AGRICULTURAL LIBERALIZATION: THE CASE OF DEVELOPING COUNTRIES

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Abstract

The objective of this thesis is to demonstrate, through legal and regulatory analysis, how three non-trade issues - SPS measures, trade in GMOs and food security concerns - might result in new modern barriers to trade that might diminish the gains of freer markets. If developed countries use non-trade concerns to justify more generous domestic support in a non-decoupled way, may do as much harm to international trade as the traditional trade policies instruments did in the past. Such undesired behavior from the developed world is possible due to the inability of current WTO norms to control these new problems. These three special issues must be addressed in future negotiations in order to modify developing countries' perception that the payoffs of trade liberalization are not advantageous for them. The continuance of this perception during current negotiations might lead to the collapse of the current trading system.

Résumé

L'objet de cette thèse est de démontrer, par une analyse légale et réglementaire, comment trois thèmes – mesures sanitaires et phytosanitaires, commerce du organismes genetiquement modifies (OGM) et aspects de la sécurité dans les produits alimentaires - peuvent se transformer en nouvelles barrières commerciales qui pourraient réduire les bénéfices d'un marché plus libre. Si les pays développés utilisent d'une manière aléatoire ces trois arguments non-commerciaux pour justifier une aide domestique plus généreuse, ceci peut créer autant de mal au commerce international que les anciennes politiques du passé. Non désiré, ce comportement des pays développés est possible à cause de l'impossibilité actuelle des normes de la Organisation Mondiale du Commerce (OMC) actuelle de contrôler ces nouveaux problèmes. Ces trois arguments en particulier doivent être utilisés dans de futures négociations afin de modifier dans les pays en voie de développement l'idée que les bénéfices du libre commerce n'ont pas d'avantages pour eux. Si la perception actuelle perdure durant les négociations présentes cette opinion peut conduire à l'écroulement du système de commerce actuel.

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AGRICULTURAL LIBERALIZATION: THE CASE OF DEVELOPING COUNTRIES

1 INTRODUCTION

Trade in agriculture represents one of the most developed areas in the developing world, corresponding to 21% of GDP in low income countries.[1] Moreover, in the developing world, the agricultural sector employs about two thirds of the working population. These statistics show the magnitude of liberalization of the agricultural market for developing countries. Due to this strong dependence on their agricultural production, the Agreement on Agriculture resulted in a very interesting proposal for the economies of developing countries, offering them reduced tariff barriers and bigger markets for imported products. However, a few years after the signing of the Agreement, developing countries were disappointed with the actual benefits that the Agreement brought to their economies; it looked as if developed countries' commitment was not as meaningful as they had expected. Developing countries have increasingly felt that rich nations see free trade as opening up new markets for their exports, while they keep their own domestic markets firmly closed. Since the signing of the Agreement new concerns have arisen, opening new issues to discuss in a future round.

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[1] See Samoussi Bilal "Introduction: Agriculture in a Globalizing World Economy", S. Bilal & P. Pezaros, *Negotiating the Future of Agricultural Policies. Agricultural Trade and the Millennium Round.* Kluwer Law International 2000. The Hague, Netherlands. At page 2.[hereinafter *Negotiating the Future*]

The objective of this thesis is to demonstrate, through legal and regulatory analysis, how three non-trade issues - SPS measures, trade in GMOs and food security concerns - might result in new modern barriers to trade that might diminish the gains of freer markets. If developed countries use non-trade concerns to justify more generous domestic support in a non-decoupled way, it may do as much harm to international trade as the traditional trade policies instruments did in the past. Such undesired behavior from the developed world is possible due to the inability of current WTO norms to control these new problems. These three special issues must be addressed in future negotiations in order to modify developing countries' perception that the payoffs of trade liberalization are not advantageous for them. The continuance of this perception during current negotiations might lead to the collapse of the current trading system.

Chapter 1 shows the importance of agriculture for developing countries and why this activity is treated differently from other trade areas. Furthermore, the chapter briefly explores the WTO Agreement on Agriculture and the current situation under such Agreement.

Chapter 2 discusses the specific problems that developing countries face in meeting SPS requirements. It shows the ineffectiveness of the SPS Agreement in preventing SPS measures from becoming an unjustified barrier to trade. The chapter explores four areas of concern: first, the transparency mechanism under the SPS Agreement; second, the lack of recognition of the special treatment provisions prescribed for developing countries; third, the flexibility inherent in the SPS disciplines themselves, especially with regard to the possibility of taking

precautionary measures; and finally, a deep analysis of the technical assistance -and the lack of it- that developing countries receive.

Chapter 3 thoroughly analyzes the more problematic issue related to current and future agricultural practices: the trade of GMO products. The chapter begins by showing the importance of new technology for developing countries, and the concerns related to this new form of production. Furthermore, it touches upon two different aspects of current negotiations: on the one hand, labelling plans as a response to consumers' needs; on the other, the possibility of using the SPS Agreement to prevent the use of GMO concerns as a disguised barrier to trade.

The final chapter states that although in the long term agricultural liberalization will bring gains to both developed and developing countries, transitional issues such as food security must be addressed. The chapter investigates how agricultural liberalization might bring about developing countries' destabilization due to higher global prices by diminishing the amount of food available for food aid programmes. The current food aid system is analyzed so as to understand its flaws and its benefits. The Chapter concludes with the idea that food aid needs to be restructured and examines which role should the WTO play in a future food aid programme.

The thesis concludes by affirming that future negotiations should consider the concerns and interests of both developed and developing countries. It is highly recommended that the developed world recognize and respect the concerns and needs of the developing world. By doing so, the developing world will finally see

the WTO as the rule-based system that protects it from the unilateral predatory actions of larger countries or big multinational firms.

2 TRADE LIBERALIZATION IN AGRICULTURE REPRESENTS A GREAT OPPORTUNITY FOR ALL DEVELOPING COUNTRIES

2.1 Introduction

Agriculture is today a cornerstone sector of the global economy, accounting for 5% of the Gross Domestic Product (GDP) and more that 10% of the world's merchandise trade. About half of the world's workforce is employed in agriculture. In developing countries the agricultural sector employs about 2/3 of the working population generating around 1/5 of the national income. Furthermore, some developing countries like Ethiopia, Guinea, Mali, Rwanda and Tanzania employ more than 80% of their population in the agricultural sector, including agricultural production for self consumption; and the share of agriculture in the GDP in countries like Burundi, Cambodia, or Cameroon reaches over 40%.[2] Moreover, 70% of the world's poorer population lives in rural areas and depends on agriculture for some or all of their income. Finally, the farmers in developing countries manage most of the world's arable land and available fresh water.[3]

These statistics demonstrate that the agricultural sector is a strong pillar in the economies of developing countries. However, the doctrine is divided around the idea of how beneficial trade liberalization in the agricultural market can be for the developing world. Those who are against freer trade for agricultural products

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[2] World Bank, "World Development Report 1999/2000 – Entering the 21st Century: The Changing Development Landscape", The World Bank (1999a); World Bank, "World Development Indicators 1999: The World Bank (1999b).

[3] See A. F. Calla, "What the Developing Countries Want from the WTO" (2001) 2.1 The Estey Centre Journal of International Law and Trade Policy. 165 at 169.

maintain that small farmers in the developing world are being squeezed hard while exporters and transnational corporations in the developed world carrying out the processing and retailing are making disproportionate profits in the commodity chain. For this part of the doctrine, liberalization of the agricultural market has left farmers in the developed world without the protection of governmental agricultural policies. These policies included tariffs, quantitative restrictions, subsides which artificially reduced the costs of inputs, and support prices programmes that increased the prices farmers were paid for their commodities. These policies were used to protect the livelihoods and employment of those in the rural sector.[4]

Moreover, according to this theory, developing countries have not received the promised benefits of free trade owing to the fact that the pre and post farming operations are dominated by corporations from industrial countries. Hence, developing countries are unable to enter a higher value processing for their commodities due to the current tariff structure and tariff escalation of the developed world. This position argues that developing countries should produce exclusively for the local market because by doing so, they would reduce the number of intermediaries, providing the farmer with opportunities to have more direct access to the consumer/market, and consequently, much greater control over the price and the level of profitability.[5]

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[4] See A. Kwa, "Agriculture in Developing Countries: Which Way Forward?" (2001) Trade Related Agenda, Development and Equity (T.R.AD.E.) Occasional Papers – South Centre. 1at 3.
[5] Kwa, *ibid* at 13.

2.2 Free Markets for Agricultural Products: The Advantage for Developing Countries

In contrast to the thesis previously introduced, another part of the doctrine believes that liberalization of the agricultural market is extremely advantageous to the interests of developing countries. This notion will be followed through the rest of the paper. The premise of this thesis is that access to a freer market for agricultural products is absolutely vital to the development of the developing world. In other words, further liberalization of the agricultural market will, in the long term, benefit all developing countries. For a better understanding of the benefits of further liberalization, developing countries can be classified into four groups or categories.[6]

The first group includes those countries that are net food exporters of tropical farm products. These countries currently pay relatively low tariffs in many of their primary exports, but still have to cope with high tariffs in some significant products such as bananas. Moreover, net food exporters of tropical farm products face extremely high tariffs in processed tropical products, which hinder their capacity to export the processing value-added component. For example, according to current rules, developed countries let coffee beans in free but they apply high tariffs on processed coffee.[7] This group of developing countries would benefit from a removal of tariffs on tropical products, including processed agricultural products. This removal would give this group the possibility of trading at a larger scale and, moreover, the opportunity to compete in the area of processed agricultural products.[8]

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[6] See K. Anderson, "Agriculture, Developing Countries and the WTO Millennium Round" (1999) Center for International Economic Studies of the University of Adelaide. 1 at 3.
[7] Anderson, *ibid* at *2*.
[8] Calla, *supra* note 3 at 173.

The second group comprises developing countries that are exporters of temperate farm products, such as oilseeds, livestock products and sugar. This group of net food- exporting developing countries faces high import tariffs and very restrictive tariff rate quotas, especially when trying to sell to the OECD (Organization for Economic Cooperation and Development) countries' markets. Consequently, these countries have a clear interest in seeing these tariffs lowered. It is worth mentioning that within this group there is a sub-group of countries that have preferential access agreements with OECD countries. This sub-group might, in the short term, lose the sale revenues of those items, if the OECD countries lowered their Most Favored Nation (MFN) tariff. Nevertheless, they may compensate for these losses through the sales of other farm products that are not included in the preferential agreements and/or they may be able to negotiate some type of compensation.[9]

Both of the previously mentioned groups would gain from a reduction in competitive export subsidies, more stable prices, protection against embargoes and political trade restrictions, sanitary and phytosanitary rules not being used as barriers, and protection against misuse of antidumping and countervailing duty provision.[10]

A third and distinctive group is formed by net food-importing developing countries that have low export earnings and/or significant food import requirements. This group of countries fears that cuts in subsidies and reductions in the financial support of OECD countries might raise world prices for their imports and reduce the

[9] Anderson, *supra* note 6 at 2.
[10] Calla, *supra* note 3 at 173.

quantities of food available for food aid programmes or subsidized sales. Yet, even this group would benefit from liberalization of the agricultural world market, because it would force them to develop a comparative advantage in the agricultural production that they might not be currently using because of the availability of food aid programmes. Moreover, further liberalization of the agricultural market would provide them with cheaper imports and better export prices.[11] In addition, in those countries where agriculture is not a feasible activity, liberalization would benefit them by producing a raise in the wages paid for unskilled labor, which may be sufficient to more than offset the rise in food prices. This idea will be fully analyzed in chapter 4 of this paper.

Finally, still another group includes those developing countries that are rapidly accumulating capital, and developing their economies towards the production of unskilled labor-intensive manufactures. These countries would also gain from the liberalization of agricultural trade, in the sense that, as Kim Anderson explains: "Lowered industrial – country barriers to farm trade would reduce the need for the more land-abundant developing countries to move into manufactures in competition with the newly industrialized one".[12]

The argument in this paper supports the idea that developing countries will obtain benefits from further liberalization of the agricultural sector. World trade in agriculture is currently regulated mostly by the Uruguay Round Agreement in Agriculture. The following sections of this chapter will explain and analyze why liberalization in agriculture has resulted in such a hard area of negotiations, and the

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[11] *Ibid* at 174.

current status under the Agreement. The chapter concludes with the affirmation that the current system needs to be improved in the near future. Negotiations should not only attend to the three principal areas currently regulated trough the Agreement, but also to new non trade concerns that are explored in detail in the following chapters.

2.3 Differential Treatment for the Agricultural Sector

Agricultural production has always been considered a special area for both developed and developing countries. This has turned liberalization of the agricultural sector into a very difficult task that can only be really understood if we explore and explain the rationales for this kind of behavior. This chapter will explain the different ways in which developed and developing countries have managed their agricultural sectors. The main objective of the section is to clarify why the opening of the markets in industrialized countries to developing countries has been and will remain a difficult task in future multilateral negotiation.

2.3.1 Industrialized Countries and the Protection of their Agricultural Sector

Industrialized countries have been asking for the liberalization of markets, not only bilaterally by the signature of reciprocal agreements, but most importantly, multilaterally, by the auspices of the WTO. In this line, liberalization of trade in goods was the first step towards global liberalization, and was followed by trade in services and trade in agricultural products. Nevertheless, the process of liberalization

[12] Anderson, *supra* note 6 at 4.

of the agricultural sector poses atypical circumstances compared to the other two areas mentioned previously.

Since the beginning of the GATT negotiations, developed countries' governments have been reluctant to open their agricultural markets. These governments have resorted to different types of policies aimed at protecting the sector from international competition. The clearest example of this type of protectionist policies is the Common Agricultural Policy (CAP) system in the EU. Moreover, even though the US fights for liberalization in the multilateral scenario, it has bilaterally resorted to new types of subsidies to protect its agricultural sector, the latest and most controversial of which is the new Farm Bill that President Bush signed on May 2002.[13]

The paradox of agricultural policies stems from the fact that, contrary to common belief, a small minority of farmers in the developed world (less than 5% of the labor force) have managed to obtain a high level of support, whereas in developing countries the large population of farmers has been discriminated against.[14] The lobbing power of farmers in the developed world has been studied in depth and explained by different theories.

One classic explanation has been "the number paradox". According to this theory a specific interest group composed of a few members is better suited than a

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[13] "Trade Disputes – Dangerous Activities" *The Economist*, (9 May 2002), online: The Economist <http:www.economist.acom/displayStory.cfm?Story_ID=1120348 (date accessed: 2 February. The new farm bill increases agricultural support by 70%. According to official US estimates, the farm bill will increase government spending on agriculture by 80%, an additional US$ 82 billon over ten years on top of some US$ 100 billon that Congress was already set to give farmers. The bill extends, or re introduces subsidies on a host of farm products from honey to chickpeas. For Americas' biggest crops, soybeans, corn and wheat, it invents new payments that are related to prices and production and hence, are highly trade distorting.

large group to exercise pressure because it can more easily control the "free rider problem"[15] and because it ensures homogeneity of preferences. Farmers in the developed world, who are a relatively small group, are *a priori* more efficient at lobbying than a large consumer association. Farmers in developing countries, due to their large number, face severe difficulties in organizing themselves to defend their interests.[16]

The strong support enjoyed by farmers in the developed world has also been explained by the "compensation effect" theory. This theory departs from the idea that sectors in decline, or suffering from economic adversity, tend to benefit more from government support in times of crisis than during periods of growth. This is a consequence of greater propensity of sectors to exert pressure on the government to intervene in times of adversity. This is the case of farmers in developed countries where farmers' income depends to a great extent on government support, like in the case of the CAP in the EU. The shrinking size and role of agriculture associated with industrialization and economic development have resulted in farmers arguing for and relying on state support and in governments showing greater concern to maintain the relative standard of living of farmers.[17]

A third explanation argues that as national income rises and the number of farmers falls, the resistance to support for agriculture weakens. In developed countries the benefits of agricultural support are concentrated on a few farmers while

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[14] See. Bilal "The Political Economy of Agricultural Policies and Negotiations", in S. Bilal & P. Pezaros, *supra* note 1, 81at 84.

[15] The free rider problem can be explained as the possibility that some members benefit from the group action without having to contribute to its costs.

[16] See M. Olson, "The Logic of Collective Action: Public Goods and the Theory of Groups" (1965). Cambridge, Mass.: Harvard University Press.

the costs of government intervention in agriculture (in terms of both direct cost to tax payers and consumers on the one hand, and indirect costs generated by the distortions introduced which induce deadweight losses and incentive biases on the other hand) are spread over the whole population.[18]

One last explanation can be found in the "restaurant bill problem". This explanation is particularly applicable in the case of the EU. The theory is explained through a dinner situation where each person orders his/her own course, but the restaurant bill for the dinner is shared equally among all those at the table. This situation inevitably ensues that some persons pay more than they would have done otherwise, as individualistic behavior leads at least some people to order the more expensive course, knowing that the cost will be shared with the others. In the case of the EU, a Member may not favor the CAP, but since it is there, and the Member State has to pay for it anyway, the Member includes products or measures that would directly benefit its farmers, even though that entails a higher overall cost of the CAP.[19]

The theories introduced before try to explain the strong support that agriculture has enjoyed in the developed world. Moreover, most developed countries justify this strong protectionism with different arguments that have been challenged by those who believe in the benefits of free trade.

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[17] See K.M. Murphy, A. Schleifer & R. W. Vishny, "The Allocation of Talent: Implications for Growth" (1991), Quarterly Journal of Economics.

[18] See L.A. Winters, "The Political Economy of the Agricultural Policy of Industrial Countries" (1987). European Review of Agricultural Economics, 14 (3) at 285-304.

[19] See S. Bilal, "Political Economy Considerations on the Supply of Trade Protection in Regional Integration Agreements" (1998) Journal of Common Market Studies, 36 (1) at 1-31.

Among the justifications for protecting the agricultural sector we can find concerns related to self-sufficiency or national security, exceptional price instability and the preservation of the rural way of life and the rural environment. The self-sufficiency/national security argument is based on the idea that a nation's survival depends, in certain circumstances, on the possibility to access food. In times of food shortage, the amount of food imported from other countries can be reduced as these exporter countries may restrict their exports to ensure their own population gets fed first. Those who are against protectionism in the agricultural sector believe that such an explanation has only been used to maintain agricultural production in countries where it would have been more efficient to import their food.[20]

The second justification, exceptional price, is based on the fact that agricultural production is subject to greater price fluctuations compared to other trade areas. This is mainly due to the fact that supply is susceptible to unpredictable factors such as the weather. Moreover, while farmers' income is highly volatile, their costs are mostly fixed. Governments argue that unless supply is restricted or prices stabilized by other means, a single bad year in the harvest may end up in many farmers being put out of business altogether although, in real terms, they do not have any comparative advantage in producing agricultural goods.[21]

Finally, one of the strongest arguments used to maintain protectionist policies in agriculture is the idea of preserving the rural way of life and environment. The basic idea is that if they open the market to imported agricultural products, the land which was previously used for agriculture will then be used to install polluting

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[20] See M. J. Trebilcock & R. Howse, *The regulation of International Trade,* 2nd ed. (London and New York: Routledge, 2001) at 253.

industries, and industrial or commercial cities. Moreover, there is also the idea that agriculture sustains rural communities that will disappear if economic activity is shifted from agriculture.[22]

2.3.1.1 Agricultural Protectionism in the European Union and the Multifunctionality Theory.

In the case of the EU, all these justifications find support in the multifunctionality theory, according to which agriculture is considered by Europe as more than a means of producing food and fibre at the cheapest price. Agriculture responds to the interrelated objectives of citizens, consumers and farmers in three principal ways. First, in the case of production, agriculture provides the population with secure and stable supplies of healthy, quality food and non-food products and allows EU countries to develop a competitive position in world markets, always based on sustainable production methods. Second, agriculture serves territorial objectives by safeguarding and enhancing the countryside and by providing environmental services to the public. In this sense, agriculture is a source of employment, preventing depopulation in remote areas. Finally, agriculture plays a social role by reinforcing the economic and social cohesion, ensuring a balance between producers, sectors and regions.[23]

This multifunctional role of agriculture serves as the pillar of the current CAP system. The CAP understands agriculture not only as a tool to produce a rich variety of high quality foods, but also, as the key element to promote growth and

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[21] *Ibid.*
[22] *Ibid* at 254.
[23] See N. Devisch, "The Role of European Farmers in Global World", in S. Bilal & P.Pezaros, *supra* note 1 at 237.

protection to the rural environment, to preserve rural landscapes and to contribute to the socio-economic development of rural areas, including the generation of employment opportunities.[24]

Gerry Kiely, counselor on agriculture, fisheries and consumer affairs in the European Commission Delegation to the United States clarifies the concept of multifunctionality when he says:

> In Europe we do not see agriculture as merely having an economic role, although I do not want to understate the importance of this. If it was merely economic consideration which has to be taken into account, then the arguments put forward by many would carry more weight, i.e. abolish all support and market protection and let the market decide on the basis of "survival of the fittest". Of course even if one were to accept this argument, this approach would wipe out about two-thirds of our farmers overnight, leading to a major decline in production and an increase in prices and imports. Eventually, however, a much smaller number of farmers would produce from essentially the same area. This would result in a similar or even a greater level of production and exports, similar or lower market prices and a depopulated rural environment in the EU. It is not obvious as to who would benefit from this scenario but it is obvious where the loss would be, in the rural areas of Europe. [25]

Those who fight against the CAP and who argue for freer markets for agricultural products believe that although none of these three arguments are completely untrue, they erroneously rest on the idea of family farmers who can lose their work if markets are opened. Free trade supporters sustain that, in fact, agricultural production in developed countries is currently under the control of large commercial producers. Consequently, the image of the poor family farmer represents only a small group of farmers who can be better aided by another kind of measures, such as insurance for stabilizing farmers' income or regional development plans to ensure a balance in the agricultural production in rural areas. According to this position, this type of measures will reach the same objectives while avoiding a

[24] See G. Kelly, "WTO and Market Access: Subsides, Tariffication and Barriers to Freer Trade" (2001) Michigan State University – DCL Journal of International Law, 1 at 2.

distortion in domestic prices and the limitation of foreign competition to maintain artificially high domestic prices.

