 of TRIPS says that**

“subject to provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether product or process, in all fields of technology provided that they are new, involve an inventive step and are applicable of Industrial application.”

It adds significantly that subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced. (This means it is open to a pharmaceutical company to obtain in India a patent for one of its products, manufacture it anywhere outside and still claim all the rights of the patentee i.e. exclude all others,

both Indian and foreign, from producing or selling that drug in India – a monopoly in that product).

**Paragraph (2) of Article 27**

Permits the member - countries to exclude from patentability inventions, the commercial exploitation whereof is prejudicial to public order, morality including the protection of human, animal or plant life or health or to avoid serious prejudice to the environment.

**Paragraph (3) of Art 27**

similarly permits the exclusion from patentability diagnostic, therapeutic and surgical methods for treatment of human or animals and plants and animals (other than micro-organism) and essentially biological processes for the production of plants or animals other than non-biological and micro-biological processes. (That it incorporates specific obligations on the issue of patenting life forms to the extent that it obliges members to provide product patents for non-biological and micro-biological processes).

In addition Article 27.3 (b) stipulates that all the members shall provide for the protection of plant varieties, either by patents or by an effective sui-generis system or by a combination thereof.

The article thus allows two forms of IPRS in plants, patents and a sui-generis system.



## **Plant Patents**

The first part of this article requires that members allow patenting of plants and animals produced through 'non-biological' and 'micro-biological processes'. The reference is quite evidently to the new biotechnology of genetic engineering. However, while the moving of species across species barriers through genetic engineering techniques can be defined as 'non-biological' in the sense that such mixing of genetic material would not happen in nature. The production of plants and animals with genes introduced from other species takes place through an essentially biological process of reproduction.

Though patenting of plants and animals has become prevalent in few developed countries, the article in TRIPS governing patenting of plants and animals creates major problems in many countries. Unlike Plant breeders' rights (PBRs), the new utility patents are very broad-based, allowing monopoly rights over individual genes and even over characteristics. PBRs do not entail ownership of the germplasm in the seeds, they only grant a monopoly right over the selling and marketing of a specific variety. Patents, on the other hand, allow for multiple claims that may cover not only whole plants but plant parts and processes as well. So according to attorney Anthony Diepenbrock, "You could file for protection of a few varieties of crops, their macro-parts (flowers, fruits, seeds and so on), their micro-parts (cells, genes, plasmids and the like) and whatever novel processes you develop to work these parts, all using one multiple claim (patent)."

## **IPRs in Plant Breeding**

IPRs in the area of plant breeding are a relatively new form of protection that initially emerged with the passage of the 1930 plant patent act in the US, which covered only asexually propagated species (with the exception of potatoes and Jerusalem artichoke). Prior to this, in Europe a range of measures had been adopted to protect the rights of breeders, which included the use of official lists of varieties, trade mark protection and seed certification, among others. These differing national practices were harmonised in 1961 under the International Convention For The Protection of New Varieties of Plants (UPOV). The rights conferred under this convention, called Plant Breeders Right (PBRs), were granted for distinct, uniform and stable (DUS) varieties that were also commercially novel (See Box 1).

### **Importance of Sui-Generis regime:**

According to TRIPS, countries may provide a sui-generis regime for IPRs in plant genetic resources. The TRIPS agreement does not oblige countries to adopt the UPOV Convention, the convention on breeders rights. However, it has often been interpreted that the term “effective sui-generis” would be taken to imply UPOV. However, countries can create alternatives to the UPOV convention under a sui-generis regime, especially in the context of the Convention on Biological Diversity which creates obligations for states to protect bio-diversity and indigenous knowledge and practices.

The term 'effective' can be defined vis-à-vis Bio-diversity Convention. This would enable countries to base their sui-generis legislation on the protection of community rights and the convention of agricultural bio-diversity as required by CBD. For both these objective UPOV is an inadequate instrument. There is ample legal ground to go beyond UPOV and evolve a framework of sui-generis particularly in the light of Bio-diversity Convention. It should also be seen as an important task for the protection of community intellectual rights. People's contribution to the development of an adequate sui-generis system, therefore, needs to focus on three imperatives of ethics, ecology, recognition of creativity by communities and economic equity.

### **Debate on Sui-generis system and PBR (Plant Breeders Right)**

Sui-Generis implies a 'system of your own' which means India will have to enact legislation to afford protection to such varieties. 'Sui-generis' system is a special form of protection for new varieties of plants which grants rights to the developers of such varieties in the form of "plant Breeders Rights" or an equivalent type of rights. However, the terminology 'effective sui-generis system' has generated a lot of flutter in India. The terms 'effective' causes great concern among the policy makers, farming communities and academecia. Our draft PVA (Plant Varieties Act) does not give any explanation of the term effective. Indian farming community has expressed its apprehensions about the definition 'effective'. To them

'effective' means the sui-generis system would be nearer to patents or similar to that of provisions codified under UPOV-91. In fact, if it is so, then to frame country's own sui-generis system will be completely meaningless.

Though the membership of the UPOV is open to all countries since 1968 till now, only the developed countries have taken its membership. It has, therefore, evolved a plant variety legislation suitable to the socio-economic context of only the Industrial Countries where farmers are no more a large part of population and do not have any control over plant breeding or seed supply. This situation is very different from ours where a majority of population continues to be engaged in farming and farmers' seed production and supply systems are still the main source of seed (*Shiva, 1996*). Of the total 600,000 ton seed requirement of Indian Agriculture, about 32% is met by formal agencies like national and state seed corporations. The rest 68% are provided by inter-farmer sale. A huge volume of trading in seed in the informal sector among farmers is the life line of Indian Agriculture.

In fact, joining UPOV would be more disastrous to the farmers' rights, because after amendment in 1978 and 1991 the system is heading towards outright patents. Once a plant patent is given it allows for multiple claims that may cover not only the whole plants but plant parts and processes as well. Patent protection implies the exclusion of farmers' right over resources having these genes and characteristics (*Shiva, Ibid.*). In the earlier UPOV only plant Breeder Right (PBR) is granted. PBRs do not entail ownership of

the germplasm in the seeds, They only grant a monopoly over the selling and marketing of a specific variety (*Shiva, Ibid.*). In 1978 UPOV, some restrictions was placed while providing two exemptions to PBRs, namely the farmers exemption and research exemption. The first exemption allows the farmers to retain part of their harvest for subsequent planting as seed, whereas the second one permits the breeders to use a protected variety in subsequent breeding for research work or experiment. However, 1991 UPOV amendment put stronger restrictions. In this version, breeders are not exempted from royalty payments for breeding work and the exemption for farmers to save seed has become provisional (*Sahai, 1996b*).

It is thus clear that a patent - protection to the intellectual properties in the agriculture sector is not desirable to a developing country like India where agriculture is not a commercial venture to the farmers; rather it is livelihood to them. India, thus, requires its own sui-generis system. Moreover this system should not follow the UPOV model. Recognition of farmers right must be the central pillar on which our sui-generis system is built (*Sahai, 1996 a*).

The government of India has initiated suitable steps to bring about legislation on the controversial issues of plant variety protection to safeguard the interests of farmers with regard to use and availability of seeds in the wake of TRIPS. The five important features of the proposed legislation are:

- the farmer can choose the best seeds he likes

- the farmer can save seed from one season/crop and use it for replanting in the next.
- The farmers can sell his surplus seed but not as branded seed as it is in case of protected variety.
- The farmer can also become whole time seed producer and sell protected seed as a commercial enterprise with the consent of the right holder; and
- Our scientists will be free to use all seed varieties, including protected varieties, for experiment and research for developing new varieties.

It is expected that under the proposed legislation, the government of India will constitute a national authority for plant variety protection and protection of the rights of the breeders, farmers and researchers. The authority will be a purely professional body (*Chawla, 1995*).

Seven ex-officio members of the authority will include the chairman, Agriculture Commissioner, Horticulture Commissioner, Director, NBPGR, (National Bureau of Plant Genetic Resources), Director, Botanical Survey of India, etc. The authority will ensure proper maintenance of the national register of plant varieties (NRPV).

