Implications of the Uruguay Round Agreement for South Asia
The Case of Agriculture
Implications of the Uruguay Round Agreement for South Asia: The Case of Agriculture

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132 Box 1. How liberal are India's imports?
Reducing poverty and eliminating hunger are among the most fundamental challenges the South Asia region faces. For the past decade, South Asia has been the second fastest growing region in the world, after East Asia, with an average annual growth of 5.3 percent. Despite this, South Asia is home to 40 percent of the world’s poor, with more than 500 million people living below the international poverty line of US$1 a day.

With more than three out of four of the region’s poor people living in South Asia’s rural areas, reducing poverty and ending hunger will require focused attention on the rural economy. Agriculture and associated trade reforms have been uneven, and emphasis must be given in the future to policies that raise agricultural output and rural employment and earning opportunities.

Despite their differences, South Asian rural economies share common constraints. In all countries and despite some recent progress, there is a need for substantial improvement in a policy environment that remains characterized by large distortions in commodity as well as factor markets, particularly water, fertilizer, land, and rural credit. The natural resource base (land, water) is critically constrained by high population pressures, and increasingly faced with competing demands from agricultural, industrial, urban and residential users. Poorly functioning institutions at federal, state/provincial and local levels contribute to the inefficient utilization of often large public outlays for rural development: safety net and nutrition programs tend to be poorly targeted and ineffective; the access to and quality of basic human services (education, health, sanitation) and infrastructure (rural roads, water supplies and electricity) in rural areas are typically poor.

Recognizing these challenges, the World Bank has adopted a broad rural focus as opposed to a narrow agricultural one and is placing greater emphasis on rural development that emphasizes the entire rural productive system and the sustainable management of its natural resources, integrated with human capital, infrastructure, and social development.

In this context, the World Bank is launching the South Asia Rural Development Series. The series, which will focus on both country-specific and cross-regional issues, is part of the Bank’s wider efforts to share and disseminate knowledge and ideas, stimulate in-country dialogue, and contribute to the already-rich debate on overcoming the challenges facing the rural economy in South Asia.

Initially, the series will cover agricultural trade and price policies in South Asia, examining the implications of the Uruguay Round on South Asia’s agriculture; and in the case of India, the performance of selected agricultural commodity markets, and of water management. Over time, the series will grow to include other regional and country specific themes.

Mieko Nishimizu
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Preface

With the conclusion of the Uruguay Round, and the entry into force of its Agreement on Agriculture on 1 January 1995, the World Bank and the Food and Agriculture Organization of the United Nations (FAO) continued their collaboration in a series of jointly sponsored workshops, held on a regional basis, on the implications of the Round for agriculture.

The workshops are designed to bring together senior national agricultural policy decision makers and administrators, to familiarize them with the implications of the Uruguay Round for the agricultural sector and to enable them to exchange experiences on the problems and challenges that the outcome of the Round pose at national level. In these endeavours, FAO and World Bank staff enjoyed the close collaboration and participation of staff of the World Trade Organization (WTO) and of national experts with detailed knowledge of the national agricultural policy settings in Bangladesh, India, Nepal, Pakistan and Sri Lanka, all of whom contributed detailed papers for the Workshop.

This volume brings together the main papers presented at a workshop, which covered South Asia and was held in Kathmandu, Nepal, during 22–24 April 1996. We hasten to add, however, that to keep the report to a relatively modest length, a great deal of supplementary and background material made available to the meeting, had to be excluded. We entrusted this task, of selection and editorial oversight, to Mr R.J. Perkins, formerly Director of FAO's Commodities and Trade Division, and take this opportunity to thank him for undertaking this role.

The volume has four main sections. The first one comprises overview papers prepared by the International Economics Division of the World Bank and the Commodities and Trade Division of FAO, covering global policy issues, the implications for world agricultural commodity markets, and specific issues of an agricultural policy nature for the countries of the South Asia region, arising from the Uruguay Round.

Section II reviews the key components of the Uruguay Round Agreement on Agriculture, notably those on domestic support, export subsidy and market access commitments, coupled with discussion of the main aspects of the WTO’s multilateral review process and dispute settlement and of the Round’s outcome on domestic taxes and administrative and technical barriers to trade on goods and services. This section concludes with a review of the impact of the WTO on Codex Alimentarius, a key feature of the Round’s Agreement on Sanitary and Phytosanitary Measures.