In conclusion, the arguments explained above show the tendency in the developed world to protect the agricultural sector. The pressure of the lobbies that represent the agricultural sector in the EU and in the US is strong enough to maintain protectionist policies that result in higher prices for consumers and higher taxes for their citizens. It is here where the contradiction arises, because liberalization in agriculture would give more gains to consumers and taxpayers in the developed world than in the developing one; still, governments succumb to the pressures and maintain a system that is uneconomical for their own citizens. In 1990 a study carried out jointly by the OECD and the World Bank estimated that if developed countries cancelled domestic and export subsidies, food prices would rise resulting in a shift of food production to lower–wage developing countries. In this situation, OECD countries would experience a net annual economic gain of approximately US$ 50 billion, while developing countries would gain US$ 12 billion.[26]

The study mentioned above demonstrates that opening markets for agricultural products would benefit both developed and developing countries and that it is essential that developed countries stop their protectionist policies so that the real benefits of free trade can be enjoyed by all.

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[25] *Ibid* at 1.
[26] United Nations Conference on Trade and Development, *Agricultural Trade Liberalization in the Uruguay Round: Implications for Developing Countries*, UN, 1990.

2.3.2 Developing Countries Attacking their Agricultural Sector

Contrary to the situation in the developed world, net food-exporting developing countries, which have a huge economic dependency on the agricultural sector, give no support to this area; what is more, they have generally taxed it in order to use it as a source of revenue.[27] This type of policy towards agriculture in net food-exporting developing countries has resulted from several factors, some of which will be explained in the following paragraphs.

One of the first issues that attracts attention is the fact that the impact of indirect policies (such as foreign exchange rate policies) on producer prices and on the purchasing power of farmers is greater than the impact of direct interventions in agricultural pricing policies. Nevertheless, farmers focus their lobbying power on activities that attack direct measures affecting the price of their inputs and outputs, while ignoring the macroeconomic policy. The explanation to this situation might be found in the fact that farmer groups encounter greater resistance from other actors, such as manufacturers. Hence, while macroeconomic policies can damage farmers more than direct policies, farmers have to choose between lobbying in a competitive environment with lower chances of success, and lobbying for specific agricultural policies where they encounter no possible counterpart.[28]

Another characteristic of the political economy of agriculture in developing countries is based on the belief that industrialization is the engine for growth and

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[27] See K. C. Kennedy, "Reforming Farm Trade in the Next Round of WTO Multilateral Trade Negotiations" (2001) 35. 6 Journal of World Trade 1061 at 1062.
[28] See. Bilal "The Political Economy of Agricultural Policies and Negotiations", in S. Bilal & P. Pezaros, *supra* note 1, 81at 82.

development in poor countries.[29] Hence, developing countries' governments have been benefiting the industrial sectors at the expense of agriculture. Although the idea is not artificial, the real issue is to examine where the comparative advantage of each of these developing countries resides. For example, Argentina is a country that has potential advantages in agricultural production due to its geographical location and climate factors. However, governments have been trying to encourage the development of heavy industries such as the metal mechanic or car manufacturing industries, where they do not posses a comparative advantage, instead of promoting industries that derive from the agricultural sector where Argentina is really competitive.

Finally it is worth mentioning that government intervention in developing countries is deeply influenced by political factors. In developing countries where farmers are part of the ruling coalition the agricultural sector receives support.[30] Unfortunately, this situation hardly ever occurs since the agricultural sector has been so badly treated in the last years that farmers have hardly any lobbying power in the political scenario.

Therefore, it can be stated that, in general, developing countries' governmental policies are strongly tilted against agriculture, a situation that has to be changed if developing countries want to profit from the advantages of free trade. Developing countries should support their agricultural production by resorting to the tools established in the Uruguay Agreement on Agriculture and related Agreements.

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[29] *Ibid* at 83.
[30] *Ibid.*

The following section will analyze this Agreement and will demonstrate that it represents an advance compared to the situation under the GATT, but that it needs further modification to represent a true liberalization of the agricultural market and a real opportunity for developing countries.

2.4 The WTO Agreement on Agriculture

The Uruguay Round Agreement on Agriculture represents a modest first step toward serious liberalization of the agricultural world market. The Agreement is structured on the basis of three pillars: market access, reduction of domestic support and reduction of domestic subsidies. The preamble of the Agreement states that the long-term objective of WTO members is to establish a fair and market-oriented agricultural trading system that includes substantial reduction in agricultural support and protection.[31]

2.4.1 Market Access Commitments

The provisions regarding market access commitments[32] require:

- A guaranteed access level for all agricultural products
- The tariffication of non-tariff barriers into tariff equivalents
- The use of tariff-rate quotas to ensure that the market access commitments are honored.

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[31] See World Trade Organization, *Agreement on Agriculture* April 15, 1994 Geneva: WTO, c2000, at Preamble, para. 2. [hereinafter *Agreement on Agriculture*]

[32] See *Draft Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Text on Agriculture*, December 20, 1991 MTN.TCN/W/FA, L1 [hereinafter Draft Final Act].

In the case of no significant imports of specific agricultural products, minimum access opportunities are to be provided for such products. Access was based on 3% of domestic consumption in 1995, increasing to 5% by 2000. If import volume is greater than these thresholds, current market access levels are to be maintained.[33]

The tariffication process is the first step towards greater liberalization of the agricultural sector in future negotiations. Article 4 of the Agreement prevents members from maintaining, resorting or reverting to non-tariff measures. The process of tariffication meant that non tariff barriers on imports such as embargoes, quotas, variable levies, minimum import prices, discretionary licensing, or voluntary export restraint agreements, must be converted into equivalent tariffs based on the difference between domestic and world prices resulting from the non-tariff measures.[34]

The problem with the Agreement's tariffication process is that it resulted in a prohibitive duty rate, or in what has been called "dirty tariffication". Dirty Tariffication occurred when countries deliberately overestimated the level of protection on non-trade barriers in order to increase their base rate of duty resulting from tariffication. This behavior was possible owing to the fact that the Agreement left to each individual country the task of converting non-trade barriers.[35]

Regarding tariff reduction, the Agreement requires that developed countries reduce agricultural tariffs by an average of 36% over a six-year period ending in 2000. In the case of developing countries, the average reduction is 24% over a ten-

[33] See Agreement on Agriculture, *supra* note at art. 4.2.
[34] *Ibid.*

year period ending also in 2000.[36] All tariffs, including those resulting from tariffication must be bound, and developing countries must establish ceiling bindings where no bindings existed before the Uruguay Round. Least developed countries commit to tariff binding on agricultural products but are not required to make any further commitments to reduce tariffs. [37] In addition to the average tariff reductions, developed countries have to make a minimum 15% tariff reduction in each tariff line, and in the case of developing countries this tariff reduction has to be 10%. [38]

The market access provision resulted insufficient to satisfy the needs of developing countries. Some merit can be given to the fact that the Agreement succeeded in eliminating the overabundance of non-tariff measures. Nevertheless, there was too much manipulation in both the tariffication process and in the fact that many members, in order to meet the overall 36% tariff reduction commitments, reduced duties on import-sensitive agricultural products by the 15% minimum and made greater reductions on products that are either less import-sensitive or in which there is little trade. Consequently, developing countries end up facing tariff peaks that exhibit the highest frequency and the highest rates in product sectors of particular interest to them such as sugar, tobacco, cotton and prepared fruits and vegetables.[39]

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[35] Kennedy, *supra* note 27 at 1067.
[36] See Draft Final Act, P 5 at L.19.
[37] Prior to the Agreement on Agriculture only 55 percent of tariff line items for agricultural products were bound in developed countries, and only 18% were bound in developing countries. See, K. C. Kennedy, *Reforming Farm Trade in the Next Round of WTO Multilateral Trade Negotiations,* Journal of World Trade, December 2001, Vol. 35, No 6, page 1068, footnote 35.
[38] See Draft Final Act, *supra* note 32 at paragraph 5.
[39] D. E. McNiel, "Agricultural Trade Symposium:Furthering the Reforms of Agricultural Policies in the Millennim Round" (2000) Minnesota Journal of Global Trade 1at 10.

2.4.2 Commitments on Domestic Support

One of the most important achievements of the Agreement is the recognition that domestic policies have the potential to distort trade. Article 7 of the Agreement on Agriculture deals with provisions aimed at mitigating the trade distorting effects of domestic subsidies in the agricultural sector.

The Agreement classified domestic subsidies in three boxes: the green box, which includes all the subsidies that are considered permissible and countervailable;[40] the blue box, which includes permissible subsidies that are countervailable if they cause injuries but which are not subject to reduction; and finally, the amber box, which includes permissible subsidies which are countervailable if they cause injury but which are subject to reduction commitments.[41]

Article 3.2 imposes a standstill on the use of domestic subsidies and article 6 obliges members to reduce domestic subsidies in accordance with the following criteria. Developed countries must reduce the remaining non-exempt domestic subsidies by 20% from levels existing during the 1986-88 base period in six equal annual installments. Developing countries are required to make reductions of 13% over a period of ten years. Finally, least developed countries are exempted from making any reduction, but are required to bind their level of support.

[40] In this category we can find policy-funded government programme that does not involve consumer transfers or provide price support to producers such as general services or benefits to agriculture or the rural community involving research, pest and disease control, training services, marketing and promotion services, infrastructural services, etc. See Agreement on Agriculture, Annex 2.2-2.13.

2.4.2.1 The AMS Calculation

The reduction commitments mentioned previously must be achieved in accordance with the Total Aggregate Measure of Support (Total AMS). The Total AMS measures all domestic subsidies for all agricultural commodities, with certain exceptions. The calculation of the Total AMS was designed in such a way that it allows members to include blue box payments, but to exclude them for the calculation of the current Total AMS, which is the one used to determine annual compliance. This artifice was created in order to allow US deficiency payments under the 1985 and 1990 Farm Bills and EC compensation payments under the 1992 CAP reform. Hence, these two major players received a huge credit for using direct government expenditures and for reforms undertaken after the signature of the Agreement, instead of offsetting the required 20% reduction, avoiding any real reduction in domestic support.[42]

The provisions regarding domestic subsidies were aimed principally at developed countries, since these countries are the ones who have been resorting to different types of policies to support the agricultural sector in their countries. As a consequence, it can be inferred that developing countries have no real interest in this area. On the contrary, developing countries are deeply interested in a well functioning international trade order in which world market conditions are not distorted by domestic subsides. Moreover, if tariff reduction and export subsidies continue to be reduced under the schedule of the Agreement and in future negotiations, it is likely that developed countries will resort to domestic support

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[41] See Agreement on Agriculture, *supra* note 31 at Annex 2.1
[42] McNiel, *supra* note 39 at 9.

measures to take over the protectionist role that border protection and export subsidies played in the past.[43] Therefore, developing countries must, in further negotiation, argue for a clear definition of domestic support with emphasis on a real reduction in this type of policies.

2.4.3 Commitments on Export Subsidies

The widespread use of export subsidies can be considered the most disruptive element in the operation of world markets. The Uruguay Round's main achievement has been the formation of constraints on the use of export subsidies, as these commitments had a direct impact on world markets.[44]

The Agreement grants in Part V that members will not provide export subsidies otherwise than in conformity with the Agreement and their Schedule Commitments.[45] Article 3.3 provides that a member:

> Shall not provide export subsidies listed in paragraph 1 of Article 9 in respect of the agricultural products or groups specified in Section I of Part IV of its Schedule in excess of the budgetary outlay and quantity commitments levels specified therein and shall not provide such subsidies in respect of any agricultural product not specified in that Section of its Schedule.

Accordingly, the Agreement prohibits export subsidies in two instances: one, on products that have never been subsidized in the 1986-1990 base period and which can not receive subsidies in the future; and two, it prohibits those export subsidies which are not listed in Article 9.1 which are not permitted either.[46]

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[43] See T. Josling, "Developing Countries and the New Round of Multilateral Trade Negotiations: Background Notes on Agriculture" (1999) Institute for International Studies at Stanford University 1 at 8.
[44] *Ibid* at 5.
[45] Agreement on Agriculture, *supra* note 31 at Article 8. If a member does not summit a Schedule, it is prohibited from granting any export subsidy o ay kind in the future.
[46] Kennedy, *supra* note 27 at 1071.

The reduction commitments, in existing export subsidies, are on the basis of 18 standard commodity groups, and a member cannot shift subsidization from one group to another. Developed countries are committed to reduce the volume of subsidized exports by 21% and the expenditure on subsidies by 36% over a six-year implementation period (1995-2000).[47] The parallel commitments by developing countries are 24% by value and 14% by volume over a ten-year implementation period (1995-2004).[48] The least developed countries have made no reduction commitments but have agreed to a standstill by binding their export subsidies.[49] Moreover, the budgetary expenditure and quantity commitments are independent, thus a member is not allowed to exceed either commitment.[50]

2.4.3.1 The Circumvention Prohibition

Article 10 of the Agreement prevents members from circumventing their export subsidy commitments in four ways. First, it provides that export subsidies which are not subject to reduction commitments are prohibited if they are not provided for in its Schedule of Concessions or if they are carried out in a manner which results in or which threatens to lead to circumvention of export subsidy commitments or if they involve the use of non-commercial transactions to circumvent reduction commitments. This circumvention provision has been considered a virtual prohibition on export subsidies that are not subject to

[47] Agreement on Agriculture, *supra* note 31 at Article 9.2 (b)(iv)
[48] *Ibid* at Article 8, 15.2
[49] *Ibid*
[50] McNiel, *supra* note 39 at 12.

reduction.[51] Secondly, members may not apply export subsidies to products that formerly did not receive them. Thirdly, members agreed not to circumvent the export subsidy reduction commitments through food aid except in conformity with Article 10.4. Finally, members agreed to work towards the development of internationally agreed disciplines on export credits, export credit guarantees and export insurance programmes.

By 1999, only ten developing countries had made reduction commitments on export subsidies.[52] However, this does not mean that the rest can subsidize exports without limits. On the contrary, they can not subsidize exports at all, except in the form of subsidies to reduce the costs of marketing exports and internal transport and freight charges on export shipments, on which developing countries did not have to undertake commitments.[53]

To conclude, developing countries have a significant interest in seeking further reduction of export subsidies, an area in which they saw a tangible advance in the results of the Uruguay Round negotiations. Nevertheless, the EU, and lately the US, have been resorting again to this type of policies to promote some sectors of their agricultural industry[54], which worsens future negotiations in this area. Some net-food import developing countries also have a real concern regarding the consequences of further reductions in the area of export subsidies, especially for fear of a quantitative reduction in the amount of food available for food aid. This concern will be fully analyzed in Chapter 3.

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[51] *Ibid* at 13.
[52] See USDA/ERS *Agricultural in the WTO. Situation and Outlook Series.* International Agriculture and Trade Reports. WRS-98-4 (1994) at 22.
[53] Josling, supra note 43 at 6.

2.5 Conclusion

So finally, the issue is on the table. The Agreement on Agriculture brought liberalization of the agricultural market under discussion. Itself, it did not bring much change regarding market access and subsidies. It can be said that the most important achievement was the introduction of Article 20 that encourages further negotiations towards the liberalization of the agricultural sector. The first issues to be discussed will address the three main areas described previously. However, new issues that were not taken into consideration in the Uruguay Round will have to be attended in a future round. These new issues have been called "non-trade issues" and include different types of concerns that although not directed related to trade, indirectly are influence by the rules of the WTO. Among many non-trade issues, this thesis will analyze how three of them can interfere with developing countries expectations. These non-trade issues are: sanitary and phytosanitary measures, trade in GMOs and food security. It is necessary that developing countries understand how these concerns can result in relation to their interests so as to be able to negotiate and present their concerns in order to obtain the changes that will ensure that those concerns are contemplated.

[54] See *The Economist, supra* note 13.

3 SANITARY AND PHYTOSANITARY MEASURES, ANOTHER TRADE BARRIER FOR DEVELOPING COUNTRIES?

3.1 Introduction

As mentioned in Chapter 1, the progressive liberalization of agricultural markets creates opportunities for developing countries to become better integrated into the global trading system and to exploit their comparative advantage in the production of agricultural and food products. Nevertheless, their gaining, maintaining and expanding their world market share will highly depend on their ability to meet the demands of the developed world. These demands include not only competitive prices, but also quality standards such as sanitary and phytosanitary measures.

Sanitary and phytosanitary concerns are relevant to developing countries' interest because, due to the provisions of the Agreement on Agriculture, developed countries have clearer rules regarding the latitude in which they can create their protectionist domestic policies. Developing countries fear that the developed world will use non-trade concerns, such as food safety, to create new and hidden barriers to trade and will continue stopping the liberalization process. If developed countries use non-trade concerns to justify more generous domestic support in a non-decoupled way, it may do as much harm to international trade as the traditional trade policies instruments did in the past.

This chapter will explain how developed countries can create disguised barriers to trade by imposing quality requirements on foreign products. Such

undesirable behavior is possible due to the latitude of some of the provisions of the Sanitary and Phytosanitary Agreements (hereinafter SPS Agreement).

Consumers in high income countries have become more aware of food safety risks and demand greater guarantees regarding product handling. As a consequence, agricultural policy instruments in the developed world have widened to include issues related to technical barriers such as food quality and sanitary and phytosanitary (SPS) requirements.[55] Although SPS measures are necessary to protect public health or the environment from pest, diseases, and contaminants, they can also be used to thwart commercial opportunities. For this reason, the object of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) is to create rules that will balance the right of countries to legislate in relation to health and environmental protection while disallowing mercantilist protectionism.[56]

The purpose of this chapter is to demonstrate that the latitude contained in particular provisions of the SPS Agreement hinders the capacity of controlling the creation of SPS measures whose primary purpose is the protection of national interests. The chapter will also identify the specific problems that developing countries experience in meeting SPS requirements, and will propose possible modifications to solve some of the concerns previously identified. It concludes that the SPS Agreement needs to be reviewed in order to fulfill its objective. Such a modification should take into consideration the special circumstances of the

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[55] See F. Smith, "Multifunctionality and Non-trade Concerns in the Agricultural Negotiations" (2000) Journal of International Economics Law - Oxford University Press, at 707.

[56] D. Roberts, "Preliminary Assessment of the Effects of the WTO Agreement on Sanitary and Phytosanitary Trade Regulations" (1998) Journal of International Economic Law, at 377.

developed world when facing new SPS measures, specially their lack of resources and technical support.

3.2 Developing Countries and SPS Measures

SPS measures are risk-reducing measures aimed at the protection of food safety, plant and animal health, and the environment. Consequently, in some situations, SPS measures can act to impede trade in agriculture and food products. Trade can be impeded, for example, when an SPS measure imposes an import ban or when it prohibitively increases production and marketing costs. SPS measures can also divert trade from one trading partner to another by imposing regulations that discriminate between potential supplies. Finally, SPS measures can reduce the overall trade flow by increasing cost or raising barriers for all potential supplies.[57]

Although the trade impact of SPS measures has raised notoriety in the context of developed countries, especially through the high profile dispute between the European Union and the United States regarding the use of hormones in meat production, developing countries have a strong interest in the subject. According to recent studies[58], developing countries find difficulty in trading with developed countries because of differences in quality requirements. For example, over the period of June 1996 to June 1997, there were significant rejections - around 5%- in the US border of imports from Asia, Africa, Latin America and the Caribbean due to

[57] S. Henson & R. Loader, "Barriers to Agricultural Exports from Developing Countries: The Role of Sanitary and Phytosanitary Requirements" (2001) 29 World Development, 85at 89.
[58] See K. M. Murphy & A. Shleifer, "Quality and Trade" (1997) 53 Journal of Development Economics.

microbiological contamination, filth and decomposition.[59] The cost of rejection at the border is more than considerable if we include the loss of the product value, transport and other export costs, added to product re-export or destruction expenses. On the other hand, the cost of upgrading sanitary conditions or of developing SPS controls in developing countries is so high that it cannot be afforded by the governments of these countries.

Developing countries argue that there are different aspects of the SPS requirements of the developed world that act as real barriers to exports of agricultural and food products. Most of them are related to issues such as little access to information on SPS requirements, no availability of technical and/or scientific expertise and financial constraints. Another repeated concern talks about the lack of awareness of SPS issues among government officials and within agriculture and the food industry. Finally, in many cases developing countries have been unable to comply with SPS requirements in the time permitted and/or the cost of doing so was perceived as being prohibitively high.[60]

The international community addressed this conflictive issue of SPS measures as a possible hidden barrier to trade in the Uruguay Round Agreement, through the Agreement on Sanitary and Phytosanitary measures. The Agreement has been criticized for different reasons. Agricultural exporting countries believe that the Agreement allows wide latitude in the adoption of SPS measures. This latitude allows importing countries to impose measures that can impede trade, no matter how unlikely or how inconsequential the risk might be. On the other hand, environmental

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[59] See FAO, *Table regarding the number of contraventions cited for US food and Drug Administration import detentions*, June 1996-June 1998. (1999).

advocates and consumers in the importing countries believe that, under the SPS Agreement, the standards for crafting SPS measures are inconsistent with sovereignty rights. According to this group, the SPS Agreement limits the ability of governments to raise food safety standards or to adopt precautionary measures to protect the environment when biological hazards are not completely understood.[61]

The following section of this chapter will briefly describe the SPS Agreement ; it will then focus on some of the key points that should be modified in order to balance the different interests of the international community while, at the same time, recognizing and assuring the benefits of trade liberalization for developing countries.