The fundamental issue in the entire debate on TRIPS is whether it is in India's interest to establish a system for protection of plant breeder's right. The answer is positive.

India has abundant plant breeding skills and coupled with the agro-ecological diversity and the ingenuity of the farmers, it will be possible to develop a vibrant seed industry that not only meets domestic demand but also makes India a player in the world seed Industry. India's agricultural production can increase by 15% to 20%, if high quality seeds are more widely available.

### **Bio-piracy and Traditional Knowledge**

The various useful properties and knowledge regarding biological resources have been identified and preserved through consistent skill, observation and usage by various local and indigenous communities through the world. In the field of pharmaceutical research, indigenous knowledge contributes towards the identification of the material in developing the drug, and often provides information of its precise uses in treating particular illnesses, its means of preparation and its dosage / for example the use of 'karela', 'Jamun' and 'brinjal' for control of diabetes is common knowledge and everyday practice in India. Their use in the treatment of diabetes is documented in authoritative treaties such as "wealth of India. The 'compendium of Indian Medicinal Plants' and the 'Treatise on Indian Medicinal plant'. Similarly Turmeric has been traditionally used in India for its many special properties in wound-healing. For instance, it is used as a blood purifier, in treating the common cold, and as an antiparasitic for many skin infections. It is also used as an essential ingredient in cooking many Indian dishes. The patents on these properties like anti-diabetes properties of

Karela and the use of turmeric in wound healing, highlight the problem of biopiracy – the patenting of indigenous bio-diversity related knowledge. Obtaining a patent – i.e., exclusive right to sell and distribute something that is so commonly known is a serious question in this new patent regime.

The grant of patent on non-original innovations (linked to traditional medicines, which are either based on what is already a part of the traditional knowledge of the developing world or a minor variation thereof) have been causing a great concern to the developing world. The Council for Scientific and Industrial Research asked for a re-examination of the U.S. patent no. 5,401,5041, which was granted for the wound healing properties of turmeric. In a landmark decision, the US patent office revoked this patent after ascertaining that there was no novelty; the innovation having been used in India for centuries. The case of the revocation in October of the patent granted to W.R. Grace Company and U.S. Department of Agriculture on neem (EPO patent No. 436257) by European patent office, again on the same ground of its use having been known in India, is another example. India's reexamination request for the patent on Basmati rice lines and grains (US Patent no. 5,663,484) granted by the USPTO has been successful and the Ricetec Company has withdrawn its claims. It is seen that there is a problem on the grant of such patents linked to the indigenous knowledge of the developing world that needs to be addressed jointly by the developing world and the patent offices of the developed world.



The basic logic behind patent is that it is a mechanism to promote innovation by ensuring that the 'inventor' would have the exclusive right to sell and distribute the product, he has invented. While there are arguments both for and against the value of patent in general in promoting innovation, patents over products of biological diversity could pose certain specific problems. Patents, by definition, cannot be granted over something that is obvious : that is known or anticipated by prior use; that is a product of nature and not a product of human creativity. However, laws of different countries vary in the criteria used for assessment of the degree of human innovation that is required for qualifying for a patent.

In the basmati patent, for instance, the government of India has challenged only three of the twenty claims granted to the patent holder, Ricetec, (U.S. Company) the belief being that there was enough evidence on record only to challenge these. What was challenged were only claims regarding certain characteristics of basmati (specifically starch index, aroma and grain dimensions); and not the other claims of the patent pertaining to the novelty of the rice likes and plants cultivated from these. Patents over herbal mixtures and compositions present greater scope for being challenged because properties of each of the ingredients in the composition, and sometimes the composition itself is not 'novel'.

There is other issue that while the use of turmeric in wound healing and anti-diabetes properties of Karela is commonly held knowledge, there would be many instances when use/s is of a specific plant or herb is

known only to a particular community or tribe or individual. "Patenting" products developed from such biological material poses further challenges.

The local communities or individuals do not have the knowledge or the means to safeguard their property in a system which has its origin in very different cultural values and attitudes. The communities have a storehouse of knowledge about their flora and fauna – their habits, their habitats, their seasonal behaviour and the like and it is only logical and in consonance with natural justice that they are given a greater say as a matter of right in all matters regarding the study, extraction and commercialisation of bio diversity.

The existing IPR systems are oriented around the concept of private ownership and individual innovation. They are at odds with indigenous cultures, which emphasise collective creation and ownership of knowledge. There is concern that IPR systems encourage the appropriation of traditional knowledge for commercial use and that too without the fair sharing of benefits of the holders of this knowledge. They violate the indigenous cultural percepts by encouraging the commodification of such knowledge. UNDP estimates that medicinal plants and microbials from the south contribute at least \$ 3 billion a year to the north's pharmaceutical industry. However, not even a small fraction of this gets ploughed back to the developing world.

There is a medicine that is based on the active ingredient in a plant, *trichopus zeylanicus* (Aarogyapaccha) found in the tropical forests of south

western India and collected by the Kani tribal people. Scientists at the Tropical Botanic Garden and Research Institute (TBGRI) in Kerala learnt of the tonic which is claimed to bolster the immune system and provide additional energy while on expedition with the kani in 1987. These scientists isolated and tested the ingredient and incorporated it into a compound which they christened "Jeevani" the giver of life. The tonic is now being manufactured by a major Ayurvedic drug company in Kerala. In 1995, an agreement was reached between the institute and the tribal community to share a license fee and two percent of net profits. This marks perhaps the first time that for IP held by a tribe, a compensation in the form of cash benefits has gone directly to the IP holders.

India and other developing countries have emphasized in various communications to the WTO that the rights of holders of traditional knowledge to share benefits arising out of innovation on the basis of their knowledge and the biological resources nurtured by them, should be recognised. They have also have recommended that applications for patents should mandatorily disclose the source of origin of the biological resources and knowledge pertaining to it, so as to facilitate benefit sharing with the originators of the knowledge and resource. The United States has strongly opposed this. This kind of stand by US would only lead to greater misappropriation of biological resources and knowledge pertaining to the same.

The corporate agenda for India is to introduce US style Corporate monopolies in what such as those of Cargill and ADM and in seed such as those of Monsanto, Novartis, Dupont and Zeneca. These corporations demand monopolistic intellectual property Rights for seed, forcing farmers to pay royalties for each seed while also controlling other inputs. This corporate dependence on seed and agrichemical inputs is already driving thousands of farmers to suicide.

- (2) HYV (High Yielding Varieties) of seeds, that MNCs sell to the peasants are not so much high-yielding as high responsive seed. They respond only to large amount of chemical fertilizers and pesticides, besides adequate water. In the absence of required inputs there may be extensive crop failures. Thus they are capital intensive, which poor or marginal farmers can't afford.
- (3) Under the TRIPS agreement of WTO, farmer to farmer exchange or sale of patented 'high yielding' varieties of seeds would not be allowed. Indian peasant would not also be allowed to sow seeds gathered from the crop harvested – the seeds over which TNCs (Transnational Corporations) claim intellectual property Rights. So new seeds have to be purchased for every crop. During the past years traditional varieties of seeds have been mostly replaced by the new 'high-yielding' varieties, which have become monopoly of seeds.
- (4) The spread of modern varieties has been an important cause of genetic erosion. The uniformity caused by increasing areas sown to a

limited number of varieties is a source of increased risk for farmers, as varieties may become vulnerable to disease and pest attack. The trend which is being set by the TNCs through use of genetically engineered plants, is to create a niche for broad international market for a single product thus creating the conditions for genetic uniformity in rural landscape.

- (5) With India's signing of the treaty under the GATT in 1994 the second phase of the green revolution has begun. An expert commentator on the patent regime. Mr. Pat Mooney had said that the second green revolution is aimed at monopolised seeds, whereas the first green revolution aimed at generally commercially agricultural inputs. It is not surprising that 'terminator seeds', have come into picture. Terminator, a plant gene, which allows seeds to 'self destruct' after producing a single crop. Terminator was developed by the U.S. department of Agriculture (USDA) in collaboration with 'delta and pine land', a seed company now acquired by the biotechnology giant, Monsanto, which already has extensive interest in this country. Terminator's self destructive traits could spread through cross-pollination and cause the gradual extinction of India's traditional crop varieties. Cargill-Monsanto, Pioneer High-tech International, seed Tech International (US), Hindustan Lever, ITC (U.K.), Hoechst (Germany), Ciba Geigy (Switzerland) are some of multinationals involved in marketing of seeds in India.