Section III of the present volume presents detailed papers on the market implications of the URA for selected commodities of importance to South Asia. These complement the brief commodity market reports summarised in Section I, and cover rice, sugar and fibres markets. Finally, in Section IV the five main country case studies are presented, covering Bangladesh, India, Nepal, Pakistan and Sri Lanka.

We hope that the present volume both provides a record of the main dimensions discussed at the workshop held in Kathmandu, and will serve as a frame of reference for the participants and others in South Asia charged with agricultural policy formulation and implementation in the wake of the Uruguay Round. We also hope that agricultural policy decision makers, particularly in developing countries in other regions that face similar challenges of adjusting their agricultural sectors to meet rapidly changing global market conditions, will benefit from the experiences of the South Asia economies covered in this volume.

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Overview of the Impacts of the Uruguay Round: Global and South Asian Dimensions
Overview of the Global Impact of the Uruguay Round and Lessons from Early Reformers

Alberto Valdés*

I. Background

The Uruguay Round Negotiations were the most sweeping multilateral attempt at trade liberalization in agriculture. The agreement reached in December 1993 contains a result which, though modest compared to the expectations of substantial reduction in agricultural distortions, does bring agricultural trade under GATT disciplines establishing a new set of rules for the sector. The most radical departure from previous GATT rules is that from the first year of implementation, nearly all border protection is to be provided by bound tariffs (instead of quantitative restrictions). Moreover, countries undertake specific commitments subject to GATT discipline on domestic levels of support and exports subsidies. The specific provisions of the Agreement are discussed in later chapters.

The Uruguay Round Agreement (URA) also changes the domestic policy options faced by countries, distinguishing among those which are discouraged and those which are acceptable. Since 1985 many developing countries have embarked on a unilateral process of trade liberalization and price policy reforms which in most cases include agricultural products. Thus, many of them are currently in the process of adjusting their own trade regime in light of their own reforms while simultaneously adjusting to the new rules established by the URA on agriculture. This is also the case with transition economies which have recently joined GATT, such as the Baltic republics, central America, and the countries of central Europe.

These changes will have an impact on the world market, including the level and stability of world prices which will need to be understood in the reform of agricultural policies. New institutional arrangements, including stronger dispute settlement procedures, also will impact on developing country trade policy choices. The relationship between regional and multilateral trade arrangements is also becoming clearer in the wake of the UR. The environment in which agricultural policy will have to be set in the future will be markedly influenced by these developments in the international arena.

This paper is organized as follows: Section II presents a brief overview of recent assessments of the global impact of the URA, with emphasis on the potential effect on world prices. Section III examines a synthesis of price trends in world food markets. The objective of these two sections is to discuss the potential changes in the global environment

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in which developing countries operate. Section IV presents some observations regarding early reformers, the case of Latin America in the early 1990s.

II. The potential changes in the global trade environment

Although the principle of trade liberalization has gained wide acceptance in recent years, many policy makers in developing countries are exploring temporary import restrictions in the form of additional tariff protection to insulate domestic farmers from the impact of depressed prices until the Uruguay Round accord leads to higher world market price for agricultural products.

It is argued that world food prices are artificially low, mainly as the result of protectionist policies of industrialized countries. Local farmers cannot be left alone to compete against the treasuries of rich industrial nations; they must be protected from artificially low world prices. This argument for protection receives its economic logic from the widespread belief among policymakers that world prices will turn sharply upward once the Uruguay Round accord is fully implemented. The URA, according to this view, will compel industrial countries to lower their rates of protection to farmers and to eliminate export subsidies over time. Protection is therefore only temporarily needed until food prices rise.

Are the advocates of protection right? Are prices in world food markets only temporarily depressed?

The impact of the Uruguay Round on the agricultural sector of a country needs to be assessed at two levels. The first is the specific impact on agricultural trade, world prices and the economic welfare of the sector. The second level is the macro economic impact of the Uruguay Round as a whole on world economic growth and international trade and the consequences of those global developments for the agricultural sector.