3.3 The SPS Agreement

The SPS Agreement addresses the impact of SPS standards on trade in agricultural and food products. The two main objectives of the Agreement are: first, the protection and improvement of the current human or animal health and phytosanitary situation of all member countries, and second, the protection of members from arbitrary or unjustifiable discrimination due to different sanitary and phytosanitary standards.[62] The following points are the key elements of the Agreement.

In the first place, the basic rights and obligations described by the SPS Agreement include the recognition of the right of individual nations to take the

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[60] Henson & Loader, *supra* note 57 at 93.
[61] Roberts, *supra* note 56 at 379.
[62] Henson & Loader, *supra* note 57 at 93.

necessary measures to protect human, animal or plant life or health, provided that such measures are not applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination among members, and that they do not unnecessarily impede trade.[63]

Second, the Agreement recognizes the fact that in many circumstances the harmonization of SPS Standards can help to reduce regulatory trade barriers. Consequently, members are encouraged to participate in a number of international standards-setting organizations, specially the Codex Alimentarius, the International Office of Epizootics (OIE) and the International Plant Protection Convention (IPPC), and to base their SPS measures on the standards or guidelines set by these organizations.[64]

Third, members must accept the sanitary and phytosanitary measures of other members as equivalent, even if they differ from their own measures or from those of other members trading the same product, if the exporting member can demonstrate that its measures achieve the Importing Member appropriate level of sanitary protection.[65]

Fourth, Members are obliged to base their sanitary and phytosanitary measures on an assessment of the risk to human, plant and animal life or health, taking into consideration risk assessment techniques developed by international organizations. The assessment of risk must be based on available scientific evidence. When assessing the risk, members must consider relevant economic factors such as

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[63] *Agreement on the Application on Sanitary and Phytosanitary Measures,* 15 May 1994, UR Collection LT/UR/A-1A/12, at Article 2. [hereinafter SPS Agreement].
[64] *Ibid* at Article 3.
[65] *Ibid* at Article 4.

the potential damage in terms of loss of production or sales in the event of the entry of a pest or disease, or the cost of controls or eradication in the territory of the importing member.[66]

Moreover, the Agreement recognizes the fact that SPS risks do not correspond within national boundaries; therefore, it recognizes that pest- or disease-free areas can exist. The determination of such areas must be based on factors such as geography, ecosystems, epidemiological surveillance, and the effectiveness of sanitary or phytosanitary controls.[67]

Furthermore, the Agreement provides procedures aimed at obtaining enhanced transparency in the setting of SPS standards among members by demanding the publication and notification to the SPS Secretariat of all proposed and implemented SPS measures.[68]

Two of the provisions made by the Agreement are most relevant to the interests of net food-exporting developing countries. One of them is Article 5.7, which allows the creation of provisional measures, and which has been criticized on several occasions because of the latitude in its wording. The article reads:

> In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

Three problems can be identified in relation to the text of this article. First, there is no definition of what encompasses "pertinent information". Second, it is

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[66] *Ibid* at Article 5.
[67] *Ibid* at Article 6.
[68] *Ibid* at Article 7.

necessary to clarify for how long the measure may be maintained while keeping its character as "provisional". Finally, there are no guidelines to regulate what the obligation of obtaining "additional information" involves.[69] These three problems will be later analyzed in this chapter.

The other relevant provision is Article 3.3, which contemplates the possibility of obviating international standards if stricter measures are adopted on the basis of scientifically justified risk assessment procedures. Article 3.3 reads:

> Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary and phytosanitary protection a Member determinates to be appropriate in accordance with the relevant provisions of paragraph 1 through 8 of Article 5. Notwithstanding the above, all measures, which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provision of this Agreement.

The latitude in the wording of this article also represents concern for developing countries. The article establishes that Members are authorized to deviate from international standards, only if they have a "scientific justification" and if the Member has based the measures on a "risk assessment". None of these terms are defined in the Agreement. Moreover, in relation to the consequences that the application of the article can bring about for developing countries, it has been stated that the importing countries' possibility of deviating from international standards and guidelines represents a real danger to the interests of developing countries, in the sense that they neither have the capacity nor the expertise to challenge SPS measures. Furthermore, since risk assessment does not have to embody a majority of

[69] See D. Prevost & M. Matthee, "The SPS Agreement as a Bottleneck in Agricultural Trade between the European Union and Developing Countries: How to Solve the Conflict" (2002) 29 Legal Issues of Economic Integration, 43 at 49.

view[70], it is relatively easy for Members to impose more stringent measures than those embodied in international standards.[71] This article will be later analyzed in this chapter.

Finally, the Agreement provides a detailed and structured procedure for the settlement of dispute that might arise between Members regarding the legitimacy of SPS measures that distort trade.[72]

3.4 Critique to the SPS Agreement from the perspective of Net Food Exporting Developing Countries

Current negotiations towards possible modifications of the SPS Agreement are focused principally on market access. Possible amendments to the current status are being considered in order to prevent Members from replacing their traditional protectionist measures with non-tariff barriers, such as the imposition of standards or regulations for the protection of human, plant or animal life or health. The following sections will analyze some of the main concerns of developing countries in relation to the SPS Agreement.

3.4.1 Transparency Mechanism under the Agreement

One of the most frequently heard complaints of developing countries is related to the fact that, on many occasions, exporting countries need to comply with

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[70] See *EC Measures concerning Meat and Meat Products (Hormones) (Complaints by the United States)(1998)* WTO Doc. WT/DS26/AB/R98-0099 at para. 175. (Appellate Body Report). Online: WTO http://docsonline.wto.org/GEN_searchResult.asp [hereinafter EU- *Beef Hormones*]. This paragraph has been criticized in the sense that opens the door for the use of what has been called "hired scientist" by governments to find justifications for their measures (See D.E. McNiel, (1998) 39:89 Virginia Journal of International Law, 134 at 134).

[71] Prevost & Matthee, *supra* note 69 at 48.

undocumented *de facto* measures. These *de facto* measures function as a hidden barrier to trade by impeding accession to foreign markets. Although the issue was addressed in article 7 and Annex B of the Agreement in thorough detail[73], the concern derives from the lack of compliance with these provisions since they were implemented.[74]

According to provisions in Annex B, members must provide: 1) A notification of the enquiry point which is responsible for the provision of any answer to any interested Member, as well as the provision of relevant documentation, usually the copy of the actual regulation. 2) A notification of the national authority which is going to act as the notification authority, the single central government authority responsible for notifying SPS measures to the WTO; 3) A notification to the WTO of all proposed modifications to the existing SPS regulation or of new measures that might affect international trade. [75]

Nevertheless, recent studies show that current arrangements do not adequately take into consideration the different circumstances of developing countries, especially in the fact that, in many cases, the length of time given between the notification of the new measure and its application is insufficient for the exporting country to respond in an effective and appropriate manner, in the sense that they often posses neither the financial resources nor the scientific knowledge to respond on time.[76] Moreover, although the transparency provisions have been

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[72] SPS Agreement, *supra* note 63 at Article 11.
[73] Roberts, *supra* note 56 at 399.
[74] Henson & Loader, *supra* note 57 at 98.
[75] SPS Agreement, *supra* note 63, Annex B.
[76] Henson & Loader, *supra* note 57 at 98.

obligatory since the enforcement of the Agreement[77], two years after that date, more than half of the Members had not notified a single SPS measure. This lack of response to the commitments signed under the Agreement demonstrates the lack of an enforcement mechanism that assures real protection for developing countries against arbitrary behavior from the country applying the new measure. Access to full information regarding the new measures and timing that recognizes the needs of producers in the exporting developing countries would help them to comply with SPS regulations.

3.4.2 Lack of consideration for developing countries' constraints

The SPS Agreement provides for special and differential treatment of developing countries in different areas. First, the Agreement encourages Members to recognize the special needs of these developing countries when establishing new SPS measures and to permit time-limited exemptions where necessary.[78] Second, the Agreement provides that Members should accord longer time frames for compliance with new SPS measures on products of interest to developing country Members, where the appropriate level of protection allows.[79] A close examination of these provisions shows that this special and differential treatment is not binding. The wording of the provision permits easy evasion as it only represents "best endeavor" commitments.[80]

As a consequence, developing countries argue that the special treatment provisions are not enforceable and that this situation allows developed countries to

[77] Roberts, *supra* note 56 at 400.
[78] SPS Agreement, *supra* note 63 at Article 10.1
[79] *Ibid* at Article 10.2

ignore them. This concern was raised in the framework of the implementation discussions in the General Council[81] as well as in the Seattle preparatory process.[82] Moreover, the concern has been expressed by the Least Developed Countries Coordinator to the Draft Ministerial Declaration when he argues that it is not sufficient to provide technical assistance in order to help developing countries understand WTO rules and implement their obligations.[83] Developing countries also demand that technical assistance go further and take into account supply side constraints, such as the inability to comply with SPS standards due to lack of technical capacity, expertise and infrastructure.[84]

In conclusion, although the SPS Agreement recognizes the special situation of developing and least developed countries in article 10, the language used to formulate these provisions turns them unenforceable. For this reason, it is necessary to modify them in order to secure real application and compliance. There are different proposals for future modifications, such as those that demand a specific and clear statement that Article 10 must be made mandatory for developed country Members, and others that suggest laying down specific time frames for the

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[80] Prevost & Matthee, *supra* note 69 at 50.

[81] See WTO, Ministerial Conference 4th Session, *Ministerial Declaration* (held on Doha, 9 -14 November 2001) at paragraph 44. WTO Doc. WT/MIN(01)DEC/1, online: WTO http://docsonline.wto.org/gen_browseDetail.asp?preprog=3#Ministerial+Meetings (date accessed: 10 February 2003). [hereinafter Doha Declaration].

[82] See WTO, General Council "Concerns Regarding Implementation of Provisions Relation to Differential and More Favorable Treatment of Developing and Least Developed Countries in Various WTO Agreements – Communication from India" (13 November 1998) at para. 19, WTO Doc. WT/GC/W/108, online: WTO <http://docsonline.wto.org/gen_search.asp> (date accessed: 11 February 2003).

[83] See WTO, Ministerial Conference "Proposal by Least Developed Countries for Alternative Text in the Draft Ministerial Declaration JOB(01) 140/REV.1 of 27 October 2001" (Doha 9-3 November 2001) at para. 6, WTO Doc. WT/MIN(01)/W/7, online: WTO http://docsonline.wto.org/gen_browse.asp (date accessed: 11 February 2003)

[84] Prevost & Matthee, *supra* note 69 at 51.

imposition of new measures.[85] However, any option should bear in mind the rights of importing countries to address their concerns by imposing SPS measures.

In any case, the provisions regarding special and differential treatment must be put into operational terms because they really represent a better tool for developing countries when they face new SPS measures. The differential treatment provision will allow them to satisfy the needs of the importing countries and to retain their participation in world trade.

3.4.3 Lack of participation in the international organizations that create the standard

One of the key elements in the SPS Agreement is the idea of participation of all Members in the institutions that create the standards and in the practices that it encourages. It is crucial that developing countries gain access to these institutions if they want to actualize the potential benefits of the SPS Agreement. Real participation in the setting of international standards is critical for developing countries if they want to ensure that their needs are adequately taken into account.[86]

This principle is recognized and encouraged in different passages of the SPS Agreement. For example, Article 3.4 says:

> Members shall 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, to promote within these organizations the development and periodic review of standards, guidelines and recommendations with respect to all aspects of sanitary and phytosanitary measures.

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[85] *Ibid.*

[86] Henson & Loader, *supra* note 57 at 96.

Similarly, when recognizing Special and Differential Treatment for developing and least developed countries, Article 10.4 states that "Members should encourage and facilitate the active participation of developing country Members in the relevant international organizations".

Regrettably, the participation of developing countries in the international standard-setting process is far from satisfactory, the main reason being the lack of resources to maintain diplomatic missions in Geneva. Moreover, although 65 low and middle-income Members currently have missions in Geneva, the rest of the countries deal with WTO matters from their embassies in other cities of Europe.[87]

Another problem directly related to these issues is the fact that, as the resources are meager, the offices are poorly staffed, often having only one person in charge of all WTO matters, including SPS concerns. An example that illustrates this problem is developing countries' attendance to SPS Committee meetings in Geneva. According to an attendance list published for 10 of the 12 Committee meetings held from November 1995 to September 1998, almost 50% of low and lower-middle income Members did not attend the meetings, while less than 20% attended five meetings.[88]

The same explanation can be given for the lack of participation of developing countries in international organizations for standardization. They do not have the resources to attend the committees that prepare the standards; thus, they have to limit their participation to the plenary sessions where the proposed standards are adopted. Consequently, as their concerns cannot be raised on time, consensus is hard to

[87] *Ibid.*
[88] *Ibid.*

achieve, preventing the adoption of any standard. As clearly explained by Denise Prevost, this result is against the interests of developing countries, which could gain substantially from the harmonization of standards.[89]

Solutions to the problem of participation in the international forum can be sought in two directions. First, the public sector in the developing world can form coalitions around issues of mutual regional interest. This type of tactics has already been used by the East Asian and Latin American countries, which have leveled efforts to coordinate monitoring controls and to harmonize food safety regulations.[90]

Secondly, international organizations can provide financial and technical assistance to developing countries in order to enable them to expose their own interests. A proposed alternative is based on the idea that the WTO must administer a funding programme with the income of the WTO budget. The financial assistance will be used for training programmes for developing countries' delegates, for financial support to attend all meetings, and for coordination with their national ministries. This solution ensures that developing countries will have no constraints to attend the meetings and that the financial support is supplied in a secure manner.[91]

Finally, it is worth mentioning that the need for financial and technical assistance was recognized in the Doha Ministerial Declaration, when the Budget Committee was instructed to develop a plan ensuring long term funding for WTO technical assistance for adoption by the General Council in December 2001.[92] During the first meeting on this issue, the Budget Committee considered a proposal

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[89] Prevost & Matthee, *supra* note 69 at 55.
[90] See L.J. Unnevehr, "Food Safety issues and fresh food product exports from Least Developed Countries" (2000) 23 Agricultural Economics, 231 at 238.
[91] Prevost & Matthee, *supra* note 69 at 56.

from the Director General to create a Doha Development Global Trust Fund. According to this proposal, this Fund was to be financed by voluntary contributions and organized with a monitoring mechanism to ensure timely and predictable funding. Many Members raised objections to the idea of voluntary contributions and argued for direct financing from the WTO's regular budget.[93]

Nonetheless, the Doha Development Agenda Global Trust Fund was created following the WTO Ministerial Conference in Doha in November 2001 based on Members' voluntary contributions. By December 2002 the General Council approved a target amount of CHF 24 million for 2003 for the Doha Trust Fund.[94]

Furthermore, the World Bank and the WTO established a new fund denominated "The Standards and Trade Development Facility". This fund will provide a stimulus to important new projects for developing countries in the critical area of sanitary and phytosanitary measures by helping them shape and implement international standards on food safety, plant and animal health. The objective of the new fund is to provide grants and financial support for technical assistance projects in developing countries through enhanced collaboration between the two international organizations. It is expected that the Food and Agriculture Organization, the World Health Organization and the World Organization for Animal Health will join the World Bank and the WTO in the new facility. The new Fund will be financed with an initial donation from the World Bank of US$ 300,000

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[92] Doha Declaration, *supra* note 81 at para. 40

[93] Prevost & Matthee, *supra* note 69 at 56.

[94] WTO, Press Release 320, "Technical Assistance: Germany to contribute 1 million euros to the Doha Trust Fund" (4 November 2002), online: WTO <http://ww.wto.org/english/news_e/pres02_e/pr320_e.htm> (date accessed: 10 February 2003)

and the WTO will allocate funding from the Doha Development Trust fund. The WTO will administer the Fund for the partners. [95]

3.4.4 Provisional Measures Under article 5.7

Article 5.7 has been criticized on several occasions because of the latitude in the wording of the provision. The article allows Members to impose provisional SPS Measures in cases where relevant scientific evidence is insufficient. Developing countries argue that the terms used in this article are vague and undefined, thus allowing possible imposition of precautionary measures that are not based on real risks and that could last for an undetermined period of time. The article reads:

> In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

The main concerns can be grouped in three issues. First, there is no definition of what constitutes "pertinent information" in order to justify a provisional measure. Secondly, there is no time frame to inform for how long the measure may be maintained while keeping its character as "provisional". Finally, there are no clear guidelines that explain what the obligation of obtaining "additional information" entails.[96]

On the other hand, developed countries, specially those Members of the EU, believe that this Article assures their right to protect their population in cases where

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[95] See WTO, WTO News – Press Release, *Food Safety and Related Measures, World Bank grants kicks off Bank - WTO assistance on standards,* (27 September 2002) online: WTO <http://www.org/English/news_e/news_htm.> (date accessed: 10 February, 2003).
[96] Prevost & Matthee, *supra* note 69 at 49.

scientific data does not provide certainty regarding a product. This position found support in what has been called the "precautionary principle". Under the precautionary principle, any country can provisionally adopt measures to protect human health, when there is a legitimate reason to believe that the product in question may carry health hazards, but they do not have sufficient information to identify them. In order to accommodate the objectives of the precautionary principle to EU interests, the European Commission manifested during the negotiations that they would not support the proposal to add time restrictions to Article 5.7.[97]

The precautionary principle is based on the assumption that free trade might produce what has been called "a race to the bottom".[98] In other words, market access agreements and rules to enforce them will force harmonization of standards at the lowest common denominator at average levels. In this case, a country with low standards is perceived as having established a competitive advantage for its producers based on lower environmental compliance costs. Companies competing in the global market against these producers may pressure their own governments to lower standards to level the playing fields. For this reason, those who support the precautionary principle demand that trade rules should not inhibit countries from setting their own requirements above established norms. Furthermore, they want to ensure that countries that use trade restriction to protect their own market from

[97] See WTO, Committee on Sanitary and Phytosanitary Measures, "Communication from the European Communities" (8 March 2000) WTO Doc. G/SPS/GEN/168, online: WTO http://docsonline.wto.org/gen_search.asp (date accessed: 11 February 2003).

[98] For a deeper analysis of "the race to the bottom conflict" see J. R. Paul, "Free Trade, Regulatory Competition and the Autonomous Market Fallacy" (1994/1995) 1 Columbia Journal of European Law.

substandard products are not exposed to scrutiny and countermand under WTO rules.[99]

Moreover, it should be taken into account that in this specific case, there is no other best solution to the problem due to the fact that the danger originates outside the scope of the importing Member's sovereignty. An importing country that considers any product as possibly harmful cannot impose production controls on the exporting country. In such a case, direct policy interventions such as taxing the production are not available, so the second best option is to revert to border measures to prevent the entry of like imports not meeting national health standards. Using a trade measure in this way seems relatively more efficient than applying no standards to imported agriculture and thereby suffering the health consequences; or attempting to negotiate common production standards with all supplying countries.[100]

However, free trade advocates maintain that such a principle might either end up being used to disguise protectionist purposes or with poorly crafted programs with minimal public health benefits that impose unjustifiable burdens on the free flow of commerce. [101]

The lack of definition of Article 5.7, added to the protectionist tone of the precautionary principle as promoted by the European Union is a source of confusion. The Appellate Body clarified some of these concepts in its report on *Japan*

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[99] See D. Esty, "Greening the GATT: Trade, Environment, and the Future" (1994) Institute for International Economics, 52 at 107.
[100] See S. Charnovitz, "World Trade and the Environment: A Review of the New WTO Report" (2000) 12 Geo. Int'l Envtl. Law Review at 523.
[101] Esty, *supra* note 99 at 101.

Varietals.[102] According to the Appellate Body, Members can enact a provisional measure only if this measure complies with the following four requisites.

A provisional measure can be:

1. Imposed in respect of a situation where "relevant scientific information is insufficient"; and
2. Adopted "on the basis of available pertinent information",[103]

However, such a measure can only be maintained if the Member that adopted it:

3. Seeks to obtain the additional information necessary for a more objective assessment of the risk; and
4. Reviews the measure accordingly within a reasonable period of time.[104]

The Appellate Body decided that the four requisites are cumulative in nature. Thus, when any of these four requirements is not met, the measure will be found to be inconsistent with the SPS Agreement. As a result, the party imposing the measure apparently has to prove that it meets the four requirements in taking such a measure.[105]

In relation to the issue of what constitutes "additional information" the Appellate Body added that:

> Neither Article 5.7 nor any other provision of the SPS Agreement sets out explicit prerequisites regarding the additional information to be collected or a specific collection procedure. Furthermore, Article 5.7 does not specify what actual results must be achieved; the obligation is to "seek to obtain" additional information. However, Article 5.7 states that the additional information is to be sought in order to allow

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[102] See *Japan – Measures Affecting Agricultural Products (Complaints by Brazil, the European Union and the United States)* (1999) WTO Doc. WT/DS76/AB/R (Appellate Body Report) online: WTO http://docsonline.wto.org/GEN_searchResults.asp (date accessed: 10 February 2003) [hereinafter, *Japan Varietals*].

[103] *Ibid* at para. 89.