In fact, with the aim of monopolising agricultural system in all countries, Monsanto is in the process of controlling the entire seed industry by acquiring shares in all the major national and international seed companies. By controlling seed both through acquisitions and mergers, and through patents, Monsanto in effect is attempting to gain control over food systems (See Table 3.1).

- (6) Most people contend that biodiversity represents a cultural and ecological heritage developed over generations, upon which our collective survival depends. Subjecting this heritage to a legal regime of commercial monopoly rights under TRIPS will destroy the conditions for its conservation and sustainable use, especially by the communities and thereby destroy society's access to diverse food and medicine.
- (7) The private sector in India, however, feels that patenting would provide the necessary incentive for it to engage in research and development activities, enlarge the magnitude of breeding and complement public sector efforts in R&D besides introducing a healthy competition between private and public sector in the production of good quality HYVs. However, it is being felt that once seeds are patented, farmers would lose the right to modify, retain or use their seeds and would be dependent on patent-holders for their seed requirement.

According to environmentalist Dr. Vandana Shiva, globalisation is leading to rapid and often, painful changes for the poor. The negative aspect of this is the shift of focus from the right to eat towards the right to trade, which is endangering food security. Further, global forces are encroaching on the right to local decision-making by dictating national policies.

It is true that patent protection will hinder the dissemination of know how. At the same time, there will be no incentive to private investors for innovation in the absence of some form of protection.

Hitherto, countries have taken utmost care with their national IPR systems in order to protect the balance between private incentives and public interest. Perhaps, the same approach is required now.

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### Box 1: What are Plant Breeders' Right?

<p>PBR are a form of IPRs that are specially directed at protecting plant varieties. Under the UPOV system, varieties submitted for grant of protection must fulfill the following conditions:</p>	<ul style="list-style-type: none"> <li>• These conditions for granting protection are relatively relaxed when compared to those required for grant of patent. In a similar sense, the scope of protection for breeder's right is also not as expansive as that of patents.</li> </ul> <p>In general, the following is considered as the scope of breeders' right: the breeder's authorisation shall be required for the production, for purpose of commercial marketing of the reproductive or vegetative propagating material, as such, of the new variety, and for the offering for sale or marketing of such material.</p> <p>Two broad exemptions are notable here:</p>
<ul style="list-style-type: none"> <li>• Distinctness--the variety must be clearly distinguishable by one or more important characteristics from any other variety whose existence is matter of common knowledge at the time when protection is applied for.</li> </ul>	<ul style="list-style-type: none"> <li>• Researchers exemption--the breeders may use a protected variety for the purpose of creating other new (derived) varieties, which can then seek protection (under the conditions noted above) and be marketed. Importantly, the authorisation of the breeder of the protected variety is not required; however, authorisation shall be required when the repeated use of the protected variety is necessary for the commercial production of the derived variety.</li> </ul>
<ul style="list-style-type: none"> <li>• Uniformity -- the variety must be sufficiently homogenous in its distinguishing characteristics, i.e. different individuals of the same variety are reasonably similar</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers' exemption--farmers may save a portion of the harvest of a protected variety and either use it as seed for subsequent planting or even exchange the same. One should be clear that this exemption is not specifically stipulated in either the international convention or national laws (except in the US) but remains a de facto provision. The above scope of protection has been substantially enhanced in a 1991 amendment of UPOV, it comparable to that of patents.</li> </ul>
<ul style="list-style-type: none"> <li>• Stability-- the variety must be stable in its essential characteristics, that is to say, it must be remain true to its description after repeated reproduction or propagation, so that progenies and parents remain reasonably similar</li> </ul>	
<ul style="list-style-type: none"> <li>• Novelty--the variety must be commercially new in terms of the available stock of varieties. The conditionality of commercial novelty means that novelty is broken only when the reproductive material is marketed by or with the approval of the breeder.</li> </ul>	

**Table 3.1 : Mergers and Acquisitions by Monsanto from 1995 to 1998  
All Over The World.**

Year	Company	Country	Specialisation	Share (Percent)	Purchased at (US \$)
1998	Cargill	Central and Latin America, Europe, Asia, Africa	Seed operations		1.4 billion
1998	Delta and Pine	US	Cottonseed	85	1.82 billion
1998	Dekalb	US	Seed operations		2.3 billion
1998	Mahyco	India	Seed operations	26	24 times paid up value
1998	Unilever	Europe	Seed operations		525 million
1998	EID Parry	India	Seed operations	51	
1997	Holden	US	Seed operations	25-35	
1997	Semetes	Brazil	Seed operations	30	
1997	Millennium	US	Seed operations		118 million
1996	Agracetus	US			150 million
1996	Calgene	US	Seed operations	49.9	
1995	Kelco		Chemicals		1.06 billion
1996	Roche		Women's health care		2.40 million

Source: Compiled from Monsanto (1998) and *The Hindu*, December 21, 1998.

## CHAPTER IV

### FOOD SECURITY, AGRI-BUSINESS AND NON TRADE ISSUES

**“Food is a basic human right, everyone must have access to safe, nutritious and culturally appropriate food in sufficient quantity and quality to sustain a healthy life with full human dignity. Food is first and foremost a source of nutrition and only secondarily an item of trade. This right can only be realised in a system where food sovereignty is guaranteed. Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity. Food sovereignty entails the sustainable care and use of natural resources especially land, water and seeds. One who work the land, must have the right to practice sustainable management of natural resources and to preserve biological diversity. This can only be done from a sound economic basis with security of tenure, healthy soils and reduced use of agro-chemicals.”**

This is the view of one of the farmer organizations representative against WTO agricultural policy.

The implementation of agreement on agriculture was supposed to bring a structural change in the world foodgrains market. It was expected that due to reduction commitments of the developed countries, cereal production would shift from highly subsidized region to low subsidized regions. Empirical evidence shows that there has not been much change in the pattern of world cereals production and exports. This may have been due to the fact that there

has not been any significant reduction in the aggregate domestic transfers to the agricultural sectors in most developed countries. Projected income and population growth imply higher domestic absorption of food in the developing countries. Supply shortfalls are expected because of increasing non-availability of agricultural land and factors of instability such as production fluctuations caused by unusual weather.

The International Food Policy Research Institute (IFPRI) has projected that in the developing countries the “Food gap” (the difference between demand and production of food) could more than double in next 25 years and many people living in the developing countries will not be able to buy sufficient food to fully meet their needs. Recent FAO estimates for 1995-97 suggest that currently there are about 790 million people in the world who are chronically undernourished.

#### **Agreement on Agriculture and Its impact on food security of India.**

In India, population growth rate and higher per capita income suggest that demand for foodgrains is growing. But there has been shift from food grain production to cash crop cultivation due to economic incentives in liberalisation era. Yield growth rates of foodgrains are stagnating in most parts of India. Recently foodgrains stock held by public agencies are more than 42 million tonnes. But this stocks do not reflect real surpluses but pseudo surpluses. According to Vandana Shiva – they are indicators of two distortions in the

centralised food system built by World Bank and Rockefeller advice in the 1960s and referred to as the green revolution.

At the level of production, the rice and wheat stocks are pseudo surpluses because they reflect increases in production of wheat and rice, but do not reflect decrease in the production of pulses, oil seeds, millet and maize, all which are necessary for food security. A shift from diversity to monocultures would, ofcourse, register an increase in monoculture output but would eclipse the decline in diverse outputs.

In Punjab, the area under rice has increased from 227,000 in 1960-61 to 2,250,000 hectares in 1999-2000, a ten-fold increase. The area under wheat increased from 1,400,000 in 1960-61 to 3,300,000 hectares in 1999-2000, a three fold increase. The area under pulses in the same period has decreased from 903,000 to 69,000 hectares, a ten fold decrease. Gram went down from 6,634,000 in 1966-67 to 560 hectares in 1985-86, which is more than a ten fold decline. The area under maize went down from 327,000 to 185,000 hectares. Area under oilseeds has also decreased. In the case of ground nut from 67,000 to 10,000 hectares, linseed from 4000 to 1000 hectares. Area under Coarse grains and millets have also declined.