As a general proposition one can argue that developed countries subsidize their agricultural sectors by protecting them from import competition and subsidizing exports into world markets. The consequences of these policies are to increase domestic production, contract domestic consumption and therefore reduce import demand or increase excess exportable supplies, thereby putting downward pressure on world prices. It would follow then that liberalization which reduced domestic distortions should put upward pressure on world prices.

On the other hand, developing countries (and the formerly Centrally Planned Economies) tend to tax agriculture (particularly their export subsector) and often subsidize urban consumers (Schiff and Valdés, 1992). The consequences of these policies would in general be the opposite of the developed countries, namely to contract domestic production and expand domestic consumption. The result would be smaller exportable surpluses and larger import demand, thereby putting upward pressure on world prices. It should therefore follow that liberalization in developing countries which reduced domestic distortions would increase production and decrease consumption, therefore putting downward pressure on world prices.

These contradictory general positions in fact are borne out by global modeling efforts that have included liberalization in both developed and developing countries. Such models produce small price changes (Valdés and Zeitz, 1990; Anderson and Tyers, 1990 and Tyers and Anderson, 1992). More recent analysis — OECD, IIASA, FAPRI, RUNS, etc., suggests that liberalization of the sort proposed in the so-called Dunkel draft would produce modest — 4 to 12 percent — increases in world prices for most staples such as wheat, rice, coarse grains, sugar and dairy (Valdés and Zietz, 1995). These results were premised on most of the liberalization occurring in developed countries.

The actual outcome of the Round as described by Anania et al (1994) was an even more modest liberalization for agriculture than the Dunkel proposal with developing countries subject to even less discipline than the developed countries. Post Marrakesh analysis therefore suggests even more modest increases in prices, 0 to 5 percent (Goldin and van der Mensbrugghe, 1995; FAO, 1995, etc.).

When considering the impact of such price increases on individual countries, one must distinguish whether a country is predominantly an exporter or an importer of agricultural products and, more precisely, which products a country exports and which it imports. Therefore, the consequences for exporters of agricultural commodities is modestly improved market access and prices slightly higher than the long term trend of decreasing real commodity prices that has prevailed for most of this century. For food importers, the consequences of higher import prices, although modest in percentage terms, could have significant balance of pay-
ments impacts where food imports are a significant part of the import bill. A further implication of the Round will likely be a reduction of stocks in developed countries which could have implications for global market stability in the case of significant supply and demand shocks. Nevertheless, the overall effect of the Agreement should be to increase long term world market price stability. A second consequence of reduced stocks, coupled with aid fatigue, may be reduced availability of food aid. Rising grain prices increase the opportunity cost of food aid to donors. Given that most developing countries are food importers, the global consequences of the Round for the poorest among them could well be more negative than positive in the short run.

Finally, the issue of special and differential treatment of developing countries deserves comment. The lowering of the levels of protection by developed countries on an MFN basis means by definition that the margin of preference for developing countries under, for example, the Lomé Convention and the Caribbean Basin Initiative are reduced.

The macro consequences of the Round for agriculture are also modest but potentially positive. Goldin and van der Mensbrugghe (1995) estimated small but positive gains in income as a result of the Round, although most of it occurs in developed countries. But on the broader front, overall global growth enhancement resulting from the Uruguay Round package would have positive effects on developing countries as a group. The implementation by developed countries of further reductions in industrial tariffs, the abolition of the Arrangement Regarding International Trade in Textiles (MFA) and the eventual opening of developed countries' agricultural markets, all represent positive potential gains for developing countries. In the longer run, it is the improved set of rules for agricultural trade and the overall positive impact on global growth and trade that may have more positive implications for agriculture in the developing countries than the short term agricultural liberalization per se.

III. Price trends in world food markets

The secular decline in the real prices for key agricultural commodities has persisted since the turn of the century, and especially for maize, rice, and wheat since the early 1950s. As shown by Grilli and Yang (1988), between 1900 and 1986, the decline has been 0.35 percent annually for food, 0.82 percent for nonfood agricultural products, 0.68 percent for cereals, and 0.54 for nonbeverage foods. Only tropical beverages prices have increased in real terms (0.63 percent per year). Mitchell and Ingco (1993) identify a 78 percent decline in real world food prices between 1950 and 1992, a 1.3 percent annual decrease. Similarly, Tyers and Anderson (1992) calculate a downward trend of about 0.5 percent per year between 1900 and 1990 for the traded staples including grains, meats, dairy products, and sugar. These trends are largely confirmed in a disaggregated study by Cuddington (1992).