[104] *Ibid.*

[105] See J. Pauwelyn, "The WTO Agreement on Sanitary and Phytosanitary (SPS) Measures as Applied in the First Three SPS Disputes – EC Hormones, Australia – Salmon and Japan – Varietals" (1999) Journal of International Economic Law , 641 at 650.

> Members to conduct "a more objective assessment of the risk". Therefore, the information sough must be germane to conducting such a risk assessment. [106]

In relation to the period of time granted for a review of the measure, the Appellate Body manifested:

> In our view, what constitutes a "reasonable period of time has to be established on a case-by-case basis and depends on the specific circumstances of each case, including the difficulty of obtaining the additional information necessary for the review and the characteristics of the provisional measure.[107]

Finally, the Appellate Body explained its position regarding the European Union's argument of the Precautionary Principle. It stated that the "precautionary principle" does not overrule the obligation to base SPS measures on a risk assessment.[108] Moreover, regarding the status of the "precautionary principle" in the international law, the Appellate Body manifested:

> It is regarded by some as having crystallized into a general principle of customary international environmental law. Whether it has been widely accepted by Members as a principle of general or customary international law appears less than clear... We note that... the precautionary principle, at least outside the field of international environmental law, still awaits authoritative formulation.[109]

Although the response from the Appellate Body brought some light over the possible use of Article 5.7 of the SPS Agreement, further clarification is needed. Provisional measures must not be used to create measures that cannot be based on a scientific justification. Moreover, precautionary measures should be used only in relation to safety concerns, and should not cover the ethical concerns of consumers. As regards the period of time, it is necessary that a period be stipulated. The response from the Appellate Body concerning this issue is insufficient. Some authors

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[106] *Japan Varietals, supra* note 103 at para. 92.
[107] *Ibid* at para. 93.
[108] *Ibid* at para. 125.
[109] *Ibid* at para. 123.

propose a period of 6 months, with the possibility of asking for additional time by proving why the additional time is necessary and why a risk assessment cannot be performed in this 6 month period.[110]

The different proposals described above by critics of the SPS Agreement aim at ensuring that Article 5.7 is only used for legitimate purposes. Some of these corrections could be viewed as positive options for a future amendment of the SPS Agreement in relation to developing countries' interests, because they might ensure that precautionary measures will not be used to protect national markets and distort trade.

3.4.5 The possibility to obviate international standards if stricter measures can be scientifically justified by means of a risk assessment. Article 3.3

The SPS Agreement promotes the harmonization of sanitary and phytosanitary standards in order to reduce trade barriers. This approach is highly beneficial for developing countries because harmonized standards provide protection against arbitrary behavior from importing countries when creating SPS measures.[111] Nevertheless, Members are entitled to adopt measures that achieve a higher level of protection under the criteria established in Article 3.3.

In this case, like in the case of Article 5.7, the wording of the provision allows different interpretations, thus permitting the creation of measures that hide protectionist intentions. Article 3.3 establishes:

> Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by

[110] Prevost & Matthee, *supra* note 69 at 49.
[111] Henson & Loader, *supra* note 57 at 94.

> measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary and phytosanitary protection a Member determinates to be appropriate in accordance with the relevant provisions of paragraph 1 through 8 of Article 5. Notwithstanding the above, all measures, which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provision of this Agreement.

The footnote to article 3.3 reads:

> For the purpose of paragraph 3 of article 3, there is a scientific justification if, on the basis of an examination and evaluation of available scientific information in conformity with the relevant provisions of this Agreement, a Member determines that the relevant international standards, guidelines or recommendations are not sufficient to achieve its appropriate level of sanitary or phytosanitary protection.

In relation to the wording of the article, it is clear that Members are authorized to deviate from international standards, only if they have a "scientific justification" and if the Member has based the measures on a "risk assessment".

Due to the ambiguity of the provision it is necessary to have recourse to the interpretation that the Dispute Settlement Body (DSB) provided of Article 3.3 in two disputes, *Japan Varietals* and *EU- Beef Hormones*.

Regarding the requisite of "scientific justification" for the imposition of a higher standard, the Appellate Body interpreted that in *Japan Varietals*:

> There is scientific justification for an SPS measure, with the meaning of Article 3.3, if there is a rational relationship between the SPS measure at issue and the available scientific information.[112]

Moreover, if Article 3.3 and its footnote are read in concert, it seems like there are two justifications for the imposition of higher standards than those imposed by the international organization. However, the Article is far from clear.[113] Even the Appellate Body recognized the lack of clarity in this article when it had to interpret it in the *EU- Beef Hormones* case. On this occasion the Appellate Body manifested:

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[112] *Japan Varietals, supra* note 103 at para. 79.

> The distinction made in Article 3.3 between two situations may have very limited effects and may, to that extent, be more apparent than real. Its involved and layered language actually leaves with no choice... Article 3.3 is evidently not a model of clarity.[114]

Hence, there is a clear need to reformulate and clarify the wording of the article. One of the modifications should include a clear statement that any deviation from international standards must always be based on a risk assessment. With a modification of this kind, developing countries would be able to protect themselves from possible abuses from importing countries in case they decide to set higher levels of protection when there is no clear justification for it.[115]

In relation to the consequences that the application of the article can bring about for developing countries, it has been stated that the importing countries' possibility of deviating from international standards and guidelines represents a real danger to the interests of developing countries. First, developing countries argue that they neither have the capacity nor the expertise to challenge SPS measures. Secondly, since risk assessment does not have to embody a majority of view[116], it is relatively easy for Members to impose more stringent measures than those embodied in international standards.[117]

Nevertheless, the room left to maneuver in this Article is a consequence of the pressure of some developed countries, especially the European Union. The EU sees Article 3.3 as a way to ensure the application of the precautionary principle

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[113] Pauwelyn, *supra* note 106 at 656.
[114] *EU- Beef Hormones, supra* note 70 at paragraph 176 and 173.
[115] Prevost & Matthee, *supra* note 69 at 55.
[116] *EU- Beef Hormones, supra* note 70 at paragraph 175. The finding of the Appellate Body has been criticized in the sense that opens the door for the use of what has been called "hired scientist" by governments to find justifications for their measures (See D.E. McNiel, (1998) 39:89 Virginia Journal of International Law, at 134).
[117] Prevost & Matthee, *supra* note 69 at 48.

during the risk assessment, especially if the minority opinion draws attention to scientific uncertainty. [118]

As a result of such different approaches to the issue, it would be useful for developing countries to negotiate the tightening of the flexibility resulting from the wording of Article 3.3. However, a modification stating an obligation for all Members to base their SPS only on international standards is not a favorable option for developing countries. International standards represent a compromise agreement on a minimum level of protection, and such an obligation would be against the sovereign right of governments to choose the appropriate level of protection to be applied in their territories. If countries are obliged to base their SPS measures only on international standards, the consensus needed to establish the standards will never be achieved. Moreover, such an obligation would end up paralyzing the standard setting procedure, an outcome that is contrary to the interests of developing countries in the sense that they often do not have standards in place, and international standards provide them with a certain degree of protection. Moreover, international standards set a benchmark against which other Members' standards can be challenged. [119]

Finally, the provision can also be modified in order to oblige Members to promptly notify their intention to impose those measures, to respond to all comments received from other countries, and to provide financial and technical support in case

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[118] See WTO, Committee on Sanitary and Phytosanitary Measures, Committee on Technical Barriers to Trade and Committee on Trade and Environment, " European Council Resolution on the Precautionary Principle" (2 February 2001) at para. 3, WTO Doc. G/SPS/GEN/225, G/TBT/W/154, G/CTE/W/181, online: WTO http://docsonline.wto.org/gen_search.asp (date accessed: 10 February 2003).

[119] Prevost & Matthee, *supra* note 69 at 54.

the imposition of such a measure might negatively impact developing countries exports, in order to help these countries to meet the new standard. Such a modification would ensure that Members did not lightly deviate from international standards and, if they decided to do so, they would take responsibility for the effects that such a deviation could have on developing countries' exports.

3.5 Analysis of the functioning of the SPS Agreement through its application by the DSB: The US-EU hormone-treated beef dispute

The position of the Appellate Body in the *EU- Beef Hormones* dispute offers different lessons to be learned regarding the application of the SPS Agreement. Although the conclusions reached in *EU- Beef Hormones* were based on differences between developed countries, they can also be taken into consideration for the interests of net-food exporting developing countries.

First of all, it is worth mentioning that the *EU- Beef Hormones* dispute showed that the ability of a trading partner to withstand a WTO ruling and concomitant retaliation from the aggrieved partner can undermine the larger goal of multilateral regulatory harmonization.[120] Furthermore, the dispute shows that the values embedded in national standards that restrict the imports of genetically modified products are can be seen as anathema to the trade-oriented values embedded in the WTO regime.[121]

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[120] See J.J. Kastner & R.K. Pawsey, "Harmonizing Sanitary Measures and Resolving Trade Disputes through the WTO-SPS Framework. Part I: a Case Study of the US-EU Hormone-Treated Beef Dispute" (2002) 13 Food Control, at 49.

[121] See S.D. Murphy, "Biotechnology and International Law" (2001) 42 Harvard International Law Journal 47 at 83.

In the *EU- Beef Hormones* dispute, the Appellate Body concluded that the EU did not provide a risk assessment report detailing the risk due to control problems, and thereby failed to justify its measures. Thus, the EU was asked to modify its regulation to allow for the import of hormone treated beef. As the EU refused to alter its measures, the US was given authorization to suspend trade concessions on imports from the EU for a value of up to US 117 million. The suspension was applied primarily to products from France, Germany, Italy and Denmark, countries which the US considered possessed the strongest influence in resolving the dispute.[122]

This case offers four valuable lessons on the implementation of the SPS Agreement. First, while a measure may be subject to the WTO-SPS framework and its existing provisions, an unfavorable decision outcome, followed by a penalty, may be withstood because of the economic strength of the Member facing it.[123] If the EU was able to maintain its decision after being economically sanctioned by the US, what outcome can be expected if instead of the US the sanctioning member were a net food exporter developing country whose possible retaliatory sanctions would be much more modest than those of the US?

Second, the Panel addressed the issue of the burden of proof, a point not clearly resolved in the SPS Agreement. The Panel arrived at the conclusion that the failure to use international standards represents a *prima facie* violation of the SPS Agreement, with the burden of proof then shifting to the party taking the measures to justify them pursuant to one of the two routes available. The Appellate Body refuted

[122] Kastner & Pawsey, *supra* note 121 at 51.
[123] *Ibid* at 54.

this conclusion[124] and stated that harmonization is not a self-standing obligation under the SPS Agreement, but rather a balance between the legitimate right of states to maintain regulative diversity or distinctiveness, and the need to reduce the trade-distorting impact of regulatory diversity.[125] Moreover, when determining the appropriate level of protection there is, in principle, no obstacle to the choice of zero risk as the appropriate level of protection.[126]

Some part of the doctrine noted that this finding by the Appellate Body can make it more difficult for countries to successfully challenge sanitary measures that are stricter than international standards. This disadvantage can be considered even more detrimental for exporting developing countries due to the reliance that these countries have on international standards. [127]

Moreover, it is difficult to reconcile the consideration of such deviation from international standards as an "autonomous right" with the Appellate Body's characterization of provisional measures under Article 5.7 as a "qualified exemption"[128], even though in both cases the treaty language is very similar. Further reasons for this distinction should be provided in the future.[129]

Thirdly, it is worth mentioning that the Appellate Body corrected the narrow notion of risk assessment adopted by the Panel in its interpretation of the SPS

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[124] *EU – Beef Hormones, supra* note 70 at paragraph 172-176.
[125] Trebilcock & House, *supra* note 20 at 157.
[126] See L. A. Ruessmann, "Reflections on the WTO Doha Ministerial Conference: Putting the Precautionary Principle in this Place: Parameters for the Proper Application of a Precautionary Approach and the Implications for Developing Countries in Light of the WTO Doha Ministerial" (2000) 17 American University International Law Review 905 at 928.
[127] See "WTO Backs Key Finding on Hormones, But Could Make SPS Cases Harder", *Inside US Trade*, Vol. 16, no. 2, (16 January 1998), online: Inside US Trade http://www.insidetrade.com (date accessed: 10 February 2003).
[128] *EU- Beef Hormones, supra* note 70 at paragraph 21.
[129] Pauwelyn, *supra* note 106 at 656.

Agreement. There is no requirement for a risk assessment to establish a certain threshold level of degree of risk. Moreover, it is not necessary the risk assessment embody only the view of a majority of the relevant scientific community because responsible and representative governments may act in good faith on the basis of what, at a given time, may be divergent opinions coming from qualified and respected sources.[130]

In addition, the Appellate Body established that a risk assessment had to be a "process characterized by systematic, disciplined and objective enquiry and analysis, that is, a mode of studying and sorting out facts and opinions..."[131] This implies that not every imaginable risk is susceptible to evaluation under a risk assessment. The Appellate Body expressly rejected public concern about a certain type of product and scientifically unconfirmed speculation about the existence of a risk as insufficient for the purpose of a risk assessment.[132]

Furthermore, according to the Appellate Body, risk assessment can include real world considerations, such as the degree of risk that may exist due to improper handling or precaution, or the ineffective regulatory control of the abuses.[133] This new interpretation that permits the inclusion of risk management considerations in risk assessment exercises could have important implications as it lends legitimacy to previously excluded risk factors. [134]

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[130] Ruessmann, *supra* note 127 at 930.
[131] *EU – Hornones, supra* note 70 at paragraph 21.
[132] See J. Bohanes, "Risk Regulation in WTO Law: A Procedure-Based Approach to the Precautionary Principle" (2002) 40 Columbia Journal of Transnational Law 323 at 344.
[133] Trebilcock & House, *supra* note 20 at 157.
[134] Kastner & Pawsey, *supra* note 121 at 54.

Finally, regarding the question of the precautionary principle, the Appellate Body confirmed in the *EU- Beef Hormones* dispute that this principle is indeed embodied in the SPS Agreement in its preamble, in article 3.3 and in article 5.7. Moreover, the Appellate Body confirmed that the precautionary principle could not in any case override the explicit wording of articles 5.1 and 5.2 of the SPS Agreement.[135]

3.6 Conclusion

In conclusion, the SPS Agreement needs to be modified in order to address the significant problems faced by developing countries when approaching new SPS measures. As currently written, the SPS Agreement does not ensure market access for developing countries' agricultural exports. Reforms must aim at preventing evasion of the SPS disciplines by misuse of the flexibility inherent in the SPS Agreement. Such a reform will became a complicated point for discussion due to the opposed interests in play. Unfortunately, the Doha Declaration contains no statement concerning new negations about the rules relating to sanitary and phytosanitary measures. To the contrary, in the portion of the Work Programme related to "Trade and Environment" the Declaration provides that the outcome of the work of the Committee on Trade and Environment shall not add to or diminish the rights and obligations of members under existing WTO Agreements, in particular the SPS Agreement, nor alter the balance of these rights and obligation and will take into account the needs of developing and least developed countries. [136]

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[135] Bohanes, *supra* note 133 at 9.
[136] Ruessmann, *supra* note 127 at 16.

Nonetheless, more tightening of the wording of the agreement is indispensable in order to respect the interests of the developing world. Another important issue is to ensure that developing countries receive financial and technical support as well as clear acknowledgement of the special treatment they need in order to prevent legitimate SPS measures from resulting in barriers for their exports.

However, future modifications must bear in mind the conservation of the balance aimed at in the SPS Agreement; that is, the balance between the objective of ensuring market access for food and agricultural products, and the sovereign right of governments to protect the life and health of humans, animals and plants in their territories.

Finally, developed and developing countries must also modify their behavior in order to fully profit from the benefits of the SPS Agreement. Developed countries must be aware of the needs and special circumstances of developing countries and help them by minimizing, whenever possible, incompatibilities with the systems of production and marketing applied in developing exporting countries. In addition, it is essential that developing countries' governments implement institutional structures that help agricultural producers to comply with the SPS requirements of the developed world's markets.

4 GMOs: ANTOHER DISGUISED BARRIER TO TRADE?

4.1 GMO'S, SPS Measures and Developing Countries

Chapter 2 explored the possibility of using SPS measures as a disguised barrier to trade and how this can impair net food-exporting developing countries' market access possibilities. This chapter will continue the idea studied in chapter 2, by focusing on one type of farm product that may be banned for safety food reasons: farm products that contain genetically modified organisms (GMOs).

Most exporting developing countries have been using GMO technology for some time, and much of their export production uses this new technology. The possibility of banning trade of GMO in the developed world under the excuse of health and food safety concerns represents a great disadvantage for net food-exporting developing countries. Given the lack of specific provisions regarding trade of GMOs, and the chance of treating GMOs as subjects of sanitary and phytosanitary measures, the SPS Agreement is the WTO framework available to deal with this issue.

This chapter begins with an explanation of what a GMO constitutes, and how this new technology has influenced world agricultural production, giving emphasis to developing countries' production. It will also describe the particular attitude of the EU regarding GMO products by describing the precautionary principle. A second part of the chapter will introduce one of the proposed solutions to the problem of GMO trade, a labelling scheme. The last part of the chapter will analyze how a

labelling scheme fits within the provisions of the SPS Agreement and will argue for the development of specific rules to regulate trade of GMOs.

4.1.1 What is a genetically modified organism?

According to the European Union, Genetically Modified Organisms (GMOs) can be defined as organisms and microorganisms in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating or natural recombination. The use of technology referred as "recombinant DNA technology" or "genetic engineering" allows the selection of individual genes and their transfer from one organism into another, sometimes between non-related species.[137]

Correspondingly, genetically modified food is food or food products that derive from the genetic modification of pre-existing conventional food. The purpose of the genetic modification is either to add desirable traits, or to delete detrimental traits from conventional food. The technology allows one to transfer specific genes between species while encoding for the outward expression of desired traits or phenotypes.[138]

Commercially, this technology has been used to develop new crops specially adapted to particular farming conditions or environments in order to reduce production cost or to improve management options. Examples of this are tomatoes that have the special characteristic of delayed ripening and increased shelf life, or commercial crops that have a desirable trait of pesticide and/or viral resistance.

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[137] See European Union, "Facts on GMOs in the EU" (13 July 2002), online: Monsanto http://www.monsanto.co.uk /news/2000/july2000/13072000gmoEU.html (date accessed: 10 February 2003).

Moreover, the same technology has gone further to attend the need of consumers. Taking into account consumer's needs the technology has created crops with improved nutritional value.[139]

4.1.2 The importance of GMOs in current agricultural practices and in the expectations of developing countries

The advantages that GMO technology presents for the agricultural sector are numerous. Currently, genetically modified crops are used to increase production, to resist herbicides and diseases and to produce natural pesticides. Moreover, genetically modified crops can today tolerate long-term storage and resist adverse environmental conditions. From a commercial point of view, the technology has permitted the removal of undesirable traits in foods such as natural toxicants, antinutrients and allergens, and the provision of renewable sources of valuable materials such as vaccines, drugs and bioplastics.[140]

Furthermore, the use of GMOs has reduced costs for weed and insect control due to the development of resistant corn, soybeans and cotton. In 1997 US farmers saved US$ 119 million from GMO corn, US$ 109 million from GMO soybean, and US$ 81 million from cotton.[141] As a result of these savings, most of the world agricultural producers have adopted GMO technology. By 1998 more than 500

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[138] See D.V.Devernoe, "Substantial Equivalence: A valid International Sanitary and Phytosanitary Risk Assessment Objective for Genetically Modified Foods" (2000) Case Western Reserve Law Review at 257.

[139] See C. Ives, "The Benefits of Biotechnology, the Intersection of GAT/WTO and Other Trade Issues " (2001) Michigan State University – DCL Journal of International Law, 13 at 16.

[140] *Ibid.*

[141] See C.F.Runge & L.A. Jackson, "Labelling, Trade and Genetically Modified Organisms. A Proposed

genetically modified plant varieties were available in the US, accounting for 28% of the areas (2.57 million hectares) planted of maize, soybean and cotton. But not only developed countries such as the US, Canada and Australia have used GMOs in their agricultural production. Net food exporting developing countries followed this tendency in order to profit from the benefits of this new technology. Countries such as Argentina and Brazil or South Africa already planted around 100.000 hectares each with GMOs during 1997, the second year of their introduction in the market.[142]

For example, between 1990 and 2001 the production of Argentina's 18 main crops increased by 71%, to reach a total of 6.7 tonnes in the 2000/2001 harvest year, a historical record. This record was the result of a combination of technical change through the use of fertilizers and agrochemicals, modern machinery and new production techniques. Moreover, in the past decade Argentina has risen from being the 19th to the fifth largest corn producer and from fourth to the second largest exporter. Most of the output rise is explained by the use of new varieties, by more intensive fertilizer, pesticides and irrigation, and most importantly, by the use of genetically modified seeds.[143]

Finally, the extensive use of the new technology resulted in a rapid introduction of the GMO crops in the supply chain for processed foods using corn,

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Solution" (2000) 34 Journal of World Trade, 111at 113.

[142] See C. James, "Global Review of Commercialized Transgenic Crops: 1998" (1998) International Service for the Acquisition of Agri-Biotech Applications.