Based on rice and wheat monocultures Punjab's contribution to central pool has increased from 16% during 1970-71 to 43% in 1998-99 in the case of rice. In the case of wheat, it went up from 74% in 1970-71 to 80% in 1997-98 and has dropped to 49% in 1999-2000. this decline in wheat contributions is a consequence of FCI procuring less wheat and it is procuring less because of

growing stocks which are caused by the poor buying less food. Hence the growing food stock are also pseudo surplus in the sense that they reflect the decreasing purchasing power and entitlements of poor (*Shiva, Vandana*).

The food security system put in place during Green revolution is now being dismantled. In 1965, the Food Corporation of India was established on World Bank advice as a key element of Capital intensive, subsidised and centralised food production and distribution system referred to as the Green revolution. Other aspects were the Agriculture Price Commission and the Public Distribution System (PDS).

In the 1990s, the World Bank required the dismantling of the system it had created as a part of its economic reform and trade liberalisation package. It also opened up India's food and agriculture system to MNCs like Cargill and Monsanto. Cargill is also involved in the seed and fertilizer industry.

Our food system is now being put in the hands of these corporates by dismantling the public procurement and distribution system put up in Green Revolution period. The policy priority is now moving from state monopolies to corporate monopolies. It is "exit FCI, enter Cargill". The huge stocks held by FCI are the main justification for allowing private traders in procurement storage and distribution of food grain.

The PDS was the subsidized food system that allowed food produced at high costs through Green Revolution technologies to reach consumers at low prices. Part of the world Bank reform package was dismantling the PDS to

reduce government expenditure on food subsidies which has gone up to Rs.9,300 crores in 1999-2000 from Rs. 5,166 crores in the mid 1990s.

Opening up of Agriculture sector can have great effect on Rice and Wheat prices which are the main staple food of India. Wheat price has declined by more than 56% in the world market from December 1994 to March 1999. Over production of wheat due to high subsidization of agriculture in the OECD countries is the root cause behind this secular decline of prices of agricultural commodities India is not currently globally competitive in wheat. At present price, it will not be able to export wheat to the world market. Opening up agriculture sector will depress domestic prices of wheat. On the other hand India is globally competitive in rice and can be an exporter. But most of the studies have pointed out the surplus production in rice is going to be eroded soon. This implies that India is likely to become import dependent in food grains, particularly in rice in the near future. Subsequently when India becomes a net importer of rice this may cause social unrest. Rice is the main staple food of India and any rise in rice prices will affect the poor adversely. Accordingly to Radhakrishna and Ravi:

“If liberalization has its way and the cereal prices are allowed to rise and other prices are allowed to fall in order to integrate the domestic market with the international market the poor may be hurt in the transition since cereals are by far the major and cheap source of calories.”

Recent estimates suggest that poor spend about 40% of their budget on cereals and the well being of the poor in India is directly related to food grain



prices. Poverty ratios have been found to be positively co-related with foodgrains prices. Elasticity of the poverty ratio to the CPIAL (Consumer Price Index for Agricultural Labourers) has been found out to be 0.23. This implies that a 20% increase in price level will push up the poverty ratio by nearly 4.6% if the initial poverty ratio is about 40%.

However, it is expected that once the agricultural trade is completely opened up, there would be an expected reduction in price instability. The logic behind this view is that by increasing the number of countries that are open to world price signals, “shocks” (arising, say, from unexpected production short falls) would be absorbed by a greater number of markets, thus cushioning the effect of such shocks on world prices.

Agricultural trade liberalization can, theoretically speaking, help reduce rural poverty and food insecurity. It contributes to food security in a number of ways, by making up the difference between production and consumption needs, reducing supply variability, fostering economic growth, making more efficient use of world resources; and by permitting global production to take place in those regions more economically suited to it.

However, widespread presence of disguised unemployment in India can prevent any significant increase in rural wages.

## **Conclusion**

India’s food security situation has deteriorated in the post-UR era, empirical estimates suggest that India is going to be a net importer of food

grains in a very near future. FAO studies have also suggested that liberalization of agricultural trade has increased the risk of food insecurity in many developing countries. Keeping this in view developing countries like India should try to adopt the WTO agreement to their basic requirement of food security and trade. Currently WTO only allows food security measures that are targeted towards the poor. WTO rules should be amended to include a food-security clause, allowing the developing countries to follow any policy regime required to create and maintain food security in a country.

### **Food Security and Agri-business**

However, there are also views that food security can better be ensured through a fair and market oriented world trade system. If country is able to generate exportable surpluses in those product groups (Agricultural commodities) for which demand is income-sensitive and unlikely to face any demand constraint in the global market (see Table 4.5). Shrimp can be cited as an example. Consumption of Shrimp doubled in U.S.A. and Japan during 1982 and 1992, on the supply side, a major producer, Thailand could increase its shrimp exports five fold during the same period. Other countries including China, Indonesia and India also recorded substantial gains.

Market prospects are high especially for non-traditional agricultural products. In India exports of Spices, jute, tea could be profitable. The following items have sizable export potential and there is scope to accelerate exports within a short span of time. It is considered possible to achieve at least 30%

export growth annually in value or volume terms. These are called “extreme focus items”. The items are

**Aquaculture – seafoods (now there are problems on environmental considerations)**

India has a vast coastline with a large area under brackish / sea water, most of which are unutilised. The availability of land coupled with tropical climate presents an excellent potential for brackish water aquaculture in which shrimps is one of the important species. It is therefore justifiable to have identified shrimps aqua-culture as an extreme focus area by the government for enhancement of exports.

**Floriculture**

We have a large extent of land under floriculture growing flowers such as marigold, roses, Jasmine, Tubroses, chrysanthmum, gladiolus etc. About 34000 hectares is under floriculture in India with large extent in South Indian states such as Tamilnadu, Karnataka, Andhra Pradesh and also in states of West Bengal and Maharashtra. Global floriculture trade is growing and we have comparative advantage in that the peak requirements for flowers in Europe is in winters while the production of flowers in these countries is restricted because of climatic factors. The export of flower has been identified as an important thrust area by the government as this is an area which has not been tapped to its potential.

## **Horticulture (Fresh Fruits, Vegetable)**

The varied agro-climatic condition in the country provide enormous scope for cultivation of fruits and vegetables spice and aromatic plants. Horticulture crops are grown in about 12 million hectares. Fruits which form some of the largest horticulture produce include Mango, Banana, Citrus, Apple, Guava, Pineapple, Grape etc. India is the second largest producer of vegetables after China. Processed horticulture products which was until recently, mostly under the small scale / home/cottage Industry has now blossomed into high-tech Industry. Considering the volume of world trade in fresh and processed horticulture products and the proximity of India to major consuming centres of Europe, West Asia and the Far East, there is enormous potential for pushing up exports in this field.

- Mushrooms
- Rice
- Spices
- Sugar
- Meat and meat products
- Poultry and poultry products
- Medicinal plants, Herbs and other Micro-organisms etc.

These agricultural exports are helping the country in earning foreign exchange, in providing employment opportunities in increasing production and

productivity and in raising the income of the farming community including the small and marginal farmers.

Thus Agricultural exports and food security are compatible and are not conflicting. Agricultural production and processing policies combined with sound agricultural export management policies would help sustainable agricultural development which would help achieve economic development objectives.

However according to the central statistical organization (CSO) estimates, gross capital formation in agriculture has virtually remained stagnant (at 1993-94 prices) at around Rs.16,500 crores during the three years period, 1996-99. The share of public investment in agriculture has actually come down from 28.2 percent in 1996-97 to 23.6 percent in 1998-99. A point repeatedly made in the annual economic surveys of the union government is that the decline in public investment in the agricultural sector has arisen mainly because of the diversion of resources from creation of assets (irrigation capacity, water management, rural infrastructure) into subsidies of various kinds – Food, fertilizers, water, power and so forth. Reversal of this trend will require a shift in the balance of public expenditure for the agricultural sector from large input subsidies to creation and maintenance of public economic infrastructure. Public investment in irrigation, rural communication, schemes for control of land and water degradation must be increased. But the resources for this are likely to be available only if the massive subsidies provided for water, electricity and fertilizers are scaled down. It has to be appreciated that if

the charges for water and electricity are not raised to appropriate levels then the delivery of these critical inputs is likely to worsen over time and undermine agricultural development. Consideration could also be given to commercialization of irrigation departments with explicit subsidies provided for socially important schemes. Distribution system could be leased to panchayats and irrigation co-operatives who could determine and collect water charges, maintain and extend distribution channels, and pay a charge for water use.