Among commodity specialists (e.g., Mitchell and Ingco, 1993) world prices of agricultural commodities are expected to continue to decline in real terms, although prices of some commodities may recover somewhat from the below-trend values of 1989-91 (Tables 1 and 2). Such forecasts, however, are subject to considerable uncertainty due to unknowns in four arenas — production levels in Eastern Europe and the former Soviet Union, China's potential and positions on trade, the extent of trade liberalization by developing countries, and the "black box" role of future gains from technology.

(a) Eastern Europe and the former USSR: untapped potential. Given the right conditions, countries of Eastern Europe (such as Romania) and in the former Soviet Union (such as the Ukraine) could become net exporters of several agricultural products in less than a decade. In fact, Kazakhstan has already edged out Argentina as the world's fifth leading exporter of wheat. In the short run, net exports are already rising, because food consumption within several of these countries is falling due to a continuing decline in real incomes and lower food subsidies. Greater supply puts downward pressure on world market prices. The longer-run supply response, however, is more uncertain, depending on whether severe institutional and political impediments to agricultural production and productivity are removed in years to come.

(b) China: huge swings possible. China's economy is growing rapidly, and with growth, the agricultural sector is being transformed. Higher incomes are inducing customers to shift from grain products with low income elasticities to livestock products with higher income elasticities. How such behavioural shifts will affect China's import demand for major food products is subject to debate. Projections vary considerably, and the differences highlight China's potential impact on world prices. For wheat, two estimates suggest that China could become a major importer, with imports of 33-46 million tons. In a world market that trades only 110 mil-
Table 1. Price Trends: Predicted percentage changes in real world prices of temperate zone products (year 2000 relative to base year)

<table>
<thead>
<tr>
<th>Study</th>
<th>Base Year</th>
<th>Wheat</th>
<th>Maize</th>
<th>Rice</th>
<th>Beef</th>
<th>Sugar</th>
<th>Soya</th>
<th>Soyoil</th>
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<tr>
<td>(high demand)</td>
<td>1987</td>
<td>2.2</td>
<td>9.2</td>
<td>18.8</td>
<td>—</td>
<td>—</td>
<td>-5.5</td>
<td>—</td>
</tr>
<tr>
<td>(low demand)</td>
<td>1987</td>
<td>-21.3</td>
<td>-15.2</td>
<td>-19.9</td>
<td>—</td>
<td>—</td>
<td>-33.1</td>
<td>—</td>
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<td>World Bank (1992)</td>
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<td>-46.9</td>
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<td>-18.2</td>
<td>8.0</td>
<td>35.1</td>
<td>-4.5</td>
<td>-5.4</td>
</tr>
</tbody>
</table>

Notes: Current dollar price level forecasts for the year 2000 are taken from each study, then converted into real percentage change terms using the U.S. GDP price deflator. Forecasts of the U.S. GDP price deflator are from FAPRI, Iowa State University, 1993 (p. 18).

China is likely to rely on world agricultural markets only if it can expect both security of supplies (i.e., food is not used as a political weapon by other countries) and secure market access for its manufactured products. If these conditions are not met and China withdraws from world food markets, world prices may be substantially affected. For example, if China were to stop importing grain for po-

Table 2. Price Trends: Predicted percentage changes in real world prices of tropical products (years 2000 and 2005 relative to base year)

<table>
<thead>
<tr>
<th></th>
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<td>Tobacco</td>
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<td>Rubber</td>
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<td>-15</td>
</tr>
<tr>
<td>Bananas</td>
<td>-23</td>
<td>-23</td>
<td>-25</td>
<td>-25</td>
</tr>
<tr>
<td>Cocoa</td>
<td>-62</td>
<td>6</td>
<td>-59</td>
<td>16</td>
</tr>
<tr>
<td>Coffee</td>
<td>-52</td>
<td>23</td>
<td>-54</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Based on individual year projections in World Bank (1992).
political reasons, a scenario examined by the Australian Bureau of Agricultural and Resource Economics, the world market price of wheat could fall by 25 percent. In reality, the world price of sugar dropped in 1989 in the aftermath of China’s political crackdown on the pro-democracy movement, when sugar imports were curtailed sharply and domestic rationing was introduced.