[143] See "From Country Profiles Argentina. Economic Sectors: Agriculture, Forestry and Fishing" The Economist Intelligence Unit, (05 November 2001) at 1, online: The Economist Intelligence Unit http://db.eiu.com/search_view.asp? (date accessed: 26 February 2002).

soybean or cotton seed oils, with some estimation that between 70 to 100 % of processed foods contained GMOs by 1999.[144]

Although the benefits of GMO technology are substantial from an economic point of view, these developments have alarmed consumers and governments around the world concerning different areas. First, from an environmental point of view, the fear comes from the possibility that GMO's insect or herbicide resistant traits will spread to other less desirable plant varieties or will pose unknown risks to human health, such as the transfer of allergens or carcinogens. Moreover, currently marker genes are used to identify certain plants by their resistance to ampicillin. Opponent to GMOs fear that the consumption of these plants might lead to the development of antibiotic resistance.[145]

Second, there is also a concern related to the consolidation of control over GMOs by a small group of companies called "the Gene Giants" and the possible implications for consumers and small agricultural producers especially in net food exporting developing countries. Producers and consumers will not have the capacity to control the advances of these giants, such as Monsanto's alleged intention to market a "termination gene" which, when combined with GMO corn, soybean or cotton, will prevent farmers from using seeds from the previous year's crop by rendering them sterile. [146] Similarly, concern has also been raised in relation to

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[144] See "Sticky Labels" The Economist, (1 May 1999) at 75, online: The Economist www.economist.com (date accessed; 26 November 2001).

[145] See J.D. Kinsey, "Genetically Modified Food and Fiber: a Speedy Penetration or a False Start?" (1999) 44 Cereal Foods World, 487at 489.

[146] Monsanto denies this intention. See S. Kilman "Food Fright", Wall Street Journal, October 1999. A1

intellectual property rights and the possibility that these firms might end up with the enclosure of the "genetic commons".[147]

As a consequence of these concerns, consumers around the world, especially the EU countries, have rejected the use of GMO technology and now demand special control over the commercialization of these products. In response to this tendency, government and private companies have rethought the commercialization of GMO products. In the United Kingdom, for example, in 1999 major food chains announced their intention to avoid GMO ingredients; the same policy was followed by Carrefour, the French Food Company, and Nestle in Switzerland. On the governmental side, Russia announced in 1999 that any imported GMO product would require testing and licensing.

The GMOs controversy can affect developing countries in two ways. One is the impact that the new technology might have because of the lower costs of food production. The benefit to be drawn will depend on the capacity of net food exporting developing countries to attract the new technology. In order to profit from this technology, it is absolutely necessary for these countries to have a firm intellectual property regulation and a proper enforcement of that regulation. If, on the contrary, net food developing countries cannot attract investments on the new technology, these countries will lose competitiveness in international markets as international food prices come down. This problem requires the intervention of the governments of these countries in order to recycle their agricultural policy in

[147] Runge & Jackson, *supra* note 142 at 112.

response to GMO needs. Due to the length and scope of this work, this problem will not be further discussed.[148]

The second problem is related to the possibility of using GMO concerns as a disguised barrier to trade for net food-exporting developing countries. As already mentioned, net food-exporting developing countries are currently demanding improved access to the developed world's markets in order to have an opportunity to share in trade-led growth.[149] Moreover, developing countries have invested in GMO production due to the amazing advantages that this new technology offers them. On the other hand, consumers in the developed world demand stronger control over GMO trade. Uncertainty regarding the effect that long-term consumption of GMO products might have on human health provides a justification to impose sanitary and phytosanitary barriers to GMO products from these net food-exporting developing countries. As explained in chapter 2, the SPS Agreement presents important flaws that diminish its power to attack disguised barriers to trade. In the case of GMO products, due to the scientific uncertainty around their long term effects, the SPS Agreement looks more inoperative than before. Finally, it is worth mentioning that a potential disruption of trade flows in agriculture caused by GMO concerns might raise problems for food-importing developing countries because of the possible disruptions in food aid supply.[150]

The aim of this chapter is to demonstrate how this concern over GMO products can be turned into another food trade barrier, and can therefore affect developing countries. It should not be forgotten that 43% of developing countries are

[148] Anderson, *supra* note 6 at 18.
[149] McCalla, *supra* note 3 at 175.

net agricultural exporters, including 28 of the least developed countries[151], and that most of the largest net food-exporting developing countries (Mexico, Argentina, Brazil, Chile or South Africa) base most of their agricultural production on GMO technology. The question behind the issue of GMOs is the same one analyzed in chapter 2, that is, how to ensure that a country's food supply is safe. Further, how can it be ensured that strict health and safety regulations aren't an excuse for protecting domestic producers, or are not a disguised barrier to trade?[152]

Trade of agricultural products is actually governed by different WTO Agreements; one is the Agreement on Technical Barriers to trade (TBT), which details disciplines on national technical regulations and standards, including the labelling of products. Next is the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), which requires the use of science-based disciplines and risk analysis in the application of trade restrictions to protect plant, animal, and human health. Finally, the Agreement on Agriculture that governs trade in agricultural products, which includes GMOs and genetically modified food products.[153] However the current system does not provide adequate protection for the problem of GMO products. The following section of this chapter will analyze the EU position regarding GMOs in order to illustrate the other side of the coin in the dispute over GMO products trade. The next section will discuss a solution for consumer's concerns, a negative labelling plan. The final section will analyze food safety issues arising from genetically modified organisms that might be addressed by

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[150] Runge & Jackson, *supra* note 142 at 113.
[151] McCalla, *supra* note 3 at 172.
[152] Ives, *supra* note 140 at 19.

the SPS Agreement in order to illustrate the urgent need for an international control over the trade of GMOs. Finally, some alternatives regarding international standards will be outlined in order to exemplify some of the solutions offered in current negotiations.

4.2 The EU position regarding GMO products – The Precautionary Principle

The main principle underlying the EU position in GMO matters is its willingness to prevent damage occurring from a particular action rather than letting it arise and then dealing with the consequences. This type of approach has been called the "Precautionary Principle" and it is enshrined in Article 130 (2) of the EC Treaty.[154]

The precautionary principle is applied by the EU in areas or situations where risk assessments have been carried out, but the limitations of science underlying the assessments does not permit conclusive results. Consequently, this principle entitles nations, despite the absence of unshakable scientific proof, to act against products raising questions about health or safety.[155]

In the case of GMOs, the need to apply the precautionary principle was based on different reasons. First of all, consumers around the EU were concerned about the possible negative effects that GMO products might have on human health and the

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[153] See M.E. Bredahl & N. Kalaitzandonakes, "Biotechnology: Can we trade it?" (2001) 2 The Estey Journal of International Law and Trade Policy, 75 at 79.
[154] See N. Perdikis, "A Conflict of Legitimate Concerns or Pandering to Vested Interests? Conflicting Attitudes Towards the Regulation of Trade in Genetically Modified Goods. The EU and the US" (2000) 1 The Estey Centre Journal of International Law and Trade Policy, 51 at 55.
[155] See R.J. Zedalis, "Labeling of Genetically Modified Foods – The Limits of GATT Rules" (2001) 35 Journal of World Trade, 301at 305.

environment in the long term.[156] Although a great number of scientists affirm that genetically modified food is safe for humans, another part of the scientific community doubts this. It should not be forgotten that EU consumers have been influenced by episodes related to unhealthy food, such as the mad cow disease or the controversy around beef growth hormones[157] against the US.

Second, the same problem appears in relation to the negative effects that GMOs might have on the environment. There is uncertainty around the possibility that genetically modified plant varieties can cross over and affect traditional varieties. There is already evidence of some effect on fauna and flora. Due to the impossibility of limiting the movement of birds, insects and other vectors that carry pollen through national frontiers, it is possible that genetic modification will end up reducing consumers' choice if natural products are invaded by genetically modified pollen. In this area again, EU consumers have been exposed to different controversies[158], like France's import ban on chrysotile asbestos, or the use of BST (bovine somatotropin) in milk production[159].

Third, attempts to promote science-based assessment of the risks involved with GMO trade have met with extreme versions of the precautionary principle

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[156] See Consumers Association 1999, "Memorandum", in House of Lords Select Committee on the European Communities, 2nd Report 1998-99, *Regulation of Genetic Modification in Agriculture,* HL Paper 11-II, January 1999.

[157] *EU - Beef Hormones, supra* note 70 & *See EC Measures Concerning Meat and Meat Products (Hormones) (Complaint by the United States)* (1997), WTO Doc. WT/DS26/R/USA (Panel Report) online: WTO http://docsonline.wto.org/gen_browseDetail.asp?preprog=2#panel+Reports (date accessed: 10 February 2003). [hereinafter *EU – Beef Hormones Panel Report*]

[158] Zedalis, *supra* note 156 at 302.

[159] See *EU Proposes Permanent Ban on BST; Expected to Heighten Tensions with US,* (1999) 16 BNA's Int'l Trade Report 1778.

arguing for a complete ban on GMO production, importation or sale in numerous markets.[160]

Given the potential misuse of the precautionary principle, especially for protectionist purposes, the US[161] and most net food-exporting countries have refused to accept it and have challenged it under current negotiations.[162]

The problem surrounding GMOs is more than complex. Many different proposals have appeared in the doctrine that search for a definitive solution to the problem. Because of the length of this paper only two of them will be analyzed. The first one aims at correcting the lack of consideration of consumers' interests in the WTO, especially in the SPS Agreement and the TBT Agreement: a labelling scheme. The second proposal deals with the need to establish common international standards to guide Members in their risk assessment appreciation when evaluating the possibility of imposing a ban on GMO products. This second solution represents a plausible improvement for net food-exporting developing countries by offering them a transparent and predictable process when facing other Members' trade policies over public health.

4.3 Labelling requirements: a response to consumers needs.

In order to avoid the application of the precautionary principle, and taking into account the consumer's right to decide how healthy GMOs are; labelling requirements appear as a market-based alternative that has the advantage of

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[160] Anderson, *supra* note 6 at 18.
[161] Perdikis, *supra* note 155 at 58.
[162] See WTO, "Documents, Briefing Note on Sanitary and Phytosanitary Measures – Food Safety, detailing the concerns of developing countries over the manner in which the SPS Agreement has been implemented" (22 March, 2002) online: WTO

requiring no regulatory authority or trade restriction apart from a mechanism to ensure that labels are accurate.[163] However, labelling plans can be structured in different ways.

4.3.1 Positive Labelling

There is positive labelling when the requirements ask for an affirmative sentence. A positive label would say: "This product may contain GMOs". Obviously, as GMOs have already entered the food chain in great quantities, this type of label would be useless for relieving the consumer's concerns as such a label does not say how much GMO content is implied or if the GMO in question has been identified. According to authors like Kinsey, positive labels of this type are "almost as misleading as having no label at all"[164]

On the other hand, others believe that a positive label scheme would really work for consumers' interests by turning consumers and farmers away from GMOs.[165] However, taking into account that 70-100% of food products today contain some type of GMO, a positive label plan would result in reducing consumption of GMOs and trade in these products. Hence, such an approach turns into an attack on food manufacturers, seed companies and the investment made in research and technology on GMOs by both the private and the public sector, even though until now there is no certainty over the unhealthiness of GMO for humans

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<http://www.wto.org/english/thewto_e/minist_e/min99_e/english/about_e/08sps_e.htm> (date accessed: 10 February 2003).

[163] Runge & Jackson, *supra* note 142 at 113.

[164] Kinsey, *supra* note 146 at 487-489.

[165] Runge & Jackson, *supra* note 142 at 115.

and the environment.[166] In this sense, a positive labelling scheme could end up being a disguised barrier to trade and consequently challenged as an illegal measure under the WTO dispute resolution framework.

4.3.2 Negative Labelling

A better possible solution can be found in the concept of negative labelling. A negative label would read: "This product or seed contains no GMO". This type of labelling does not present the disadvantages mentioned in the case of a positive labelling. However, a negative label scheme needs to clarify the following points.

First, such a system needs to have a definition of what "no GMOs" means. In this case, like in the case of food and alimentary standards allowing a given amount of foreign material per unit volume, "no GMOs" have to imply a minimum threshold approaching zero. This agreement must be reached in an international forum so as to avoid differences across firms and national boundaries. The label "no GMO" has to mean the same thing in France and in Canada.[167]

However, arriving at an agreement regarding what constitutes "no GMOs" will be a difficult task. The EU is already demanding a 1% threshold for "no GMOs", while GMO opponents have argued in favor of a lower 0.1% threshold. What is not clear is of what that 1% should be. Hence, consensus also must be reached regarding how such a threshold would be measured and how it would be determined.

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[166] *Ibid.*
[167] *Ibid.*

A second requirement would be to define GMOs. Some authors[168] ask for a definition that excludes conventional plat breeding, including only "transgenic" in which some form of gene splicing has occurred.

Third, it should be taken into consideration that a "no-GMO" label might be interpreted as implying that GMO foods are harmful. Hence it is advisable to add a statement to the effect that "no significant difference has yet been shown between food or seeds with and without GMOs". With such a statement, consumers averse to the perceived risk associated with GMOs would be free to purchase based on the information on the label, while at the same time the label would not harm the GMO industry.[169]

The consequence of having a negative label scheme will be the creation of a niche market for those consumers who decide to purchase, process, segregate and sell no-GMO food. It also represents additional costs in the food supply chain that will lastly influence the final price that consumers will pay. As C. Ford Runge explains:

> In the case of food products, purchasing no-GMO ingredients will entail monitoring inputs closely, and requiring farmers and suppliers to conform to no-GMO practices. Processing would need to be in separate lots, or even separate facilities, to guarantee against co-mingling. Segregation will thus be required, either internal to a firm producing both GMO and no-GMO products, or between two firms one of which will produce a no-GMO product, and another that will not. In the case of seed, similar restrictions would apply to growing, processing, segregating and selling no-GMO varieties. [170]

Finally, assuming this extra cost does not end up being prohibitive, firms will adopt a negative labelling plan if the market for no-GMO products is large enough

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[168] *Ibid* at 116.
[169] *Ibid* at 119.
[170] *Ibid* at 116.

and the price elasticity of the demand is adequate to support such a price variation in order to cater for the variable costs of production. [171]

4.3.3 Compulsory and Voluntary Labelling

Once agreed that negative labelling represents a better solution for both consumers and producer than positive labelling, one question remains, and that is how this negative labelling scheme should be organized and which role governments should play in such a scheme. The doctrine suggests two possibilities: Compulsory Labelling and Voluntary Labelling.

There is compulsory labelling when a mandatory governmental directive imposes a labelling requirement. On the other hand, there is voluntary labelling when, as a result of consumers' demands, private companies voluntarily decide to initiate and administer a program to label their food products. [172]

In the case of voluntary labelling, and given the need for uniformity and coordination across private firms and national regulatory regimes, it would be necessary to organize a system based on international standards or norms.[173] This coordination and harmonization is strongly advice because of the benefits that it can bring about. It would allow individual nations to pursue their own enforcement and certification approaches while preventing discriminatory practices of other Members. If a country decides to refuse such a label system on a reciprocal and non-

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[171] There is already evidence that suggest that the inversion is worth doing it. See W. Nimon & J. Beghin, "Are Eco-Labels Valuable? Evidence from the Apparel Industry" (1999) 81 American Journal for Agricultural Economies, at 801-811.
[172] Zedalis, *supra* note 156 at 306
[173] Runge & Jackson, *supra* note 142 at 114.

discriminatory basis, and uses this as an excuse to deny market access, it will likely run afoul of global trade rules.[174]

4.3.4 The WTO and a negative labelling system

There is another important difference between a voluntary labelling regime and a compulsory labelling regime. If the plan is completely voluntary and comes entirely from a private initiative, such labelling plan is completely out of the scope of the WTO rules, because GATT concerns measures, mandatory or voluntary, which governmental organs of states which are party to that international agreement adopt. The GATT and the following signed agreements were not designed to regulate the private conduct of businesses or individuals that carry the nationality of particular Member nations.[175] On the contrary, a compulsory labelling system might be challenged under WTO rules if it results in an illegal barrier to trade.

However, there is another alternative where WTO rules apply, even though the labelling system works voluntarily in this case; it is those government- sponsored voluntary plans that are quite capable of falling within the reach of the WTO provisions.[176] The support for this affirmation should be searched in the panel decision of *Japan-Trade in Semi-Conductors*[177]. This decision held that even governmental plans of a voluntary nature are limited by GATT rules if governmental involvement is not only instrumental, but is also accompanied by genuine incentives for adherence or disincentives for deviation. Similarly, if any private plan depends

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[174] *Ibid* at 119.
[175] Zedalis, *supra* note 156 at 338
[176] *Ibid* at 337.
[177] *United States – Antidumping Duty on Dynamic Random Access Memory Semiconductors (DRAMS) on one megabit or above from Korea (Complaint by the United States)* (1999) WTO Doc.

on government involvement to be effective, the private attribute of the plan may merely be utilized to mask its real character of a public barrier to trade. Nevertheless, the task of drawing the line between the two situations described above can be extremely difficult.[178]

In conclusion, the goal of a labelling plan should be the satisfaction of consumers' interests and the possibility of preventing the use of such labels as a disguised barrier to trade. The basic idea contemplates a labelling plan that does not discriminate against foreign products containing GMO ingredients. If this is the case, positive labelling only satisfies the first of these two interests. Contrarily, a negative labelling plan appears to be a better option by letting consumers know that there is currently no scientific certainty regarding the possible negative effects of GMOs in health and the environment.

Nonetheless, any labelling plan has to be applied in a uniform modality in order to avoid what Runge calls "a crazy quilt of regulations"[179]. This must be achieved by coordinating and harmonizing the application of such a label plan. This structure will influence private companies in their decision on whether to afford the cost of a labelling plan by assuring them common application. It will also help individual nations to pursue their own enforcement and certification approaches, while preventing discriminatory practices of other Members. For this reason, the application and enforcement of such a labelling plan must be shared by each

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WT/DS99/R (Panel Report) online: WTO http://docsonline.wto.org/GEN_searchResults.asp (date accessed: 18 February 2003).

[178] Zedalis, *supra* note 156 at 340.

[179] Runge & Jackson, *supra* note 142 at 119.

Member country and the international organization responsible for creating the harmonized standards.

Regarding compulsory and voluntary labelling, there is no agreement regarding what might be more beneficial. Some authors demand a compulsory labelling plan[180] due to the possibility of controlling the misuse of a labelling requirement as a trade barrier. However, other authors sustain that agreement to establish a compulsory label plan based on harmonized standards is hard to happen. The rationale for such a statement seems to be related to the time it would take to reach an agreement on labelling standards, and to the ambiguous outcome it may have. For these reasons the authors propose a voluntary labelling plan which they consider would be a more efficient and economically desirable outcome.[181]

Finally, it is worth mentioning that although a labelling standardized system represents a feasible solution because it responds jointly to consumers' rights whilst preventing such label from becoming a disguised barrier to trade, it does not cover all the concerns related to the issue. First, it does not take into consideration possible unknown environmental impacts of GMO production. Secondly, it does not assure a proper conduct in monitoring and research to warrant the safety of GMO foods. Finally, it does not take into consideration the needs of developing countries related to the aspect of technology development, genetic property rights and food security.[182]

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[180] *Ibid* at 117.
[181] Bredahl & Kalaitzandonakes, *supra* note 154 at 88.
[182] Runge & Jackson, *supra* note 142 at 120.

4.3.5 The SPS Agreement: A refuge for GMO Labelling?

As mentioned in chapter two, one of the most important shortcomings of the SPS Agreement is its broad, slightly ambiguous language that leaves room for various interpretations. In this case, the uncertainty is related to the possibility of applying the SPS Agreement to a labelling requirement for GMO products.

Suppose the case of a labelling requirement designed, by a Member country, to reveal which food products contain GMO ingredients. This Member country might be inclined to defend such an action as permitted under Article 5.7 of the SPS Agreement,[183] which authorizes states to adopt sanitary and phytosanitary measures, even in instances of scientific uncertainty. In this case, the Member country concerned about GMO food products might be tempted to suggest the very language of the SPS Agreement endorses the idea of acting to protect themselves against unproven, but possible risks associated with GMO food imports.[184]

Such an interpretation would demand two categories of legal issues. The first issue is related to whether such labelling requirement falls within the ambit of the SPS Agreement. [185] The second is particular to Article 5.7 and the evaluation of the scientific risk assessment in place under the regulation.[186]

4.3.5.1 Does the SPS Agreement apply to GMOs?

One part of the doctrine[187] holds that the SPS structure is incapable of dealing with potential conflicts over GMOs. According to this interpretation, the

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[183] *SPS Agreement, supra* note 63 at article 5.7.
[184] Zedalis, *supra* note 156 at 340
[185] *Ibid* at 341
[186] Devernoe, *supra* note 139 at 272.
[187] Perdikis, *supra* note 155 at 61.

SPS Agreement works well where science is straightforward or where evidence can be easily accumulated and interpreted. In cases where uncertainty exists, differing interpretations can prevail and there may be legitimate grounds for choosing different policy solutions, even more so if ethical issues also arise, as in the case of GMOs. The SPS Agreement was created in order to ensure that national politicians are forced to think through the consequences of promoting domestic producer interests under the guise of protecting the consumer against inferior foreign products. According to the N. Perkidis this agreement should not be interpreted as including legitimate consumer concerns. Consequently, the author suggests creating new institutions or a new agreement that deals specifically with GMOs.[188]

However, this interpretation seems to obviate the fact that the SPS Agreement has two main objectives, one of which is explained in the previous paragraph; the other is the protection and improvement of the current human, animal health and phytosanitary situation of all Member countries. This last objective might be interpreted as covering also GMO problems.