Policies must also be strengthened to upgrade the quality of extension and research support, develop and propagate technologies and dryland agriculture and improve water usage and land conservation. Extension and research organizations should involve panchayats, farmers co-operatives, non-governmental organization and private industry in their effort to develop and propagate new technology and techniques. Special attention has to be given to farming system which affect small and marginal farmers who constitute the bulk of our farming population and the majority of the poorest people. Measures must also be taken to facilitate consolidation of fragmented holdings.

Private investment in agriculture can increase if public investment grows, remunerative prices for agricultural produce are maintained, controls on domestic trade and marketing are scaled down, opportunities for earning incomes from agricultural exports are steadily increased and preferential protection to the industrial sector is brought down.

The present system of agricultural credits suffers from poor recovery of loans, high costs of intermediation by co-operatives and banks and the legacy of debt write-offs which has contributed to a culture of non-recovery. Improvement in recovery of loans and re-cycling of credit are absolutely critical for augmenting the supply of rural credit. In many areas, this will require a through revamping of the institutional credit structure. Interest rate policies should encourage timely flow of credit to farmers. Unduly high costs of intermediation and unsustainable levels of interest rate subsidy curb the flow of institutional credit and oblige many small and poor farmers to rely heavily on very high interest loans from money lenders.

Thus for food security, some greater change is needed compatible with the WTO provisions and Indian scenario.

### **Multi-functionality (or Non-Trade issues) of Agriculture**

There has been a concerted effort, on the part of many developed economies, to have non trade issues such as labour standards, child labour, environment, food safety and animal welfare, put on the WTO agenda. The decline of some traditional industries such as steel, leather and textiles in the developed countries has been attributed by some to cheap imports from the developing countries. Though there is no clear evidence as yet linking job losses in the west to developing country exports, feeling run high especially in the U.S. and France.

i) **Trade and Labour**

The Unions attribute the greater competitiveness of developing country exports to payment of wages less than the legal minimum, bans on trade union activity and even the use of prison labours. NGOs and consumer groups have also raised the issue of Child labour being employed in some export-oriented industries. The combined demand is therefore that the developing countries should follow certain minimum labour standards – otherwise there will be “a race to the bottom” as a result of trade. However, the developing countries protest that trade-labour issue is a protectionist ploy to keep out their exports. At the first ministerial meeting, it was decided that the International Labour organization (ILO) and not WTO would be the forum for discussion of labour standards. Yet, both the U.S. and the E.U. have now made roughly similar proposals for a WTO working group to study the links between trade and labour in their entirety.

In an address to ministers attending the Third ministerial meeting at Seattle of WTO, Mr. Clinton argued that the WTO must make sure that open trade respected core labour standards that were essential to not only worker rights but also human rights. The president noted:

“To deny the importance of these issues in a global economy is to deny the dignity of work - the belief that honest labour fairly compensated gives meaning and structures to our lives”.



## **Social Clause**

The developed countries led by the United States have proposed a 'social clause' for incorporation in the WTO regime. If the US sponsored move to introduce social costing into the price mechanism for exports becomes a reality, developing countries like India will receive a severer setback in their exports. The U.S. proposes to levy a countervailing duty on imports from developing countries aimed at offsetting low labour costs here. In other words, the poor countries will be required to pay for the fact that they are poor. If the proposal gets accepted, foreign investments in developing countries like India would be discouraged because domestic manufacturers would not be able to export.

The American lobby, is putting forward the plea that the aim of the social clause is to ensure proper standards of living for workers in developing countries. They fail to understand that the higher wages in developed countries are because of the higher productivity of labour resulting from superior technology, larger amount of capital and land per worker, economies of large-scale production etc. If developing countries try to pay comparable wages to their labour, the wage rates would be higher than the productivity of labour; in other words, labour would be paid more than what it produces leading to bankruptcy of the Industry. The logic of advanced countries would lead the developing countries to the past colonial era when the underdeveloped countries were exporting agricultural commodities and minerals and importing manufactured products.

## **(2) Trade and environment**

For quite some years now some governments and non-governmental organizations in the developed world have been demanding that certain WTO rules should be framed to minimize the impact of trade on environment. This will inevitably mean that the developing countries should adopt stricter environmental standards in production for export. The response of the poor countries is that this does not represent concern for the environment but is only 'green protectionism', yet another attempt to keep out imports from the developing countries. The developing countries argue that while they are no less committed to the protection of the environment, standards must evolve in the course of development. Further environment should be the domain of the United Nations bodies concerned with this area and not that of the WTO, a trade body.

However, a number of global NGOs have been accusing the WTO of overseeing environmental degradation. The controversy reached a peak in 1998 when a WTO disputes panel struck down a U.S. environmental law that banned shrimp imports from Thailand, India, Pakistan and other Asian countries on the grounds that it interfered with WTO rules. This has led to accusations that the WTO has begun to usurp sovereign law in the developed countries. Quite naturally then the governments in the developing countries are looking at ways in which to neutralize such criticism mainly by making trade action on environmental grounds consistent with WTO rules. Environmental provisions / green provisions in the WTO. ( see Box)

### **3. Food Safety and Application of Sanitary and Phyto Sanitary Measures (TBT and SPS)**

#### **(i) Agreement on Technical Barriers to Trade (TBT)**

The TBT agreement allows sovereign countries to set “technical regulations and standards including packaging, marking and labelling requirement, (eco-label) and procedures for assessment of conformity, with technical regulations and standards” without creating unnecessary obstacles to international trade. Under the special and differential treatment of developing country members, there is provision for technical assistance for adjusting to new requirements in export markets.

“To ensure that preparation and application of technical regulations, standards and conformity assessment procedures do not create unnecessary obstacles to the expansion and diversification of exports from developing country members” (Find Act of the Uruguay Round 1994).

#### **(2) Agreement on Sanitary and Phyto Sanitary Measures (SPS)**

The SPS Agreement recognizes the importance of “the use of harmonized sanitary and phyto sanitary measures between members on the basis of international standards, guidelines and recommendations developed by the relevant international organisations, including the codex, Alimentarius commission, the international office of Epizootics and the relevant international and regional organisations operating within the framework of the International

Plant Protection Convention, without requiring members to change their appropriate level of protection of human, animal or plant life or health”.

Through the TBT and SPS Agreements, the WTO has diluted the distinction between trade measures based on product standards which were legitimate under the GATT, and process / production standards not legitimate under the GATT. Thus, as far as, trade in food and beverages (under SPS measures) are concerned, the WTO has legitimized the use of process-related trade barriers.

The benefits of the Agreement on Agriculture for developing member countries particularly those that are significant exporter of agricultural commodities such as India, may accrue from larger reductions in domestic support and bound tariffs, greater market access and complete elimination of export subsidies by the developed country members, however, an area of vulnerability may exist for India's future access to international markets due to agreement on the Application of Sanitary and Phyto sanitary Measures. India may be vulnerable due to deficiencies in the establishment and implementation of sanitary and phyto sanitary measures based on international standards, guidelines and recommendations.