(c) Developing countries: how much liberalization? Trade policy reforms in developing countries, such as those currently pursued by many Latin American countries, affect agricultural production and are, therefore, likely to influence world food prices. In the past, most developing countries taxed agriculture, directly through export taxes and the operation of marketing boards and indirectly through protection of industry and an overvalued exchange rate. Total taxation of agriculture has been substantial. For a set of 18 countries examined in detail as part of a wide ranging World Bank study on agricultural pricing policies, estimates average more than 30 percent for the years 1960 to 1984 (Schiff and Valdés, 1992). Indirect taxation, in particular through industrial protection and exchange rate overvaluation, is the dominant factor, with an effect on prices nearly three times that of direct interventions in agriculture through taxation of exportables or protection of importables.

Removal of these high levels of direct and indirect taxation facing agriculture in many developing countries is likely to have a significant impact on domestic production, consumption, and consequently, on trade flows. According to quantitative assessments by Anderson and Tyers (1990), Zietz and Valdés (1990), and Tyers and Anderson (1992), which make use of the findings reported in Schiff, and Valdés (1991–92), world prices could fall considerably for a number of key agricultural products. In this context, liberalization by developing countries would have just the opposite effect on world food markets as liberalization by industrialized countries. In fact, the impact of increased production due to liberalization by developing countries could effectively neutralize the upward price movement in most major temperate zone products (outside of beef and dairy) that is expected from liberalization by industrialized countries. A similar point is made by Borrell and Duncan (1992) for sugar and by Brandão and Martin (1993) for rice and tropical beverages.

Trade liberalization, however, is not the only likely scenario for some developing countries. Middle income countries in the midst of industrialization may opt for protectionist policies toward agriculture that are similar to those of industrialized countries (Zietz and Valdés, 1993). This is quite likely for developing countries without a comparative advantage in agriculture; The Republic of Korea and Taiwan Province provide recent examples. Other countries such as Colombia, Venezuela, and others may follow suit. Such protection could result in world market prices that are even lower than they are now as a result of protectionism by industrialized countries. Whether such policies can be avoided is difficult to assess. The Uruguay Round offers hope in this respect because it commits developing countries outside the group of least developed countries to trade liberalization in agriculture, although on a lesser scale and with a longer phase-in period than for industrialized countries.

(d) Technology: more to deliver? Can biotechnology trigger another green revolution, possibly more profound than the agro-chemical revolution of the 1960s and 1970s? Will genetic engineering make it possible to accelerate the development of plants and animals with new desirable characteristics, such as resistance to pests and diseases? Long-term global agricultural production and productivity may hinge on such outcomes. Already positive signs are emerging. By the mid–1990s, new genetically engineered rice varieties are expected to reach farmers. Large productivity gains are forecast for vegetables. Not only will spoilage be reduced, but vegetables will also be grown on less land and with fewer inputs. Some progress has also been made in wheat, but due to a more complex genetic structure, new varieties are not expected before the turn of the century. Productivity gains for tree crops such as cocoa, coffee, and palm oil should be substantial before the year 2000 (Mitchell and Ingco, 1993).

The quest for environmentally safe production techniques is increasingly on biotechnology’s agenda, especially in industrialized countries which use fertilizers and pesticides most heavily. New markets for higher value-added products that appeal to the environmentally aware consumer could open up, and farmers producing them could survive or even prosper without protectionism. World agricultural markets would also be affected considerably if agricultural raw materials are used as inputs in industrial production processes, such as fuels or chemicals.

The precise nature and especially the timing of this hoped-for second green revolution are unknown, so technology’s impact on world prices remains a wild card (Brown and Goldin,1992, chapter 9).
IV. Some observations from early reformers: Latin America during the early 1990s.

The implications of the Uruguay Round for the design and implementation of domestic agricultural policies for developing countries are clear when the three major areas in which negotiations were focused are considered: import access; export competition; and domestic support. A separate agreement on sanitary and phytosanitary measures is also an important dimension for the developing countries. Each of these topics is the subject of a presentation during this workshop.

A brief discussion at this stage of the emerging issues during the transition of an early reformer could be useful. Latin America is a trade region which implemented a bold programme of unilateral domestic trade liberalization (including agriculture) ahead of the adoption of the URA in April of 1994.