Another part of the doctrine supports another possible interpretation of the SPS Agreement that includes measures related to GMOs. The first reason to assert so might have to do with the yet unknown, but potential adverse physiological consequences associated with long term human intake of GMO foods. Consequently, as one of the objectives of the SPS Agreement is the establishment of rules and disciplines affecting measures that target health concerns like bacteria, toxins and spoilage, it seems reasonable to infer that a labelling plan or other import measures

[188] *Ibid.*

targeting GMOs from abroad would seem within the scope of the SPS Agreement's dictate.[189]

Another reason to support this interpretation can be found in *EU- Beef Hormones*[190]. In this case, the panel reliance on the SPS Agreement for dealing with growth hormones that result in an alteration of natural inherent processes suggests that the reach of that Agreement is not only confined to the standard, everyday bacteria, toxin and spoilage type situation, but could be applied to the case of transgenic modification as well. [191]

A final but interesting point refers to the question of whether the reach of the Agreement extends to measures that aim at GMO products by the mere requirement of product labelling, in other words, whether a labelling requirement is a "measure" or not. It can be argued that the concept of "measure" demands the existence of something in the form of a regulatory prohibition or restriction that targets sanitary or phytosanitary problems regarding food products. In the case of GMO labelling requirements, these differ in that they do not attempt to maintain the product out of the country. They merely aim at satisfying consumers' requirements by providing information on their labels.

Although this argument could be considered persuasive, it could be refuted by the wording of paragraph 1 of the Definitional Annex of the SPS Agreement.[192] The language of paragraph 1 provides an extensive listing of the kinds of

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[189] Zedalis, *supra* note 156 at 341.
[190] *EU – Beef Hormones Panel Report* , *supra* note 158.
[191] Zedalis, *supra* note 156 at 342.
[192] *SPS Agreement, supra* note 63, Annex A, "Definitions", paragraph 1(a).

requirements considered measures including "packaging and labelling". This reading permits the inclusion of labelling requirements in the definition of measures.[193]

In conclusion, there is a possible reading of the SPS Agreement that permits its application to labelling requirements for GMO products.

4.4 A Proper Risk Assessment for genetically modified food

The analysis made in the previous section concludes that a labelling plan might result in a good solution to consumers' concerns. However, a labelling plan can also be designed in such a way as to disguise protectionist purposes. For this reason, the last part of the previous section analyzed the possibility of applying the SPS Agreement to such a labelling scheme in order to avoid the use of disguised barriers to trade.

As already explained in chapter 2, the SPS Agreement requires that every SPS measure applied by a Member country be based on an objective risk assessment of the effects of the product being regulated on the life or health of humans, animals or plants.[194] Furthermore, the SPS Agreement requires that Members base their SPS measures on international standards if they exist.[195]

However, until now there are no international standards that regulate GMOs. Currently, there are different international organizations devoted to the task of constructing, administering and supervising international standards for GMO. One

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[193] Zedalis, *supra* note 156 at 344.
[194] *SPS Agreement, supra* note 63 at Article 5, paragraph 1.
[195] *Ibid* at Article 3, paragraph 2 when it says that these international standards must be "deemed necessary to protect human, animal or plant life or heath"(and that they are) based on scientific principles and ... not maintained without sufficient scientific evidence".

of them is the International Plant Protection Convention that was based on a multilateral treaty run out of the Food and Agricultural Organization of the United Nations. It is formed by 113 countries and its goal is to secure common and effective actions to prevent the spread and introduction of pests of plants and plant products, and to promote measures for their control. It should also be remembered that although the IPPC has strong implications for international trade, it has international cooperation for plant protection as its focus. Many forms of cooperation fall within the scope of the Convention. Its application to plants is not limited only to the protection of cultivated plants or direct damage from pests. The scope of the Convention extends to the protection of cultivated and natural flora as well as plant products, and includes both direct and indirect damage by pests.[196] This organization has already organized special working groups to analyze GMO problems but until now no standards have been set.[197]

Another organization capable of setting international standards for GMOs is the Codex Alimentarius Commission. This organization's main goal is the provision of food safety through the protection of consumers' health and by ensuring fair practices in food trade. It has become the seminal global reference point for consumers, food producers and processors, national food control agencies and the international food trade.[198]

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[196] See, International Sanitary and Phytosanitary Portal, "The International Plant Protection Convention" , online: International Sanitary and Phytosanitary <http://www.ippc.int/cds_ippc_prod/IPP/En/default.htm>

[197] Ives, *supra* note 140 at 6.

[198] See WHO Info, Press Release "Codex Task Force agrees on final draft of Principles for the Evaluation of GM foods" (8 March 2002), online: WHO <http://www.who.int> (date accessed: 10 February 2003).

Regarding GMOs, the Codex Intergovernmental Task Force on Foods Derived from Biotechnology has reached agreement on a final draft of "Principles for the risk analysis of foods derived from biotechnology". These principles will provide a framework for evaluating the safety and nutritional aspects of GMO foods by defining the need for a pre-market safety assessment of all such foods on a case-by-case basis. Furthermore, these principles require authorities to consider the uncertainties identified in the safety assessment and to implement appropriate measures –such as the "post-market monitoring" option- to manage such uncertainties.

The Task Force will continue to develop guidelines for the risk assessment of GMO foods until March 2003. The final work will be submitted to the FAO/WHO Codex Alimentarius Commission at its next meeting in July 2003 in Rome, Italy, for adoption.[199] This organization appears as the most convenient institution to develop the standard. The WTO has already recommended its standards in the SPS Agreement. Moreover, the institution concerns itself not only with scientific knowledge but also with international trade issues.

Finally, in 1999 the heads of the leading industrial countries invited the OECD to review food safety aspects of GMO foods. However, although the OECD has considerable experience in the field of biotechnology, and has the advantage of combining both scientific standard and international policy development capabilities, it is merely a political organization. This character prevents the OECD from developing purely scientific standards that are not influenced by political motivations. Moreover, the OECD is not open for membership to all WTO

Members, a prerequisite for a standard setting organization under the SPS Agreement. Consequently, the findings of the OECD Group on the Harmonization of Regulatory Oversight in Biotechnology can not be adopted as international standards for GMO foods until they are first adopted by the Codex Alimentarius and later deferred to the WTO.[200]

4.4.1 Two different approaches for a GMO international standard: "Substantial Equivalence" and "The In-Depth Assessment"

The following part of this section will discuss two possible approaches to be taken into consideration in the design of an international standard for the regulation of GMO products trade.

4.4.1.1 Substantial Equivalence

The Substantial Equivalence Standard has been developed by the OECD.[201] It is a comparative standard that evaluates nutritional, toxicological, immunological and pathogenic criteria of the genetically modified food and compares these new criteria with the non-genetically modified parental variety of that food, paying special attention to the genetic modification that has taken place.[202] In order to establish that the genetically modified food is substantially equivalent to its conventional counterpart, the experimental values of these criteria for the genetically

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[199] *Ibid.*
[200] Devernoe, *supra* note 139 at 274.
[201] See OECD Group of National Experts (GNE) on Safety in Biotechnology, *Safety Evaluation of Foods Derived by Modern Biotechnology. Concepts and Principles*, 7 (1993)
[202] For a complete analysis of the substantial equivalence standard see *Report of the OECD Workshop on the Toxicological and Nutritional Testing of Novel Foods: Meeting of the Ad Hoc Expert Group on Food Safety*, at 10, OECD Report SG/ICGB (98)1(1998).

modified food must be within the range that occurs naturally for the conventional counterpart. If the new food or food component is found to be substantially equivalent to an existing food or food component, the new food can be considered as safe as its previously existing counterpart.

However, a deeper examination of the characteristics of the genetically modified food or food component may be performed in situations where there is an indication that unintended effects of genetic modification may exist. Nevertheless, in most cases these extra inquiries will not be necessary. From this point, further investigation should only occur if the examined variables do not fall within the naturally occurring range, or if unexpected effects of genetic modification arise, and should focus especially on the issues of allergenicity and gene transfer.[203]

Substantial equivalence departs from the idea that the genetically modified food evaluated is equivalent to its conventionally produced counterpart, and that the equivalence is evaluated with respect to the uses of the conventional food in specific regions. Because substantial equivalence seeks to endure the continuance of existing quality standards with respect to conventional products, it is implicit that the genetically modified product is at least as healthy as the preexisting product with respect to those standards.[204]

When determining the substantial equivalence of a new food product, three factors should be taken into account: any processing that the food may undergo; the intended use of the food or food product, and its intended exposure.

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[203] Devernoe, *supra* note 139 at 282.

[204] David Davernoe explains this with an example: "Potatoes are consumed in the US and elsewhere only after being cooked. Without this essential step, under certain conditions the potato may be toxic.

The comparative analysis in the substantial equivalence standard could have three endpoints. First, the genetically modified food is determined to be substantially equivalent to the precursor. Second, the genetically modified food, although not determined to be substantially equivalent, may be determined to be substantially equivalent aside from particular differences. Third, substantial equivalence may not be ascertainable either because the differences are not well defined or because no conventional counterpart exists. If the comparison results in one of the last two options, then further analyses will be required on a case-by-case basis.

David Davernoe explains how the substantial equivalence standard would work in practice by providing the following example. The genetically modified food would be a Bt-based orange ("Bugz Surpriz Orange").[205] The investigation will aim at establishing whether Bugz Surpriz oranges are as safe as conventional oranges. The first step of the assessment will include a compositional analysis of the genetically modified oranges and an analysis of the source, identity, function and stability of genetic material introduced in the oranges. A second step will analyze the safety of the kanamycin resistance gene used in the Bugz Surpriz oranges.

The third step would consist in an investigation of the nutritional profile of the modified orange compared to the conventional orange. The object of this investigation is to ensure that the genetically modified orange does not exhibit unexpected changes in composition. For example, oranges and orange products

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Genetically modified potatoes that require preparation prior to consumption, must be evaluated with respect to this step." *Ibid.*

[205] Bt-based transgenic crops incorporate insect resistance within the developed products. Bt-proteins are toxic to many insects and have the beneficial effect of allowing fewer insecticides to be used. For more information on recombinant DNA Technology, see *Biotechnology and the American Agricultural Industry,* 265 J. Am. Med. Ass'n 1429 (1991)

provide an important source of vitamins C and A. Hence, it is important that the Bugz Surpriz orange is not deficient in these vitamins compared to conventional oranges. In this case, the genetically modified oranges should be examined for vitamin content under storage conditions similar to those which conventional oranges are typically subjected to.[206]

Finally, if experimental values of the Bugz Surpriz orange result equivalent to those of the parental variety, the first part of the substantial equivalence test has been achieved. In addition, a safety assessment of the altered genetic composition of the genetically modified orange must be conducted. If, again, values fall within the acceptable level of risk of a given WTO Member, then the Bugz Surpriz orange can be considered substantially equivalent to its parental precursor, and thus safe for importation into that Member state. According to the SPS Agreement, the substantial equivalence analysis should be done by the importing country according to its individualized risk management objectives. Hence, the determination does not apply to every Member. Each Member has the obligation and opportunity to perform an assessment of its own.[207]

4.4.1.2 The "In Depth Assessment" Approach

The "In-Depth Assessment" Approach appeared as a response to the concern that the substantial equivalence standard was only useful to industry but not to

[206] Devernoe, *supra* note 139 at 285.
[207] *SPS Agreement, supra* note 63 at Article 5, paragraph 1.

consumers' needs.[208] In this case, the evaluation of genetically modified foods or food products would entail extensive scientific exploration into potential adverse public health consequences of releasing each genetically modified food for public consumption.

In comparison to the substantial equivalence standard, which is a comparative standard, the In-Depth Assessment requires the development and determination of new threshold values for each product, as well as new legislation corresponding to the potentially ill-conceived threshold values. Advocates of this approach prefer the decreased risk resulting form the extensive safety assessments involved in this approach.[209]

In order to demonstrate how this assessment would work in practice, David Davernoe refers to the same product, the Bugz Surpriz orange. The In-Depth Assessment uses immunological, toxicological and biological tests to evaluate the modified oranges. The first step includes a nutritional assessment to establish the threshold values that the new orange must achieve in order to be considered safe for normal consumption. In this case, the values will not take into consideration the prospective uses of the modified oranges in comparison to the parental precursor. Consequently, there will be a range of threshold variable that the Bugz Surpriz orange must meet, turning the process much longer and much more expensive than the comparative route used in the substantial equivalence standard. [210]

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[208] See E. Millsonto et al., "Beyond Substantial Equivalence" (1999) 401 Nature at 525, arguing for a more structured and deep examination of genetically modified foods and food products.
[209] Devernoe, *supra* note 139 at 280.
[210] *Ibid* at 289.

Once the nutritional analysis yields acceptable results, the assessment moves to evaluate the safety concerns raised by the genetic modification. This test looks for the potential activation or stimulation of toxin production in the genetically modified orange. In this case, conventional oranges do not have a toxin history; hence, the analysis will focus on both the potential induction of unexpected toxin production and the effects of the introduction and resulting concentration of the Bt-endotoxin. As could be expected such an analysis will be a difficult and time consuming process that will include extensive in vitro and in vivo tests. More importantly, this process lacks a reasonable analysis endpoint because it involves purely theoretical possibilities and, thus a great deal of uncertainty. [211]

4.4.1.3 Reasons for supporting the Substantial Equivalence Standard over the In-Depth Assessment Standard

According to David Devernoe, the Substantial Equivalence Standard responds better to the specifications of the SPS Agreement than the "In-Depth Assessment" for the following reasons. First, in the case of the in-depth analysis, the in-depth assessment requires the development and determination of new threshold values for each product, as well as new legislation corresponding to the potentially ill-conceived threshold values. This last requirement makes the in-depth assessment inoperative for the purposes of the SPS Agreement, because one of the main objectives of this agreement is "to further the use of harmonized sanitary and phytosanitary measures between Members on the basis of international standards,

[211] *Ibid* at 290.

guidelines and recommendations".[212] Moreover, this process could delay distribution of the genetically modified product for an unreasonable period of time while a policy is being developed, thus causing parallel injury to industry.[213]

Second, another concern is related to areas where extensive testing yields inconclusive results. In these cases, how much testing will be required before a state can decide to accept or deny a product into their country? This inaccuracy carries a bigger problem; under such a case, it is also difficult to assess whether a Member state is really interested in the safety of the population, or whether it is using the mechanism only to protect its domestic industry.

Third, one of the most controversial aspects of the in-depth analysis is the fact that it does not provide an analysis endpoint. As Devernoe explains:

> Where the substantial equivalence inquiry ends with the determination that the genetically modified food is substantially equivalent to its conventional counterpart, in depth assessment will continue to require testing into theoretical possibilities because it did not start with the goal of threshold value determination.

This again, results in unreasonable delay and a potential opportunity for arbitrary restrictions by Members.

Finally, the In-Depth Assessment approach will always represent a more expensive option compared to the Substantial Equivalence Standard due to its high implementing costs caused by the complexities involved in carrying it out. Developing countries financially and technologically unable to perform this analysis on their own will be forced to adopt the scientific evaluation of other Members. This reliance on the threshold values determined by other Members will turn out to be detrimental to the developing Members because the outcome will be applied to two

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[212] *SPS Agreement, supra* note 63 at Article 5, paragraph 1.
[213] Devernoe, *supra* note 139 at 290.

or more separate and distinct populations with different nutritional requirements and underlying physiologies.[214]

Contrarily, according to the same author, the Substantial Equivalence Standard provides a principle under which scientific testing can occur during the evaluation of the safety of genetically modified foods. Compared to the In-Depth Assessment approach, substantial equivalence provides an endpoint for the scientific analysis of the modified food. Moreover, it also serves the safety objective because prior to reaching the conclusion of substantial equivalence for a given food, scientists must be certain that the genetically modified food presents no more risks to the population in question than its conventional counterpart.

Furthermore, in the *EU- Beef Hormones* dispute[215], the Appellate Body explained the functioning of risk assessment. In this case, the EU did attempt to justify its ban through risk assessment, by demonstrating the risks associated with hormones. Nonetheless, both the Panel and the Appellate Body considered that such EU risk assessment failed to address the key issue at hand: "the carcinogenic potential of these hormones when used specifically for growth promotion purposes...or the potential adverse effects arising from the present *in food* residues of the hormones"[216]

The EU failed to satisfy the risk assessment requirement because its report demonstrates only the general risks of hormones, while failing to demonstrate the

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[214] *Ibid* at 280.
[215] *EU – Beef Hormones, supra* note 70 at para. 175. The finding of the Appellate Body has been criticized in the sense that opens the door for the use of what has been called "hired scientist" by governments to find justifications for their measures (See D.E. McNiel, (1998) 39:89Virginia Journal of International Law -134 at 136).
[216] *EU – Beef Hormones, supra* note 70 at para. 8

specific risks of consuming hormone-treated beef.[217] This example shows how the Substantial Equivalence Standard fits the parameters given by the Appellate Body better, because it departs from the idea that the genetically modified food evaluated is considered equivalent to its conventionally produced counterpart, and that the equivalence is evaluated regarding the uses of the conventional food in specific regions. Since substantial equivalence seeks to endure the continuance of existing quality standards with reference to conventional products, it is implicit that the genetically modified product is at least as healthy as the pre-existing product with respect to those standards.

Moreover, the Appellate Body also stated that:

> It is essential to bear in mind that the risk to be evaluate in a risk assessment under Article 5.1 is not only risk ascertainable in a science laboratory operating under strictly controlled condition, but also risk in human societies as they actually exist, in other words, the actual potential for adverse effects on human health in the real world where people live and work and die.[218]

In the case of the In-Depth Assessment approach, the impossibility to achieve a reasonable analysis endpoint due to the need to analyze purely theoretical possibilities contradicts the parameters followed by the Appellate Body in this aspect. The Substantial Equivalence Standard offers the practical character that the In-Depth Assessment approach lacks. [219]

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[217] Kastner & Pawsey, *supra* note 121 at 52.
[218] *EU – Beef Hormones, supra* note 70 at para. 175. The finding of the Appellate Body has been criticized in the sense that opens the door for the use of what has been called "hired scientist" by governments to find justifications for their measures (See D.E. McNiel, (1998) 39:89 Virginia Journal of International Law, at para. 137).
[219] Devernoe, *supra* note 139 at 290.

Finally, the Appellate Body's report on Japan Varietals[220] offers another guide to address the best standard according to SPS needs. When the Panel discusses the requirement of sufficient evidence to support an SPS measure[221], it states:

> Sufficiency requires the existence of a sufficient or adequate relationship between two elements, in casu, between the SPS measures and the scientific evidence...we agree with the Panel that the obligation...that an SPS measure not be maintained without sufficient scientific evidence requires that there be a rational or objective relationship between the SPS measure and the scientific evidence. Whether there is a rational relationship between and SPS measure and the scientific evidence is to be determined on a case-by-case basis and will depend upon the particular circumstances of the case, including the characteristics of the measure at issue and the quality and quantity of the scientific evidence.[222]

Applying this test to Japan's requirement that approval to import certain fruits should be sought separately for each variety of the fruit (Japan's so called "varietals testing requirement"), the Panel and the Appellate Body concluded that the requirement was not maintained with sufficient scientific evidence.[223] In the case of the In-Depth Assessment approach, the lack of certainty that the procedure encourages will always work as an obstacle in the search for a rational relationship between the measure and the scientific evidence.

However, it is necessary to inform that the adoption of the Substantial Equivalence Standard will not end up with discussion surrounding genetically modified under the WTO. Different problems will persist even adopting the Substantial Equivalence Standard. Firstly, the SPS Agreement recognizes the possibility of allowing varying levels of protective measures between Members[224],

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[220] *Japan Varietals, supra* note 103 at paragraphs 73 and 84.
[221] *SPS Agreement, supra* note 63 at Article 3, paragraph 3.
[222] *Japan Varietals, supra* note 103 at paragraphs 73 and 84.
[223] Pauwelyn, *supra* note 106 at 646.
[224] *SPS Agreement, supra* note 63 at Article 2.2, paragraph 3.

so conflict will arise between Members using different standards or methodologies for evaluating genetically modified foods.

Second, conflict might also arise under the Substantial Equivalence Standard if one Member challenges another Member's determination that a specific genetically modified food is not substantially equivalent to the conventional precursor. Such a determination will permit the blocking Member to ban the import of the product or to limit its import under certain restrictions. This will shoot the dispute settlement provisions of the WTO.[225]

In conclusion, genetically modified foods offer potential benefits but their trade needs to be regulated fairly and provided with a tight leash on the approval process. The Substantial Equivalence Approach presents advantages from an economical point of view but it is limited by the types of testing that these products require. Furthermore, substantial equivalence provides WTO Members with autonomy to carry out their own risk assessments and to apply them to whole classes of genetically modified foods. Consequently, this standard fits the regulations under the SPS better and should be regarded as a plausible option as a default standard for the evaluation of genetically modified foods.

4.5 Conclusion

GMOs represent a great advantage in cost of production and other scientific and nutritional aspects. However, the uncertainty regarding health safety in long term consumption turns GMO products into a valid point for restricting their import into the territory of any Member state. Such a decision will surely be supported by

consumers who feel that their rights are not directly protected by WTO principles, and consequently demand protection from their governments.

Consequently, two different interests should be attended to in the future negotiations of the WTO. Consumers' groups demand information regarding the food they consume in order to be free to decide what to eat and what not to. Net food- exporting countries demand clearer rules when there is a restriction in the trade of GMO foods in order to avoid the application of measures whose sole purpose is to protect domestic production.

In the first case, leaving consumers' concerns out of the SPS has resulted in a two-edged sword. On the one hand, it has resulted in the absence of a voice arguing that domestic consumers should have better access to lower-priced imported food currently excluded by excessive quarantine regulations; on the other hand, it has kept out of the SPS debate issues such as "the consumer's right to know" via, for example, labelling.[226]

One possible solution to this problem might be to implement labelling plans that provide nutritional information for consumers. However, it is strongly advisable to try to agree on an international standard that will provide transparent and unequivocal rules on how each Member country delineates its own labelling plan. Such a harmonized standard would be indispensable in order to avoid what Runge calls "a crazy quilt of regulations"[227].