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**Table 4.1: Demand and Production: Projection Results for Wheat**

Year	Production	Demand	Production-Demand
1999-2000	76.02	66.87	9.14
2000-2001	78.53	70.12	8.41
2001-2002	81.07	73.53	7.53
2002-2003	83.67	77.11	6.57
2003-2004	86.36	80.85	5.51
2004-2005	89.13	84.32	4.81

Source : Bhattacharya and Pal, (1998)

**Table 4.2 Demand and Production: Projection Results for Rice**

Estimated Values (In million tonnes)			
Year	Production	Demand	Production-Demand
1999-2000	86.95	86.52	0.44
2000-2001	88.48	89.67	-1.19
2001-2002	89.93	92.94	-3.01
2002-2003	91.30	96.33	-5.03
2003-2004	92.59	99.84	-7.25
2004-2005	93.78	101.41	-7.63

Source : Bhattacharya and Pal, (1998)

**Table 4.3: Percentage Changes in World Price due to India's Trade in Rice and wheat**

Quantity traded (mn. Metric ton)	RICE		WHEAT	
	Import	Exports	Imports	Exports
0.5	4.02	-3.69	0.57	-0.57
1.0	8.18	-7.11	1.56	-1.14
1.5	12.47	-10.26	2.27	-1.70
2.0	18.31	-11.87	2.98	-2.27
2.5	24.01	-12.94	3.55	-2.70
3.0	32.46	-14.42	4.26	-3.27
3.5	40.24	-16.16	4.97	-3.84
4.0	51.84	-17.64	5.68	-4.40
4.5	59.96	-19.05	6.53	-4.83
5.0	72.10	-20.52	7.24	-5.40

Source : Parikh, (1998)

**Table 4.4 : Trend of Primary Commodity Prices in the Global Market**  
(US \$/MT)

Year	Wheat	Rice	Sugar	Cotton	Tea
1970	250	574	323	--	-
1980	240	571	877	2843	2305
1990	136	271	277	1819	2058
1995	149	269	246	1785	1249
1998	121	293	189	1389	1968

Source : World Bank, *World Development Indicators*, 1993, 1999.

**Table 4.5: Income Elasticity Estimates in Developing Countries for Selected Commodities**

Item	Income Elasticity
Wheat	0.04 - 0.98
Rice	0.01 - 0.30
Beef	0.75 - 1.85
Poultry	0.40 - 2.20
Pork	0.50 - 0.97
Milk	1.50 - 2.50
Eggs	0.80 - 1.20
Fish	0.61 - 1.50
Shrimp	1.25
• Fruit	1.22 - 2.50
Sugar	1.50 - 2.00
Vegetables	0.10 - 0.92
Vegetables oils	0.50 - 1.81
Beverages	0.74
Cocoa	0.75
Manufactures	0.74 - 3.38

Note: The percentage increase in demand as a result of a 1 percent increase in income. The estimates are based on studies of developing countries. The range of reflects differences in per capita income levels among countries.

Source : Bouis 1989, Ingco 1999, Kesavan and Roche 1992; and Morquez and McNeilly 1988, Quoted in the World Bank, *Global Economic Prospects and Developing Countries*, 1994.



### **BOX: Green' Provisions at the WTO**

- **Article XX:** Under certain conditions, policies affecting trade in goods for protecting human, animal or plant life or health are exempt from normal GATT disciplines.
- **TBT and SPS Agreement:** explicit recognition of environmental objectives is made in the Agreement on Technical Barriers to Trade, and that of the Sanitary and Phytosanitary Measures.
- **Agreement on Agriculture:** environmental programmes are exempt from cuts in subsidies.
- **Subsidies and Countervailing Duties:** subsidies are permitted, up to twenty percent of a firm's costs, for adapting to new environmental laws.
- **TRIPs Agreement:** governments can refuse patent applications that threaten human, animal or plant life or health, or risk serious damage to the environment.
- **GATS Article 14:** policies affecting trade in services for protecting human, animal or plant life or health are exempt from normal GATS (the General Agreement on Trade in Services) disciplines under certain conditions.

## CHAPTER - V

### Summary and Findings

The Agreement on Agriculture forms a part of the Final Act, which was the culmination of Uruguay Round of Multilateral trade negotiations signed on 15th April, 1994. The Agreement was expected to provide a framework for a long term reform of agriculture trade and domestic policies over the years to come. Though the agreement primarily aims at creating a fair competition amongst all member countries, there are very many distortion which very strongly prevent achieving the objectives outlined.

As regards India, its present level of exports in the global agriculture trade is of miniscule proportions. Against an overall world trade of \$ 438 billion in 1998 India's contribution was just \$ 5.8 billion, which is 1.32 percent of the total world trade. Considering of the fact that India is the third largest producer of food products in the world. Its insignificant presence in the world trade of agro-products may be alarming. Yet considering the huge domestic demand for food products in the country, it may be extremely difficult for India even to double its performance and increase it to 2.6 percent of the total world trade. Achievement of such a target would at the least demand simple doubling of the contributions from each of the products exported. This would mean that the major contributors like cereals, tea, marine products, oil meals etc. will have to double their performance, which does not appear to be possible considering the empirical data of their performance in the last 10 years. As regards commodities like wheat, rice etc. the increasing demand within the

country coupled with the policy of the government to protect the Indian farmers through administered price support, make the Indian commodities non-competitive in the international market. Given these factors the major contributors toward export cannot double their performance. Therefore export of products like horticulture products, processed food items etc. must increase their performance almost 7-10 folds to achieve the target of doubling the export performance of India. Given the poor image of Indian products and the lack of infrastructure facilities within the country it is almost impossible to achieve such large increase in export of these products. Therefore, there is a clear limitations in the export potential of agro-products from India.

In market access, the present agreement demands replacement of the non-tariff barrier measures by tariff that provide substantially the same level of protection. Such tariffication process are expected to reduce by an average of 36 percent in case of developed countries and 24 percent in case of developing countries. However, a quick examination of pre-Uruguay round tariff rates would reveal that the developed countries had excessively high tariffs along with non-tariff barriers and therefore 36 percent reduction by the developed countries may not mean much. Most of the developed countries in order to protect their own economic and investment interests in their erstwhile colonies have introduced provisions for concessional trade with such countries. Tariff Rates Quota which enables the developed countries to trade with low tariff levels, is one of the most visible trade distortions contained in present agreement on agriculture. Countries like India are seriously affected because of

such provisions. It is noticed that around 28 percent of the overall global trade is governed by such Tariff Rate Quotas. It is necessary to obtain detailed product-wise exports to the developed countries, ascertain the extent of trade covered by tariff rate quotas, so as to understand the impact of low tariffs on Indian exports of such products. Based on such analyses India should submit a proposal for the elimination of TRQs within a definite time frame.

The Sanitary and phytosanitary agreement, which recognizes the governments right to take sanitary and phytosanitary measures necessary to protect human, animal or plant life or health, is slowly emerging as a non tariff barriers creating trade distortions. As an attempt to give effect to this agreement steps have been taken for harmonization of the sanitary and phytosanitary measures on as wide a basis as possible. Such attempts, based on scientific rationale, many a time question the traditional practices followed in developing countries like India, for generations together. Though countering such proposals through scientific rationale may not be possible, it is necessary to recognize that such measures will slowly but surely emerge as non tariff barriers to trade. In the guise of harmonization, attempts are being made to introduce standards and code of practices, calling for a very high degree of perfection, overlooking the field realities in most of the developing countries. In the near absence of any scientific rationale to prevent the introduction of such standards and procedures, the developing countries have no option but to accept such changes. Provision for special and differential treatment to developing countries, has also not proved useful to address to this issue.

Though there is no scope at present, for any negotiations in the agreement on sanitary and phytosanitary measures, we must realize that the decisions under the SPS Agreement have very direct trade implications and therefore this issue needs to be addressed to in the Agreement on Agriculture and suitable provision made so that SPS measures do not become non-tariff barriers to trade.

In domestic support some of the measures like Green Boxes and Blue Boxes, which have a minimal impact on trade are excluded from reduction commitments. It is necessary to examine the content of these two boxes for most of the developed countries and ascertain to what extent they provide unjustified domestic support. An analysis conducted by some of the developing countries has indicated that in U.S.A., Aggregate Measures of Support (AMS), amounted to 24 billion in the base period i.e. 1986. On the first year of implementation in 1995, its AMS drastically dropped to only over 6 million. However, its Green Box support increased to 22 billion. The Green Box criteria has not been clearly defined and the presumption that the support contained in the Green Box have utmost minimal trade distorting effects is also not completely true. The direct payments given to the farmers give boost to their income. Though such incomes have no direct relevance to production, it enables the farmers to slowly use such incomes for increasing their production level. It is therefore necessary to revisit the decision to exempt the Green Box subsidies from the overall AMS.