After decades of protectionism, most of Latin America began to open up their economies in the late 1980s, effectively putting an end to four decades of import substitution policies. Before most countries relied on quantitative restrictions (QRs) and, in most cases, high tariffs to protect the production of importables. The high protection resulted in a substantial misallocation of resources, discouraged the growth and diversification of exports, and did not improve the distribution of income. For agriculture, one of the most striking findings was the extraordinary indirect tax on agriculture from industrial protection and macroeconomic policies and the evidence that this high taxation was associated with low growth for agriculture and the economy (Schiff and Valdés, 1992).

(a) Current trade and price policies in Latin America in the context of the Uruguay Round Agreement. Two historic characteristics of agricultural trade policies have been their discretionary and selective nature, and the lack of transparency. Both characteristics are largely the result of the prevailing use of QRs, for example, quotas, licenses, and state trading. QRs are more selective and less visible than tariffs, and thus replacing QRs with tariffs has important advantages. First, tariffs are more transparent and the role of the price mechanism is enhanced. As long as the tariff levels are not prohibitively high, a great merit of tariffs is that they expand the number of global participants in the adjustment to world price changes and, as a consequence, the variability of international prices should decline. Second, tariffs generate government revenues. The latter is especially crucial for some developing countries because it removes one of the obstacles to the removal of export taxes in countries where such taxes are used as a source of government revenues. Thus, the adoption of a new set of rules under the URA, in which nearly all border protection is provided by tariffs (instead of QRs), and the commitment to further reduce all tariffs represent a major achievement towards a more open and transparent agricultural trade and price regime.

(b) The situation in Latin America. During the late 1980s and early 1990s, most countries in Latin America began a unilateral process of trade liberalization with bound tariffs, eliminating QRs, and also removing export taxes. In a very real sense, trade liberalization for agriculture in several countries of the region went ahead of the Uruguay Round.

Although in most countries export taxes and quotas were eliminated, the issue of tariffification of agricultural importables has emerged as a more difficult one than for manufactured goods. While the policy changes are still very recent, in several countries one observes the prevalence of a sort of 'dirty' tariffication, that is, the presence of tariffs accompanied by minimum import valuation on some products, variable levies on others, and more frequent use of safeguards and sanitary and phyto-sanitary rules to restrict imports. The movement towards tariffication makes the potential conflict between the desire for more transparency and non-discriminatory tariffs and (for some products) the presence of some highly subsidized and unstable border prices more evident.

This border price instability problem is compounded by developments in much of Latin America during the late 1980s regarding: (i) the extension of trade preferences under bilateral or regional free trade agreements; and (ii) the loss in competitiveness (and the increasing pressure for protection as result of the decline observed in the real exchange rate (more on this below).

In order to throw some light on the evolution of the trade reforms as it affects agriculture in the region, this section (i) looks at the current status regarding tariffs and quantitative restrictions, (ii) examines the commitments by these countries under the URA regarding the tariff bindings on commodities not previously subject to bound tariffs, and (iii) presents some observations regarding the current debate on
The recent reforms do not remain unquestioned in some countries.

(c) The current status regarding tariffs and QRs. Table 3 presents a synthesis of the tariff levels and QRs for the sample of countries during 1993–1995. Chile is the simplest case to describe; its trade policy has no export taxes, no QRs, and provides a uniform rate of protection with a tariff at 11 percent for all products, including capital goods, intermediate inputs, and final products. The exceptions (outside the highest price automobiles) are three agricultural products (wheat, sugar, and oilseeds) which are subject to a price band system linked to border prices and not to a domestic reference price.

Brazil has greatly simplified its trade regime, moving towards tariffication, eliminating most QRs and removing export taxes and quotas (except for sugar). Tariffs range from 6 percent to 13 percent, and several products are still subject to domestic price supports under the Minimum Price Program.

The Dominican Republic still maintains import licenses and state trading, and tariffs range between 5 percent and 25 percent. Comparing these tariff levels with the observed NPRs for importables it is clear that QRs are still effectively restricting imports far beyond that explained by the tariff levels.