Regarding net food- exporting developing countries, their main concern is related to possible disguised barriers to trade by importing countries when banning

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[225] Devernoe, *supra* note 139 at 296.
[226] Anderson, *supra* note 6 at 17.

imports based on GMOs products. Currently, the only tool available to protect these countries against protectionist interests is the SPS Agreement. Nevertheless, the Agreement has its flaws, as discussed in chapter 2, which added to the peculiar characteristics of GMOs; turn the proper functioning of the Agreement rules for the protection of developing countries' interests quite difficult.

For these reasons, it is essential that in a future round Members resolve the issue of GMO foods in order to ensure that the present trading system remains open and acceptable. Some propose the establishment of a new institutional framework specially designed to attend the needs of GMOs.[228] Whether or not a new institutional framework is established, some modification should be carried out in order to provide policy makers in each Member state with some kind of leeway to meet consumers' needs, while avoiding the possible misuse of GMO concerns as disguised barriers to trade.

[227] Runge & Jackson, *supra* note 142 at 119.
[228] Perdikis, *supra* note 155 at 62.

5 FOOD AID AVAILABILITY AND THE LIBERALIZATION OF THE AGRICULTURAL MARKET

5.1 Food aid, developing countries and the WTO

There is much concern from net food-importing developing countries related to the negative effects that trade liberalization might cause to food aid. The argument is based on the likelihood that freer markets might cause a depreciation of world prices for agricultural products. This situation might produce a disincentive for agricultural production, thus diminishing the quantities of food available for food aid, which has always depended on food surpluses from the developed world. Consequently, this group of countries demands that in a future round of negotiations, new rules have to address food aid concerns in order to warrant food quantities for food aid programmes.

This chapter will address two points. First, it will argue that net food-importing developing countries should progressively stop their dependence on food aid programmes and start searching for other alternatives that can contribute to long term development of those countries. Second, it will conclude that the WTO should not take control of food aid programmes because this issue goes beyond the object of the organization. These countries' reliance on food aid programmes to satisfy their population's alimentary need has created a dependence that does not contribute to the development of their weak economies.

5.1.1 What is food aid?

According to the United Nations Food and Agriculture Organization, "Food security exists when people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life".[229] Ensuring the availability of food for food aid programmes represents one of the most conflictive transitional issues in the process of opening markets for the agricultural sector.

Food Aid programmes began in the 1950s as a solution to the agricultural surpluses of the United States and Canada. These surpluses were the result of commodity support programmes or the by-product of governments' fixing farm prices.[230] For this reason, the first food aid programme in the US, US Public Law 480 (PL480) of 1954, was tied closely to national agricultural policy. By the mid-1950s food aid accounted for as much as one-third of the total value of US agricultural exports.

The concept of food aid was also an advantageous tool for political purposes. US food aid programmes canalized the US position regarding foreign policy in the context of a global Cold War. The PL480 was structured onto three pillars, each one aiming at different objectives. The first pillar rested on the agricultural community, and its objectives were the development of export markets and the expansion of

[229] FAO, "World Food Summit Plan of Action" (13-17 November 1996) at paragraph 1, online: FAO http://www.fao.org/wfs/final/rd-e.htm (date accessed: 10 February 2003).

world trade. In this sense, food aid turned to be an important impulse for the enlargement of US agricultural trade, as those countries which were food-aid recipients eventually turned into commercial customers.

The second pillar rested on foreign policy makers that would aim at the promotion of broad-base development, fostering private enterprise and democratic participation. It should not be forgotten that by this time the US was expanding its relations with newly independent nations in the context of the cold war, and the opportunity of obtaining food for cheaper prices was an excellent nexus to strengthen these relations.

The third pillar consisted in humanitarian organizations that would be able to combat world hunger and malnutrition. In this sense, food aid was planned in a new modality, through development-assistance strategies with the objective of beating world hunger.[231]

Over time, the role of food aid in the US agricultural policy changed as it changed the actors that were in charge of delivering it. By the 1970s food aid was no longer an important tool for the development of the agricultural sector, and by the end of the decade only 3% of the value of US agricultural exports was employed as food aid. The role of food aid in US agricultural policy also changed due to the fact that programmes for export promotion were becoming more significant than food aid. Exports under credit guarantee programmes were consistently larger than food-

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[230] See, S. Reutlinger, "From "Food Aid' to "Aid for Food": into the 21st Century" (1999) 24 Food Policy , 7 at 9.

[231] See, C.Christensen, "The New Policy Environment for Food Aid: The Challenge of Sub-Saharan Africa" (2000) 25 Food Policy, 255 at 256.

aid levels. From 1978 on, total export- programmes levels were well above food aid.[232]

Regarding the actors who were in charge of delivering food aid, the situation also changed. From the beginning the system was organized on the basis of government to government negotiations. Later, in the 1980s, food aid started to move through national government to non-governmental organizations (NGOs),[233] and concurrently, the idea of financial aid in replacement of food aid appeared in response to strong criticism on its potential negative effects on agriculture in developing countries.[234]

At the same time, financial aid became the most important form of aid of the 1990s and the next decade. The best way to alleviate hunger and poverty in the world was believed to be the multilateral scenario, and under this idea the World Food Programme (WFP), the International Development Association (IDA) and later, the International Fund for Agricultural Development (IFAD) were born. The benefit of this kind of associations came from their power to mobilize food and financial aid from more donors and to insulate it from political pressures.[235]

Finally, the current thrust in the issue of food aid is related to the idea of obtaining a more market-oriented environment for agriculture, both domestically,

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[232] See K. Ackerman, M. Smith & N. Suarez, *Agricultural Export Programmes: Background for 1995 Farm Legislation.* (1995) Economic Research Service, at 27. Export-enhancement programmes here include EEP, DEIP, COAP, and SOAP.
[233] Christensen, *supra* note 232 at 257.
[234] See T. W. Schultz, "Value of US Farm Surpluses to underdeveloped countries" (1960) 42 Journal of Farm Economics.
[235] Reutlinger, *supra* note 231 at 9.

principally in the US and the Cairns Group[236], as well as internationally, through the World Trade Organization (WTO).[237] Food aid became a concern for the WTO due to the presumption that food aid levels increase in periods of surplus and decline when there are shortages in world markets. Furthermore, food aid can be used as an export subsidy, and consequently, as a tool to circumvent obligations under the Uruguay Round Agreement regarding export subsidy reduction. For these reasons, Members are demanding a more cohesive institutional structure for food aid and a clear definition of which role the WTO is going to play in this structure. The issue of food aid should be addressed and resolved soon in order to give a proper solution to the different concerns of its Members.[238]

5.1.2 Which is the concern of net food-importing developing countries?

During the last 20 years, global food-aid shipments of cereals by all donors have declined from 3.7 million metric tons in 1986 to 5.5 million in 1996, recovering to 8.8 million metric tons in 1998.[239] On the other hand, the decline in food aid does not correspond to a reduction in the need of assistance. Moreover, recent analyses suggest that there is a looming mismatch between food aid resources and the world's needs in this area, and it is expected that food aid needs will increase by 50% over the next decade. Part of this mismatch is due to the increasing use of

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[236] The Cairns group is formed by agricultural exporting countries which include: Canada, Australia, New Zealand, Thailand, Indonesia, Malaysia, the Philippines, Argentina, Brazil, Colombia, Chile, Uruguay, Bolivia, Costa Rica, Guatemala, Paraguay and South Africa.
[237] Christensen, *supra* note 232 at 257.
[238] See L.M. Young, "Options for World Trade Organization Involvement in Food Aid" (2002) 3 The Estey Centre Journal of International Law and Trade Policy, 10 at 11.
[239] See, FAO Agrostat, online: FAO http://apps.fao.org/page/collections?subset=agriculture (date accessed: 17 February 2003).

food aid for emergencies, such as natural disasters, and the rising number of conflicts like Somalia or Kosovo, which led to declines in the use of food aid for economic development.[240]

The process of opening markets to agricultural products has been seen by net food-importing developing countries and least developed countries as an imminent threat to their development. These countries argue that any reduction in domestic support might lead to significant production cuts in the developed countries. As food aid has always been constituted by developed world surpluses, any production cut will turn into a reduction of the amount of food available for that purpose. Moreover, net food-importing developing countries and least developed countries sustain that the conjunction of domestic production cuts and concomitant reductions in export subsidies, will lead to significant increases in the price of food products in the world market.

As an example of this concern, it is useful to acknowledge the opinion of Ailleen Kwa, published by South Centre[241]. The author says:

> For reasons of food security, national, political and economic security, as well as due to the special place of agriculture in developing countries' economies, developing countries also need policy flexibility to ensure that existing production of staples and food crops for domestic consumption are not threatened, and, if insufficient, can be increased.[242]

Hence, net food-importing developing countries will have a smaller quantity of food available for aid, and in addition, the price they will have to pay for food

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[240] Christensen, *supra* note 232 at 257.

[241] The South Centre is a permanent intergovernmental organization of developing countries in charge of promoting South solidarity, South-South cooperation and coordinated participation of developing countries in international forums. The South Centre prepares, publishes and distributes information, strategic analyses and recommendations on international economic, social and political matters of concern to the South.

will be higher. Furthermore, having higher prices will diminish net food-importing developing countries' capacity to finance commercial imports at market prices, consequently, exacerbating the already high dependence on food aid, at a time when, because of the lack of surpluses, the availability of food will be under threat.[243]

For these reasons different country Members have presented different proposals for future negotiations on food aid. India, for example, has demanded support criteria on food aid to ensure that food aid is distinct from export subsidies, and it states that food aid should be offered regardless of the world market price.[244] A group of developing countries including MERCOSUR countries[245], Bolivia, Chile and Costa Rica proposed that food aid should be given in full grant without any commercial condition.[246]

5.1.3 What is the answer of the WTO?

The WTO recognized this problem in the Marrakech Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least and Net Food Importing Developing Countries (hereinafter the Marrakech Decision) when it says:

> Ministers recognize that during the reform programme leading to greater liberalization of trade in agriculture least-developed and net food-importing developing countries may experience negative effects in terms of the availability of adequate supplies of basic foodstuffs from external sources on reasonable terms and conditions,

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[242] Kwa, *supra* note 4.
[243] See M.G.Desta, "Food Security and International Trade Law – An appraisal of the World Trade Organization Approach" (2001) 35 Journal of World Trade, 449 at 452.
[244] See WTO, Agricultural Committee *"Discussion ion Peace Clause" data, a Proposed Food Safety – Net Fund, and 69 Notifications* (2001) WTO News 29 June 2001, online: WTO http://wto/english/news_e/news_e.htm (date accessed: 17 February 2003).
[245] MERCOSUR is formed by Argentina, Brazil, Paraguay and Uruguay.
[246] See WTO, Committee on Agriculture Special Session, *Export Subsidies or Food Dependency? A Dicussion Paper presented by Argentina, Brasil, Paraguay and Uruguay (MERCOSUR), Chile, Bolivia and Costa Rica* (2000) WTO Doc. G/AG/NG/W/38, online WTO http://docsonline.wto.org/GEN_search.asp (date accessed: 17 February 2003).

including short-term difficulties in financing normal levels of commercial imports of basic foodstuffs.[247]

But what is more important, the Ministers agree to further analyze the issues of food aid and trade liberalization through further negotiations, and for this purpose they agree:

(i) to review the level of food aid established periodically by the Committee on Food Aid under the Food Aid Convention 1986 and to initiate negotiations in the appropriate forum to establish a level of food aid commitments sufficient to meet the legitimate needs of developing countries, during the reform programme;

(ii) to adopt guidelines to ensure that an increasing proportion of basic foodstuffs is provided to least-developed and net food-importing developing countries in fully grant form and /or on appropriate concessional terms in line with Article IV of the Food Aid Convention 1986;

(iii) to give full consideration in the context of their aid programmes to requests for the provision of technical and financial assistance to least-developed and net food-importing developing countries to improve their agricultural productivity and infrastructure. [248]

The current WTO regime regarding food aid and developing countries' concerns is based on the Marrakech Decision, and whatever has been decided by the Committee on Agriculture, the organism in charge of the application and follow-up of the Marrakech Decision.[249]

The current system suffers legal and institutional deficiencies. From the legal point of view, the Decision does not create any enforceable obligation on the developed Members in order to ensure the fulfillment of the dispositions. From the institutional point of view the Decision refers all issues related to food aid to systems outside the WTO, which also lacks any effective enforcement mechanism.

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[247] See WTO, Committee on Agriculture "Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries" (29 November 2002) at para. 2, online: WTO <http://www.wto.org/gen_search.asp> (date accessed: 10 February 2003)

[248] *Ibid* at para. 3.

[249] Desta, *supra* note 244 at 453.

Moreover, in November 2001 at the WTO Doha Ministerial Conference, the issue of food aid was also addressed.[250] In this case Members promised to take into consideration the recommendations forwarded by the Committee on Agriculture. In the first place, the Agricultural Committee recommended early action within the framework of the Food Aid Convention by donors and the UN World Food Programme to review donations to better meet the needs of least developed countries and net food-importing developing countries. Second, WTO Members should take measures to ensure that the levels of food aid given to developing countries are maintained in periods of high prices. Third, food aid to least developed and net food-importing developing countries should be in grant form; and finally, an interagency panel should be developed, including the World Bank, the IMF, and the UN Conference on Trade and Development, to explore the food financing revolving loan.

The outcome of Doha was more than disappointing from the developing countries' perspective. Developing countries had asked for much more.[251] They demanded a stronger commitment on food aid issues and the incorporation of enforceable disciplines into the WTO framework. A future round of negotiations will have to decide which role the WTO will play in the issue of food aid. However, it should be said that the issue of food aid goes much beyond trade related concerns. The current international system of food aid is totally uncoordinated and demands a

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[250] See WTO, Committee on Agriculture *Committee on Agriculture (Regular Meetings) Implementation – Related* Issues (2001) WTO Doc. G/AG/11, online: WTO http://docsonline.wto.org/gen_search/asp (date accessed: 17 February 2003).
[251] Young, *supra* note 239 at 19.

complete reorganization. From this perspective much discussion has gone around the issue of which role the WTO should play in such a complex task.

The following parts of this chapter will explore the background notes on the problem of food aid, and will analyze how much harm a possible rise in world prices can affect net food-importing developing countries. A second part will deal with the idea that food aid programmes have been detrimental to the growth of developing countries. Moreover, the analysis will underline the modifications that need to be made to the current food aid system, not only form the international perspective, but also from net food-importing developing countries' perspective, specifying how they should modify their agricultural policy in order to obtain further development.

5.2 Is food aid in danger with the liberalization of the agricultural market?

As explained before, through the Marrakech Ministerial Decision, even the WTO has recognized that the liberalization of the agricultural market can bring disadvantages to net food-importing developing countries and least developed countries.

However, this assumption should not be overestimated. It has been concluded that price increases would be small and would, in fact, only be slowing up the centuries-long downward trend in real grain prices. Nonetheless, the needs of net food importing developing countries are real, and for this reason, compensation or

adjustment possibilities are built into the Marrakech Agreement or could be made of the IMFs Commodity Price Adjustment Facility.

Moreover, it should not be forgotten, that due to the economic advantages that come with free trade, even if grain prices rise and such increases are transmitted to poor farmers in importing countries, rural poverty would be reduced. In most of the cases, people in the developing world would benefit from higher world prices in the sense that higher prices raise conditions of macroeconomic growth, moving above trend employment and income level. In addition, the grain world market moves parallel with other world markets, such as commodity and raw material exports, which are still an important source of income growth and foreign exchange earnings. The point behind these arguments is not to minimize the potential for particular countries to be affected by world price rises, but to sustain that there are better ways to deal with this issue than proposing the isolation of a country from world markets.[252]

5.2.1 Is the current food aid programme the best solution to the problem?

As mentioned before, the main concern of developing countries regarding the issue of food aid is based on the fear that further liberalization will bring higher prices and consequently, a decrease in the quantity of food available for food aid.[253] In order to search for other alternatives for the food aid problem, it would be useful to analyze different flaws in the current system and how these flaws go against the

[252] McCalla, *supra* note 3 at 170.
[253] Kwa, *supra* note 4.

development of least developed countries and net food-importing countries which are the intended beneficiaries of this type of aid.

Currently, the problem of food insecurity rests on the instability of external donors' behavior, and it is based on the strong dependence that some net food-importing countries have on food aid resources. Moreover, a recent study by the ERS Food Security Report shows that the problem of food insecurity is worsening day by day and predictions are terrifying. According to this report, the quantity of food needed to maintain world consumption will increase from nearly 13 million tons in 1999 to 17.4 million tons by 2009, with amounts needed to meet nutritional needs increasing from 15 million to 23 million tons.

The first food aid programmes were introduced in the 1950s. More than fifty years later, the problem of food insecurity persists and is worsening. Although the objective of eliminating poverty remains essentially the same, circumstances have changed and it is necessary to re plan the management of the food aid programmes so that better results can be achieved. The real problem behind these predictions is whether to continue with a food aid programme which is generally based on the provision of food aid from donor to recipient country, or to go a step further and giving more consideration to economic development, investment, trade and poverty reduction. A programme based on this multilateral approach will certainly play an important role in altering the prescriptions mentioned before.

Many authors support the idea that the best way to tackle the problem of food insecurity is through aid in food from donor developed countries to those countries which face, due to impossibility of production, food shortages and which are unable

to import it because of their poor financial and economic situation. However, since the 1960s different authors[254] have sustained that this system is not beneficial to recipients in the long term for different reasons.

The first reason is based on the idea that food aid can work as a disincentive for the agricultural production of the recipient country. Such is the case of some least developed countries and net food-importing developing countries which possess natural resources to produce agricultural inputs, but whose agriculture remains undeveloped because it is always cheaper to buy food from the food aid programme. As Desta says:

> The artificially induced surplus production stockpile in most developed countries has also enabled donors to provide a sizeable amount of food aid to the food-deficit developing countries, so much, so that the growth of local production capacity in most recipient countries has been largely thwarted.[255]

This is the case, for example, of Bolivia or Peru, which possess the labor force and the land to have a high quality production in grain but which satisfy most of their needs by importing through the food aid programme. Moreover, in many of the least developed countries and net food-importing countries which are food aid recipients, a large part of the population is engaged in agriculture. In these cases, it is highly recommended to focus on increasing aggregate growth and aggregate agricultural productivity in order to stop the dependence on food aid.[256] Increasing agricultural productivity is the most efficient and equitable strategy for jump-starting growth in these countries.[257]

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[254] Schultz, *supra* note 235.
[255] Desta, *supra* note 244 at 449.
[256] Christensen, *supra* note 232 at 265.
[257] *Ibid* at 266.

Moreover, it is worth mentioning that, in many cases, food aid to net food-importing developing countries and least developed countries has not be given as a donation, but as a sale for cheaper prices. For this reason, a group of developing countries including the MERCOSUR countries (Argentina, Brazil, Paraguay and Uruguay) and Chile, Bolivia and Costa Rica demand that food aid to net food-importing developing countries be given without commercial conditions and fully in grant form.[258]

However, it should not be forgotten that food aid plays a significant part in reducing food insecurity in net-food importing developing countries and least developed countries. Food aid is a useful tool for reaching poor nutritional groups such as mother and children, who might not benefit quickly from growth and development. Moreover, food aid can play an important role in the transition from relief to development, as in the case of some African countries like Mozambique.[259] However, food aid should be organized as part of a bigger programme for a more effective result.

Food aid alone can interfere with the development of the agricultural industry and economic growth of some of these least developed countries and net food-importing developing countries by acting as a disincentive for local production. The danger in today's food aid environment resides in the fact that the incentive to deliver more food is stronger when world markets are weaker. Consequently, it is

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[258] See WTO, Committee on Agriculture, Special Session, *Export Subsidies – Food Security of Food Dependency? A Discussion Paper Presented by Argentina, Brazil, Paraguay, and Uruguay (MERCOSUR), Chile, Bolivia and Costa Rica, September 27 2000.*, WTO Doc. G/AG/NG/W/38, (2000).

[259] For a description of the food-aid experience in Mozambique, see USAID (1998, page 55-58), Michigan State University, Ann Arbor, Michigan.

essential to target and monitor food aid resources in order to insulate the negative effects of this type of aid.[260]

Second, food insecurity can be solved not only through food aid but also through other types of aid, especially financial aid. In other words, instead of asking for food aid it might be more useful to search for aid for food. If the root of hunger is to be found in poverty, and not in the malfunctioning of world markets, the choice between food and financial aid can be based solely on the basis of efficiency calculations.[261] From an efficiency point of view, the cost of buying food from a food aid programme is always more expensive than buying it from local producers or importing it from other markets. People in these net food-importing developing countries and least developed countries would gain more if they were given the money to buy the food they need in local markets. The idea is clearly expressed by Salomon Reutlinger when he says:

> It is increasingly recognized that malnutrition cannot be prevented by food alone. Aptly, food aid is wastefully used when people have to convert food into cash (because in some emergency situations, the only aid provided is food aid). And finally, aid in kind conflicts increasingly with present day notions about participatory development, the spirit of self-reliance and a growing preference for private over public activity.