In export subsidies, the commitment of the developed countries to reduce export subsidies levels by 36% below the base period level, need to be reexamined. It is well known that during base period there was a considerable increase in the subsidy levels because of the massive subsidy war between two trading blocks USA and EU. Reduction from such high peak levels may therefore not result in giving benefit to the developing countries. This is amply justified by the fact that India is not able to export poultry products to its neighbouring countries, whereas most of the developed countries like USA, Europe etc. inspite of very high freight cost are able to sell their poultry product in Middle East at competitive price. Further, the reduction commitment does not include TRQs i.e. developed countries which are re-exporting products imported under TRQs are not subject to any export subsidy reduction for such exports. This undoubtedly is a trade-distortion which will not ensure a fair competition in the agriculture trade. It is necessary to examine the extent of TRQ export and propose inclusion of TRQ exports also in the reduction commitments and also expect developed countries to provide for greater reduction in their export subsidies.

The Agreement on Agriculture has been conceived as a part of the continuing process with long term objective of securing substantial and progressive reduction in support and protection. However, many of the concealed benefits availed by the developed countries vitiate the objective considerably. The objective of establishing fair and market oriented agriculture trading system should strongly aim at the removal of trade distortions within a

definite time frame. Dr.M.S. Swaminathan of M.S. Swaminathan Research Foundation, in his article entitled “for an Evergreen Revolution” has written that:

**“the Industrial countries are responsible for many global environmental problems such as potential changes in temperature, precipitation, sea level and incidence of ultraviolet B radiation. While further agricultural intensification in industrialized countries will be ecologically disastrous, the failure to achieve agricultural intensification and diversification in India and other developing countries, where farming provides most of the jobs, will be socially disastrous”.**

Thus there should be complementary roles that the developed countries and the developing countries should play in the field of agriculture and allied industries. Developed countries should widely spread their knowledge on agriculture research and technology development, restricting their in-house agriculture activities to ensure that the basic agriculture activities are primarily confined to the developing and under developed countries. It is only through the recognition of complementary roles that the developed and developing countries should play, can ultimately the aim of fair competition in agricultural trade will be achieved.

### **TRIPS Agreement**

Similar imbalance as above are also seen in the TRIPs Agreement. Although article 65 of the TRIPs Agreement contemplates a transition period of ten years for India as a developing country to introduce product patent

protection in areas of technology not so protected in its territory as on 1 January 1995, such as pharmaceuticals and agri-chemicals, the obligation under Article 70.9 to grant exclusive marketing rights for patents at any time after the entry into force of the WTO agreement effectively neutralises this transition period available to us. In the realm of geographical indications, the additional protection available to wines and spirits is not applicable to the region specific products of developing countries. The current debate in India on the Basmati Rice issue, involving the passing off type of activity indulged in by certain foreign enterprises with regard to this kind of rice which is associated with certain regions of India, has focussed attention on the need for higher protection for products other than wines and spirits under article 23 of the TRIPS Agreement.

Indeed, the issue of development of proprietary patents by enterprises based on the traditional knowledge of indigenous communities, nurtured through generations, without obtaining prior informed consent or without coming to any agreement on benefit sharing, have been viewed as iniquitous practices by countries such as India, which are storehouses of such indigenous knowledge. A situation where indigenous biotechnology, developed over the ages in countries such as India, is being used without any flow back of benefits from patentees to original developers calls for amendments in the TRIPS Agreement. The imbalances in the TRIPS agreement and its tilt against the holders of indigenous knowhow, mainly based in developing countries,



misaligns it with another major international agreement, namely, the Convention on Bio-diversity (CBD).

Moreover, where Multilateral Environmental Agreement, such as the Montreal protocol or the framework convention on climate change set time bound targets for adherence to certain environmental standards, there also has to be provision for transfer of environmentally sound technologies and processes on fair and reasonable terms to developing countries built into the TRIPS Agreement.

### **Food Security**

There are various internal constraints, which, if not appropriately addressed, would severely limit the capacity of developing countries to increase domestic production to at least a certain minimum percentage of their requirement. **Firstly**, holdings are small and the majority of farmers belong to the small and marginal category. This limits any attempts to introduce mechanised farmings and also constrains the adoption of new technologies unless accompanied by large scale extension programmes. Consequently, the productivity is low and the total production varies substantially. Since a large percentage of the agricultural sector continues to be at the mercy of the vagaries of nature. Further, only a small percentage of what is produced finds itself in the market, the rest being used by the small and marginal farmers for sustenance or for simple barter. At the same time, there is increasing pressure on land from non-agricultural users, both because of the rising level of urbanisation as also because of the geographic spread of industries. If this

limitation on the availability of agricultural land is viewed in the context of the growth in populations. Which most of the developing countries invariably face, it would be clear that the only way in which agricultural growth can be sustained and the objective of food security attained, would be through increased governmental support in the use of inputs, particularly in terms of irrigation, electricity, technical know-how, infrastructural development and market support.

Again, access to global market in terms of food security requires access to the required foreign exchange. Given the past level of export performance and the projected global economic conditions (see Table 4.1 and 4.2), a sustained export performance for most developing countries including India, appears to be a chimera. Further when needed, food may not be readily available in the international market if there is a simultaneous shortfall in the major supplying markets, leading to a steep rise in prices, over and above dependence on imported food is likely to constrain them in their foreign policy options. So in agreement on Agriculture there should be focus on the food security and livelihood concerns by suggesting specific measures under a **“Food Security Box”**, which should be exempted from any form of reduction commitments.

Finally, agricultural self reliance forms a vital underpinning for the growth of the GDP of agrarian developing economies since good agricultural production provides purchasing power to a large majority of population, which in turn spurts industrial growth. Self-sufficiency in food production has,

therefore, specific developmental perspective as opposed to a purely commercial perspective. Hence, it is our view that developing countries like India need to be provided the requisite flexibility within the AoA (Agreement on Agriculture) to pursue their legitimate non-trade concerns. More specifically, developing countries need to be allowed to provide domestic support in the agriculture sector to meet the challenges of food security and to be able to preserve the viability of rural employment, as different from the trade distortive support and subsidies presently permitted by the Agreement. It is therefore, important that a differentiation is made between such domestic support measures which are presently being used to carve out a niche in the international trade and between those measures which would allow developing countries to alleviate rural poverty.

We are, however, deeply committed to the success of the multilateral trading system. We believe that the WTO and the multilateral trading system must be effective instrument for serving the needs of the weakest section of the society in all parts of the world. No single pattern, no single package of measures can be considered to be universally applicable. We would be deluding ourselves by thinking that a single remedy can be applied across the board. What we should strive to achieve is the amelioration of the living conditions of all people, particularly the poorest. In the words of Mahatma Gandhi, **“I do not believe in the ‘greatest good of greatest number’, nor can I agree that ‘Might Is Right’. For human beings, the object in view should be the good of all, with the weak being served first”**.

## **APPENDIX-I**

**The Preamble of WTO:**

**“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 the 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 consistent with their respective needs and concerns at different levels of economic developments”. (Preamble in the final act of the Uruguay Round 1994, p.9).**

## **APPENDIX -II**

**(a) Objectives of the TRIPS agreement has been clearly stated in Article (7) as:**

**“The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology to the mutual advantage of producers and users of technological knowledge and in manner conducive to social and economic welfare, and to a balance of rights and obligations”.**

**(b) WHO defines traditional medicine as “the sum total of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and**

**elimination of physical, mental or social imbalance and relying exclusively on practical experience and observations handed down from generation to generation, whether verbally or in writing”.**

(c) Biological Diversity Bill 2000

*(Appeared in Hindu Folio, Earthscapes, May, 2001)*

Realising that there is no comprehensive legislation dealing with biodiversity in India, and following up on its obligations under the U.N. Convention on Biological Diversity, the government of India has introduced the Biological Diversity Bill 2000 into Parliament. Currently being examined by a committee of MPs, this Bill:

- Prohibits transfer of Indian genetic material outside the country, without approval of the Indian Government, stipulates that patents or other intellectual property rights (IPR) over such material, or over related knowledge, can be only taken after seeking permission in advance;
- Provide for the levying of appropriate fees and royalties on such transfers and IPRs;
- Regulates access to such material by Indian nationals also to stop over-exploitation;
- Provides for the sharing of benefits of various kinds, including transfer of technology, monetary returns, joint R&D, venture capital funds, and joint IPR ownership;

- Provides measures for habitat and species protection. EIAs of projects which could harm biodiversity, integration of biodiversity into all sectoral plans, programmes, and policies;
- Gives local communities a say in the use of resources and knowledge within their jurisdiction, and to charge fees from parties who want to use these resources and knowledge;
- Provides for the protection of indigenous knowledge, through appropriate legislation or administrative steps such as registration at local, State and national levels;
- Stipulates that risks associated with the use of genetically modified organisms, will be controlled through appropriate means;
- Provides for the designation of institutions as repositories of biological resources;

The Bill envisages the creation of authorities and funds at National, State, and local levels.