Colombia started a bold programme of trade liberalization in 1991, removing QRs (primarily licenses, surcharges, the legal monopoly on imports by a state agency), as well as removing export taxes, and lowering tariffs. However, various types of import restrictions have emerged, and today its scheme of tariffs ranging between 10 percent and 30 percent is 'complemented' by a scheme of price bands on most importables (a variable levy in addition to the basic tariff), a complex system of purchase agreements between processors and farmers (and a lower import duty for residual imports), and a price guarantee for some products.

Ecuador applies a system of price bands similar to that in Colombia, in addition to tariffs of 20 percent. Its traditional exports remain subject to export taxes (or a quota in the case of cocoa).

Paraguay remains one of the few countries in the region where import and export licenses are applied to sensitive products (cotton, soybeans, sugar, and wheat).

Argentina has tariff rates ranging from 6 to 15 percent. Wheat for use as seeds has a minimum tariff of 6 percent, otherwise it has no tariff but is subject to an import quota, import licensing and a minimum export price of US$145/ton. Beef currently has an export subsidy of 3 percent.

Uruguay seems to have high tariff rates on many products. Tariff rates range from 12 percent to 36 percent. Beef is subject to an export quota to Europe and it is likely that under GATT there will be a similar arrangement for exports to the U.S. Tobacco receives minimum price support which is financed by taxes on cigarette consumption. One should note, however, that the information provided is for 1994. The figures for 1995 are pending and are different from those reported for 1994.

(d) Tariff binding commitments under the Uruguay Round Agreement. Table 4 presents the market access commitments to the World Trade Organization under the URA. The table contains two columns for each country. The first is the tariff equivalent that actually prevailed during the base period (1986–1988) as reported by the governments to the WTO. The second is the tariff ceiling applicable on imports as committed under the WTO. Developing countries had the option of establishing ceiling bindings (maximum tariff level) on products not previously subject to bound tariffs.

Three observations emerge. First, a sharp contrast exists between countries which bound tariffs at relatively low/intermediate levels in most countries versus Colombia that bound at exceedingly high levels. By contrast, Argentina and Chile opted for a more open trade regime. Second, a relatively modest dispersion between commodities in the bound tariffs is observed for most countries with the exception of Colombia. Third, the phenomenon referred to as “dirty tariffication” did occur among some of these countries, which reported tariff equivalents above the actual levels during 1986–88. The base tariff equivalents observed for Colombia, for example, are considerably higher than the actual tariff equivalent measures available for those years.

(e) Falling real producer prices soon after the initiation of trade and price reform: an exchange rate, border prices, or trade liberalization phenomena? Agricultural trade reform is becoming a contentious issue in several countries in Latin America, because the trade and price reform is taking place against a backdrop of stress on profitability experienced by agriculture. This phenomenon (reflected in a decline in (real) farm prices in domestic markets) has led
**Table 3. Current Status on Tariffs and Quantitative Restrictions on Agricultural Trade, 1994**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Argentina¹</th>
<th>Brazil</th>
<th>Chile</th>
<th>Colombia</th>
<th>Dom. Rep.</th>
<th>Ecuador</th>
<th>Paraguay</th>
<th>Uruguay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>US$.05 per box</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banana</td>
<td>10, 1¹, MPS, PLE</td>
<td>25, ML, MPS²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td>10, 0⁰</td>
<td>1</td>
<td>20⁴</td>
<td>20</td>
<td>20, EQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocoa</td>
<td>10, 1⁰</td>
<td>MPS⁵</td>
<td>1⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>MPS⁶</td>
<td>15¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>6,3,5⁶</td>
<td>6, 13¹, MPS, PLE</td>
<td>10</td>
<td>ML, EL¹</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grapes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>80⁰</td>
<td>8, 13¹, MPS, PLE</td>
<td>20, PA¹, PB, MPS²</td>
<td>5, ML</td>
<td>20, PB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>12-14, 0⁰</td>
<td>1</td>
<td>65, PB</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Palm Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>10, 0⁰</td>
<td>10, 1¹, MPS, PLE</td>
<td>20, PA¹, PB, MPS²</td>
<td>20, ML</td>
<td>20, PB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorghum</td>
<td>80⁰</td>
<td>30, PA¹, PB, MPS²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>8, 3,5</td>
<td>8, 13¹, MPS</td>
<td>15, PA¹, PB, MPS²</td>
<td>20, PB</td>
<td>ML, EL¹</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sunflower</td>
<td>8,3,5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>16</td>
<td>16, 1¹, EQ</td>
<td>11</td>
<td>ST, ML, EL, EQ, MPS</td>
<td>36¹, MQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>10, 0, MQ, ML, MPS²</td>
<td>10, 1, MQ, MPS, PLE</td>
<td>11, PA¹, PB</td>
<td>15, PA²</td>
<td>MQ, ML, EL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explanatory Notes:**

The first number is the Tariff Rate and the second is the Export Tax.