In conclusion, food aid means a great help in the fight against food insecurity. However, food aid must be planned and organized as part of a more global programme that ensures the development of the economies of the poorer countries. From an economic point of view, food aid should be integrated in a well planned programme that permits the absorption of commodity resources in times of weaker markets, so as to have stock for times of stronger markets, but using a more

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[260] Christensen, *supra* note 232 at 267.
[261] Reutlinger, *supra* note 231 at 12.

market-based risk-management strategy as a starting point. This new perspective must be taken into consideration not only by the international community through international organizations like the WTO or the World Food Organization (WFO), but also form the national governments of these net food-importing developing countries and least developed countries who have to analyze which real benefits they obtain in their role of recipients. Basically, governments should pay attention to the disincentive role that food aid can play for their economies. Moreover, they must articulate strategies to control the accumulation of commodities in times of abundance, in order to be safe in times of weaker markets. Being independent in this sense, will allow them to participate in world markets and will attenuate the negative effects of trade liberalization in the agricultural sector.

In the case of the international community, and especially in relation to the WTO, the goal of future negotiations should be, on the one hand to find new creative ways to support the liberalization programme while attending to transitional issues – in this case food security - and on the other, to ensure long term growth in least developed countries and net food-importing developing countries.

The following section will discuss which way forward negotiations should take in a future WTO round. Different proposals regarding how much involvement the WTO should take in a future system will be analyzed. Finally, there will be a brief description of the most important issues to least developed and developing countries related to food aid that need to be reconsidered in future negotiations in order to ensure the satisfaction of these countries' interests.

5.3 What approach should the WTO take in future negotiations?

Both the Marrakech Ministerial Declaration and Doha Ministerial Declaration recognized the concern of least developed countries and net food-importing developing countries related to the issue of food security. However, Members demand a modification of the current system. Different and quasi opposed positions can be identified in the different proposals that Members have submitted to the WTO. Two key questions can summarize the different positions: first, which role will the WTO play in relation to food security?, and second, can the WTO reach a balance between food security and rules to minimize the impact of food aid on commodity markets?

5.3.1 Negotiating inside the WTO

One part of the doctrine considers it necessary to link the WTO to food aid issues.[262] Some of these arguments can be illustrated by the different options presented during the negotiations in order to link the two regimes. Some of these options are the "Crop Price Insurance Scheme" proposed by the World Bank to assist low income food importing countries against the risks inherent in world grain markets[263]. Another option is the introduction of a "Compensatory Food Import Facility" financed by developed country exporters of agricultural products but

[262] Desta, *supra* note 244; K. Raffer, "Helping Southern net Food Importers after the Uruguay Round: A Proposal", (1997) 25 World Development, at 1901-1907.
[263] See WTO, Committee on Agriculture "Annual Monitoring Exercise in Respect of the Follow-Up to the Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least Developed and Net Food Importing Developing Countries" (28 November 2000) WTO Doc. G/AG/GEN/46, online: WTO http://docsonline.wto.org/gen_search.asp (date accessed: 10 February 2003).

administered by the WTO[264]. Egypt has proposed a revision and strengthening of the Marrakech Decision and the creation of a fund for net food-importing developing countries and least developed countries. This fund would obtain a rebate on their food import bills after they have purchased their requirements in the open market at unsubsidized prices. The fund would be prominently financed by financial organizations, United Nations agencies, developed country donors and major exporters.[265]

The basic idea that most of these projects have in common suggests that future negotiations must aim at strengthening food aid and other related assistance obligations envisaged by the Decision, and that they should aim at bringing them fully within the scope of the WTO framework itself. This position pursues a guarantee enforcement of whatever is contemplated by the Decision for the benefit of least developed countries and net food-importing developing countries, regardless of the caprice of donor countries. The authors believed that with this type of approach the pains resulting from the process of transition could be more fairly distributed.

Different arguments have been offered in support of the idea of linking WTO to food security. Moreover, as David Leebron has noted, decision among different methods may be influenced in turn by differences among actors as to whether to link.[266] These linking possibilities include: interpretative linkage,

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[264] *Ibid* Raffer.

[265] See WTO, Committee on Agriculture Special Session *Comprehensive Proposal By The Arab Republic of Egypt to the WTO Negotiations on Agriculture* (2001) WTO Doc. G/AG/NG/W/107, online: WTO http://docsonline.wto.org/gen_searchResults.asp (date accessed: 17 February 3003).

[266] See D.W. Leebron, "Linkages, Symposium: The Boundaries of the WTO" (2002) 96 The American Journal of International Law, 5 at 12.

negotiated linkage and membership linkage. In the first case, the linkage is done from the top down by the Appellate Body when it resolves disputes taking food security issues into consideration. In the case of negotiated linkage, food security issues are included in the next round of negotiations and a political agreement emerges to include food security issues. Finally, in membership linkage, membership in the WTO is linked to membership in particular food security regimes.[267]

The last option does not appear as possible in the case of food security as there are different organizations that deal with different aspects of food security. This may be another reason for creating a new organization outside the WTO responsible for world food security.

Regarding interpretative linkage, some negotiators suggest that the WTO could compel donors to respect a minimum level of commitments through the Dispute Settlement Body based on the success of the WTO dispute settlement scheme to date. The WTO's successful turn towards greater legalism has resulted in the best reason to sustain that the WTO is an expanding "constitutional" regime with a trajectory similar to the European Court of Justice.[268]

Finally, the last option left for linking food security to the WTO would be a negotiated linkage. According to this position, food security should be linked to the WTO based on the consequences of the norms of one regime (WTO) for the goals of the other. Trade liberalization through the mandate of WTO Agreements might

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[267] See J.E. Alvarez, "How not to Link: Institutional conundrums of an Expanded Trade Regime, I. Trade and the Environment: Implications for Global Governance" (2001) Widener Law Symposium Journal, 1 at 5.
[268] *Ibid.*

cause a diminishment of the food available for the food aid programme.[269] In this case, food security should appear in the next trade round agenda and it should emerge as a political agreement. However, such a linkage brings into analysis the issue of the scope of the WTO mandate. Following Debra Steger's position in this regard, the WTO's mandate is limited to policies relating to trade; and food security, although related to trade, should not be included in the scope of the WTO's mandate.

The WTO Agreement is today a complex organization in which both developed and developing Members are still learning how to implement and understand the signed Agreements. Moreover, the interpretation and application of the provision by the dispute settlement body has only just begun. Adding new subjects to an already overburdened system might put into jeopardy the very legitimacy and credibility of the trading system.[270] Moreover, the current structure of the WTO needs modification. There are important problems related to legitimacy. In the words of Debra Steger:

> There are institutional problems that make it difficult for the membership to modify or amend the rules of even to take necessary administrative decisions. There is an apparent imbalance between the powers, and the resulting effectiveness, of the "judicial" and "legislative" branches within the WTO system, and that imbalances cannot continue for very long if the system is to be sustained. Indeed, precisely because of this current inability of the organization's political and legislative bodies to act, I believe it would be political folly to introduce new subjects at this time into the WTO's already broad scope. [271]

In conclusion, it seems that using the WTO to attend to the problem of food aid is not the best option. The following part of this section will introduce the idea of forming a new international organization in charge of administering and coordinating food aid programmes.

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[269] Leebron, *supra* note 267 at 12.

5.3.2 A new Institutional Structure for Food Aid

Many authors believe it would be useful to deal with food aid issues outside the WTO. Considering that the mandate of the WTO is to reduce distortions to trade, the whole system of food aid falls outside the scope of its mandate. Moreover, the structure of the WTO does not possess the expertise to handle other issues regarding food aid that do not relate to distortions to trade. Some of these questions include whether or not the level of food aid guaranteed through the Food Aid Convention is adequate, or how to target aid to meet the needs and concerns of recipients and donors, or how to use food aid effectively within a development process. These issues have already been explored by other international organizations such as the World Food Programme or by each country by its development agencies or by private voluntary organizations.[272]

Another point that interferes with the idea of food aid negotiation in the WTO relates to the fact that all of the donors are Members, while not every recipient country is a Member of the organization. For this reason, it is possible that the necessary independence in the treatment of the issue could be violated in favor of the donors. Some authors believe that if the WTO decides to negotiate food aid issues external to trade concerns, it should err on the side of meeting the interests of recipient nations, whose concerns are more pressing than those of donor countries.[273]

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[270] See D.P. Steger, "Afterword: The "Trade and ..." Conundrum – A Commentary Symposium: The Boundaries of the WTO" (2002), 96 The American Journal of International Law, 135 at 140.
[271] *Ibid.*
[272] Young, *supra* note 239 at 22.
[273] *Ibid.*

For these reasons, the creation of a new institutional structure that can integrate all the issues related to food aid has been proposed.[274] This new institution could rest on the food aid expertise that exists in many multilateral organizations and could provide the protocols needed by the WTO without becoming part of the WTO.[275]

Although it is beyond the scope of this paper to say what an optimal institutional structure for food aid should be like, any future project should be based on the idea that one institution must be in charge of both setting the rules and of specifying minimum levels of food, demanding equal involvement of both donors and recipients in order to obtain clear recognition of and respect to the final outcome. This could be a starting point to revert the perception that the WTO has failed to fully implement the Marrakech Decision.

5.3.3 Essential issues to be addressed in future negotiations

Regardless of how future negotiation will be carried out, the following points represent significant issues that will form an important part of the discussion in a future round related to the cause of developing countries and food security.

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[274] *Ibid.*
[275] *Ibid at* 24.

5.3.3.1 Food aid in grant form

As stated, the current system inside the WTO organized the functioning of food aid through the Marrakech Ministerial Decision[276] and whatever was built thereupon by the Agriculture Committee.[277] According to the Marrakech Decision, Members agree to:

> Review the level of food aid established periodically by the Committee on Food Aid under the Food Aid Convention 1986 and to initiate negotiations in the appropriate forum to establish a level of food aid commitments sufficient to meet the legitimate needs of developing countries during the reform programme.[278].

Moreover, Members went further when they declared that:

> And increasing proportion of basic food stuffs in provided to least developed and net food-importing developing countries in grant form and/or on appropriate concessional terms in line with Artic le IV of the Food Aid Convention 1986.[279]

Under the Food Aid Convention of 1999, donors agreed that all food aid through the FAC would be in the form of grants. Moreover, it established that food aid under this Convention provided in the form of grants should represent no less than 80% of a Member's contribution and to the extent possible, Members would progressively seek to exceed this percentage.[280]

Currently, all donors except the US, provide 100% of their food aid on grant terms. The US, however, provide its food aid in grant in a proportion between 83% and 93% between 1995/96 and 1998/99[281]. The rest of the percentage is given

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[276] *Doha Declaration, supra* note 81.
[277] The Committee on Agriculture is an organ created under Article 17 of the Agriculture Agreement to monitor as appropriate the follow up of the Marrakech Decision.
[278] *Doha Declaration, supra* note 81 at para. 3(i).
[279] *Ibid* at para. 3(ii).
[280] See FAC 1999 Article IX(c), online FAO http://fao.org/legal/rtf/fac99-e.htm .
[281] See WTO, Committee on Agriculture Special Session *Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developing and Net-Food Importing Developing Countries (NFIDC): Actions Taken Within the Framework of the Decision as Notified by Members,* (2000) WTO Doc. G/AG/NG/S/4, online: WTO http://docsonline.wto.org/GEN_saarchResult.asp (date accessed: 17 February 2003).

through credit programmes. One of the most important subsidized credits is the PL480, which has a stated goal of promoting US agricultural exports.[282]

The EU has expressed through the voice of Gerry Kelly, Counselor of the Agriculture, Fisheries and Consumer Affairs European Union Commission Delegation to the United States that:

> Europe does not believe that there should be any link between the level of surpluses in developed countries and their food aid donations level. Neither do we believe that food aid should be given on concessional terms. Therefore, in the next WTO negotiations, we will argue forcibly to have the rules on food aid tightened to ensure that food aid is used for the benefit of the recipient, rather than for the farmers of the donor country.[283]

It is advisable to negotiate Food Aid Programmes that give aid in a form that does not constitute a grant in the area of export credit programmes. Negotiations in this direction will meet both donors and recipient countries' desire to eliminate unclear distinctions between food aid programmes and export credit programmes.

Moreover, the declarative character of the Declaration brings no enforceable rights with it, leaving the whole system in the hands of the good will of the donors. The enforcement of the Declaration and a reformulation of the system to ensure food aid is given in grant form is an important issue to be addressed in future negotiations.[284]

5.3.3.2 Food aid recipients

Two types of countries fall within the scope of the Declaration: least developed countries and net food-importing developing countries. The Committee is the organ responsible for deciding which countries are included in these categories.

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[282] Young, *supra* note 244 at 20.
[283] Kelly, *supra* note 24 at 5.
[284] Desta, *supra* note 244 at 456.

The Committee adopted the list of least developed countries of the Economic and Social Council of the United Nations. In the case of net food-importing developing countries, the Committee opted for an objective and subjective criteria and ended up including any developing country[285] Member of the WTO which has been a net importer of basic foodstuffs in any three years of the most recent five-year period, for which data are available, and which notifies the Committee its decision to be listed as a Net Food-Importing Developing Country for the purpose of the Decision.[286]

However, the Committee decided that "being listed would not as such confer automatic benefits since, under the mechanisms covered by the Marrakech Ministerial Decision, donors and the institutions concerned would have a role to play".[287]

Although the text is explicit in that only least developed countries and net food-importing developing countries can be considered as recipients of the aid, the final decision rests on the donors. In this sense, the EU and the US donated 0.5 mmt. and 1.9 mmt. of cereals to Russia in 1999 which is not a target country according to

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[285] In practice, whether a country is developing or not is often answered on the basis of a list maintained by the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD). See as an example, Annex B to the *Food Aid Convention 1999* (done at London, 13 April 1999).

[286] See, WTO, Committee on Agriculture, "Decision by the Committee on Agriculture at its Meeting on 24 November 1995 Relating to the Establishment of a list of WTO Net Food Importing Developing Countries for the Purposes of the Marrakech Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on the Least Developed Countries and Net Food Importing Developing Countries" (24 November 1995) at para. 1 and 3, WTO Doc. G/AG/3, online: WTO http://docsonline.wto.org/gen_search.asp (date accessed: 10 February 2003).

[287] See WTO, Committee on Agriculture, "Summary Report of the Meeting held on 20 -21 November 1995" (19 January 1996) at para. 17, WTO Doc. G/AG/R/4, online: WTO http://docsonline.wto.org/gen_search.asp (date accessed: 10 February 2003).

the Decision.[288] Deviations from the criteria are not punished due to the declarative character of the Decision. As already mentioned, the idea of leaving the enforcement of the mechanism established in the Decision left entirely to the goodwill of donor countries represents one of the greatest flaws of the entire system. [289]

Moreover, in many cases donors have different criteria at the moment of deciding who would benefit from the aid. In the case of the US for example, food aid is conjunctly administered by the US Department of Agriculture (USDA) and by the US Agency for International Development (USAID). According to USAID, emergency programmes must be directed to meeting the critical food needs of targeted populations. However, this criterion seems to be different than the one applied by the EU and the World Food Programme, due to the fact that only 17 out of 45 countries receiving Section 416b food aid are on the list of least-developed and net food-importing developing countries.[290]

Taking into account the problems previously described, it is essential to give a clear definition of who should be considered a food aid recipient. A reform in this sense would give further transparency to the implementation of the programme as well as a uniform concept to be taken into consideration by country Members when applying for the aid.

5.4 Conclusion

Food aid represents today one of the most important concerns of net-food importing developing countries and least developed countries. It is one of the issues

[288] Young, *supra* note 239 at 21.
[289] Desta, *supra* note 244 at 454.

classified as transitional problems and demands a new treatment in a future round. However, it should be borne in mind that the liberalization process in the agricultural sector is not the only cause of current food insecurity.

Food insecurity should be considered a symptom and not a disease. Food insecurity is a manifestation of a deeper problem: poverty and underdevelopment. For this reason, the remedy - in this case food aid - should not be administered independently from other remedies. Food aid must be considered within a plan that supports both development and economic growth in those territories where food insecurity represents a real concern. Food aid alone can even result in a counter productive solution for developing countries. Consequently, developing countries and the international community should re plan the current administration of food aid in order to make sure that food aid is not only benefiting donor countries.

Food aid should be restructured. Currently, there is no single institution that has both the responsibility and the power to effectively coordinate food aid policies between donors and recipients and to address major international crises.[291] There are more than eight international organizations[292] involved in food aid administration and the promotion of agricultural development. The WTO is only one of the many international organizations related to the issue. Although the organization has recognized the possible negative effects that agricultural liberalization might have on food insecurity, it is not clear which role it will play in a future system. Due to the

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[290] Young, *supra* note 239 at 21.
[291] *Ibid.*
[292] Only to mention, there is the World Food Programme; the World Food Summit supported by the FAO; the FAO Consultative Committee on Surplus Disposal, the WTO; the Food Aid Committee of the International Grains Council; and national food aid programmes maintained by the US, the EU, Canada, Japan, and many European countries.

specific mandate of the WTO, its current weak structure and its lack of expertise in other non trade issues related to the problem of food aid, it is not advisable that it should adopt the role of monitoring and administering world food aid. In this sense, it might be a good idea to leave this task to another specific organization, and to rest on the expertise of this organization as it is done on the Codex Alimentarius and the International Plant Protection Organization to develop international sanitary and phytosanitary standards.

6 CONCLUSION

The Agreement on Agriculture promised freer markets for world agricultural products. However, the Agreement did not respond to developing countries' expectations regarding the reductions in subsidies and better opportunities for market access. The most important achievement of the Agreement on Agriculture was the introduction of Article 20 that encourages further negotiations towards the liberalization of the agricultural sector. The Agreement was focused on three areas: domestic subsidies, market access and export support. The commitments on these areas need to be re-examined in a future round. Apart from these three main areas, a future round will also have to attend to other issues that are not directly related to trade. These non-trade issues might result in new modern barriers to trade that might diminish the gains of freer markets. If developed countries use non-trade concerns to justify more generous domestic support in a non-decoupled way, it may do as much harm to international trade as the traditional trade policies instruments did in the past. Such undesired behavior from the developed world is possible due to the inability of current WTO norms to control these new problems.

In the case of SPS measures, the SPS Agreement should be modified in order to address the significant problems faced by developing countries when approaching these types of measures. As described in chapter two, the SPS Agreement does not ensure market access for developing countries' agricultural exports. Reforms must aim at preventing evasion of the SPS disciplines through a misuse of the flexibility inherent in the SPS Agreement. Similarly, proper financial and technical support

will help developing countries in complying with SPS measures in the developed world.

Moreover, developed and developing countries must also modify their behavior in order to increase the benefits of the SPS Agreement. Developed countries must be aware of the needs and special circumstances of developing countries and help them by minimizing whenever possible, incompatibilities with the systems of production and marketing applied in developed exporting countries. At the same time, it is essential that developing countries implement institutional structures that help agricultural producers to comply with the SPS requirements of the developed countries' markets.

Regarding GMO, the uncertainty regarding health safety in long term consumption of these products turns them into a valid point for restricting the importation of these products to the territory of any Member state. Such a decision will surely be supported by consumers who feel that their rights are not directly protected by WTO principles, and consequently demand protection from their governments.

Future rules should be written taking into consideration two different interests. Consumer groups demand information regarding the food they consume. Net food- exporting countries demand clearer rules when restricting trade of GMO foods in order to avoid the application of measures with the sole purpose of protecting domestic production.

One possible solution to this problem might be solved by the application of labelling plans that provide nutritional information for consumers. However, it is

strongly advised that international standards are organized that provide transparent and unequivocal rules to guide the way each Member country should delineate its own labelling plan.

Regarding net food-exporting developing countries, their main concern is related to possible disguised barriers to trade by importing countries when banning imports based on GMO products. Currently, the only tool available to protect these countries against protectionist interests is the SPS Agreement. Nevertheless, the Agreement has its own flaws as previously discussed in chapter 2. These flaws, added to the peculiar characteristics of GMOs, make it difficult to guarantee the proper functioning of the Agreement rules for the protection of developing countries' interests. The issue should be dealt within a near future to avoid chaos in the trade of these products.

Finally, food aid, one of the most widely discussed transitional issues, demands a new treatment in a future round. A departing point can be a clear understanding of the role of world markets in food availability. Moreover, it is necessary to understand that food insecurity is a manifestation of a deeper problem. Food aid must be considered part of a plan that supports both development and economic growth in those territories where food insecurity represents a real concern. Food aid alone can even result in a counter productive solution for developing countries.

Food aid needs to be restructured. Currently, there is not a single institution that has both the responsibility and the power to effectively coordinate a food aid

policy between donors and recipients and to address major international crises.[293] The WTO must decide which role it will play in a future system. Due to the specific mandate of the WTO and its lack of expertise in other non trade issues, it is not advisable that it should adopt the role of monitoring and administering world food aid. It might be advisable to leave this task to another organization with experience in food aid.

For all the reasons explained above, future negotiations should aim at preserving every Member's interests. This thesis is focused on the interest of developing countries, taking into consideration the different needs that each group of developing countries has and how they can be solved. Developing countries need to trust world markets and believe that a rule-based system will protect them from the unilateral predatory actions of larger countries or big multinational firms. However, developing countries should also work hard internally to be able to profit from the benefits of free trade. Developing countries should focus their economies and technical assistance funds on concrete support to the rural infrastructure and agricultural research and development. Governments should start by discarding the adverse practice of super taxing their agricultural sector. Developing countries should continue the process of liberalization of their economies and they should work towards intellectual property law enforcement that would enhance the prospects for both transfer of new biotechnologies and their development locally. The combination of governmental policies that build support for free trade and a responsible and unselfish attitude from the developed world in the international

[293] Young, *supra* note 239 at 21.

forum is the only true exit from the scanty results of this first stage in the process of liberalizing the agricultural market.

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