Hidden within the overall progressive thrust of the Bill are some serious defects that will need to be tackled. For instance, it omits from its purview all claims of IPRs that are made under the proposed Protection of Plant Varieties and Farmers' Rights Bill (which is also currently in Parliament). Unfortunately the Plant Varieties Bill does not provide for prior consent from farmers or compulsory benefit-sharing arrangements where farmers' varieties or knowledge is used, so such an exemption

provides a major loophole for corporations and scientists to gain monopolistic IPRs on plant varieties.

Secondly, the Act does not provide citizen with the power to approach courts if they detect violations. The final expert committee draft of the Bill presented to the MoEF contained such a locus standi to citizens, and its is strange that this has been left out.

The Bill is also soft on Indian entities, requiring only “prior intimation” for their use of bioresources rather than permission as in the case of foreigners. This could be unjustified, given that Indians (especially corporations) are not necessarily any more responsible in their conduct.

The empowerment of local community bodies under the Bill is rather incomplete, for much greater powers to gram sabhas should have been provided.

If the above shortcomings are tackled, however, the Bill could be a powerful tool for conservation and for securing the livelihoods of biodiversity-dependent communities.

### **APPENDIX -III**

(a) The following is a review of specific articles of the SPS Agreement and their implications for India by G.D.Orriss (FAO Consultant), Presented in a Seminar on June 2000. Indian Institute of Foreign Trade, New Delhi.

#### **Art 2 Basic Rights and Obligations**

Article 2 reaffirms the right of members to determine their appropriate level of sanitary and phytosanitary protections. It also states that no member should be prevented from adopting or enforcing measures necessary to protect human, animal or plant life or health, subject to the requirement that these measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between members where the same conditions prevail or as a disguised restriction on international trade. Emphasis is placed on SPS measures based on scientific principles and justification.

India faces resource and capacity challenges necessary for it to meet its obligations and accrue the benefits associated with the SPS agreement. In fact the right to protect human, animal or plant life or health goes beyond the potential trade benefits associated with adherence to the SPS Agreement. It should be fundamental right for all countries to have adequate capacities to protect their human, animal or plant life and health.



A potential exists under this Article that may allow members to ship goods having a lower level of protection than would be required in their own countries to India where to lower level of sanitary or phytosanitary protection protection may exist. This may raise ethical considerations and should be addressed in the next review of the Agreement.

Another ethical consideration relates to the obligation for India to provide goods which meet the developed world's higher level of protection. This results in India sending their products with lower levels of risk to the developed world while allowing their own populations to be exposed to goods with higher levels of risk.

### **Article 3 Harmonization**

Article 3 (1) encourages WTO Members to harmonize sanitary and phytosanitary measures on as wide a basis as possible with international standards, guidelines or recommendations developed by international organizations, where they exist. These organizations include for food safety the FAO/WHO Codex Alimentarius Commission; for animal health, the Office International des Epizooties; and for plant health, the International Plant Protection Convention.

**Article 3(2)** states that sanitary or phytosanitary measures which conform to international standards, guidelines and recommendations are deemed to be necessary to protect human animal, or plant life or health and are presumed to be

consistent with the relevant provisions of this Agreement. However, even with developing countries base their standards and legislation on international standards, they frequently do not have the necessary capacities to ensure adherence to the legislation as they do not have adequate testing, inspection, certification and approval procedures. They may therefore be unable to meet the level of protection required by developed Member countries.

It is necessary for the Government of India to take steps to ensure that the sanitary and phytosanitary measures in India are harmonized with the international standards, guidelines and recommendations.

In the case of food safety, there is an urgent need to amend the Prevention of Food Adulteration Act and associated Rules to ensure that India's sanitary measures are based on Codex standards, guidelines and recommendations and to strengthen the capacities of the Central and State Governments to implement effective food control programme. Similarly, it will be necessary to review the legislation protecting animal and plant life or health to ensure harmonization with international requirements and to strengthen the capacities necessary to ensure to adherence to the legislation.

Articles 3 (3) allows Members to introduce or maintain sanitary or phytosanitary measures which result in a higher level of protection than would be achieved by measures based on relevant international standards, guidelines, or recommendations if there is scientific justification, or as a consequence of the level of sanitary or phytosanitary protection that a Member determines to be

appropriate in accordance with the relevant provisions of Articles ( Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection). However some Members who have introduced such measures have not provided adequate justification or information to the affected countries. Also the lack of technical expertise, technical infrastructure and /or resources may prevent India from effectively challenging levels of protection of other Members considered to be unreasonable.

Article 3.4 instructs Members to play a full part, within the limits of their resources, in the relevant international organizations and their subsidiary bodies, in particular the Codex Alimentarius Commission, the International Office of Epizootics, and the international and regional organizations operating within the framework of the International Plant Protection Convention.

Effective participation by India in the establishment of international standards, guidelines and recommendations is important to ensure that its interest, an those of other developing countries are taking into consideration in the elaboration of international norms. Opportunities exist for collaboration with other developing Member countries to ensure that standards unacceptable to the developing Member countries are not adopted.

There is much however that remains to be done and there is an urgent need for the Government of India to develop the necessary capacities in the area of sanitary measures (foods safety) in order to ensure the protection on the Indian consumer and to maintain or increase access to international markets. Specific

attention should be given to strengthening the food inspection programmes, sampling and analysis capabilities, and compliance and enforcement activities of the Central and State Food Authorities. Food control laboratories need to be significantly upgraded and appropriate laboratory equipment is required. Training programmes need to be developed and provided to inspectors and laboratory analysts. In addition, a credible system for certification of the quality and safety of food exports needs to be established under the Export Inspection Council, Ministry of Commerce.

There are presently a number of agencies in India that have responsibilities for different aspects of food control at different levels of the food production chain. A mechanism for coordinating their activities is needed to ensure that an integrated approach is taken to the control of food safety and quality to prevent dilution and/or duplication of activities and to establish synergies.

#### **Articles 4 Equivalence**

Article 4 (1) directs Members to accept the sanitary and phytosanitary measures of other Members as equivalent even if their measures differ from their own or from those used by other Members trading the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection.

Article 4(2) directs Members to upon request enter into consultations with the aim of achieving bilateral and multilateral agreements on the recognition of the equivalence of the specified sanitary or phytosanitary measures.

The concepts of the appropriate level of sanitary or phytosanitary protection is important in that it is defined under the SPS Agreement as the level of protection deemed appropriate by the Member establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory. Many Members otherwise refer to this as the acceptable level of risk.

It is important to also recognize that sanitary and phytosanitary measures go beyond standards and regulations. Sanitary and phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures. These include end product criteria; processes and production methods; testing, inspection and certification procedures; quarantine treatments including relevant requirements associated with the transportation of animals or plants, or with the materials necessary for their survival during transport; provisions or relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety. It will be necessary for India to take action to strengthen measures in these areas.

**(b) Definition of Food Security**

FAO defines food security as a situation in which all households have both physical and economic access to adequate food for all members and where households are not at risk of losing such access.

The world bank defines food security as access by all people at all times to enough food for an active and healthy life. Therefore, one should distinguish clearly between food production and food security.

[Ingco, Merlinda, (1996)]

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