- MPS = Minimum Price Support
- PLE = Trigger or call price
- EQ = Export Quota
- MQ = Import quota
- ST = State Trading
- PB = Price Band
- EL = Export license
- ML = Import license
- PTQ = Preferential Tariff quota
- PA = Procurement agency with no legal monopoly on purchases or trade

a. Data for Argentina is for 1995, that is after MERCOSUR has been implemented.

b. Until May 27, 1994 beef containing bone was subject to an export tax of 5%, after that the tax was 0%.

c. This is a non-rebatable value-added tax (ICMS), thus, it is the implicit export tax.

d. This is not state trading with respect to exports or imports, but rather a procurement agency for a small percentage of output.

e. Exports of beef are subject to an export subsidy (CERT).

f. Exports of coffee are subject to an export tax.

g. For each ton of maize and sorghum bought in the domestic market, processors and importers are granted a license to import another ton. In addition, they obtain a tariff reduction.

h. INCOPRE (Marketing Board) established a price support; however, it was below market price.

i. There was no export tax, but exporters had to surrender foreign exchange to the Central Bank.

j. All exports have to be negotiated through the Commodity Exchange.

k. Prices are controlled by an association of export companies.

l. If used as seed the tariff rate is 0%; otherwise the rate is as stated.

m. Within MERCOSUR the tariff rate is 56%. However, this rate is currently under revision.

n. As of January 1995 the implementation of MERCOSUR has taken place. MERCOSUR includes Argentina, Brazil, Paraguay and Uruguay. The common external tariff is 10% for beef, rice, and wheat, 6% for cotton, 8% for maize, sorghum, soybeans and sunflower and 12-14% for milk. Sugar has been kept outside MERCOSUR agreement. Inter-Mercosur trade is duty free.

o. Export subsidies are 3% for beef, 5% for cotton, 8% for milk and tobacco and 2.5% for wheat, corn, rice and sorghum.

Source: A. Valdès, Surveillance Project 1996.
to intensive pressure for protection for import-competing subsectors.

The analysis on the evolution of real producer prices (table 3) shows that between 1986 and 1995 all major agricultural producer prices declined (in real terms) in all countries. For most countries the decline was larger during the trade reform period of 1990–1993 than in the previous years, for both exportables and importables. On average during 1986–1993, the price decline for exportables was considerably larger than for importables. Producer prices for exportables fell by 6.7 percent per annum, while prices of importables fell by 4.8 percent per annum.

The main factor underlying the decline in real domestic farm prices is the exchange rate appreciation observed

### Overview of the Global Impact of the Uruguay Round and Lessons from Early Reformers

Table 4. Base and Bound Tariffs of Selected Countries and Selected Agricultural Products

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Argentina</th>
<th>Brazil</th>
<th>Chile</th>
<th>Colombia</th>
<th>Dom. Rep.</th>
<th>Paraguay</th>
<th>Uruguay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Bound</td>
<td>Base</td>
<td>Bound</td>
<td>Base</td>
<td>Bound</td>
<td>Base</td>
</tr>
<tr>
<td>Apples</td>
<td>40</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td>25</td>
<td>55</td>
<td>120</td>
<td>108</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Chickpea</td>
<td>55</td>
<td>20</td>
<td>100</td>
<td>70</td>
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</tr>
<tr>
<td>Cocoa</td>
<td>85</td>
<td>35</td>
<td>100</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>37</td>
<td>35</td>
<td>277</td>
<td>194</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>55</td>
<td>55</td>
<td>110</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>60</td>
<td>35</td>
<td>100</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>70</td>
<td>55</td>
<td>31.5</td>
<td>177</td>
<td>159</td>
<td>40</td>
<td>55</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>37</td>
<td>35</td>
<td>204</td>
<td>143</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>45</td>
<td>55</td>
<td>210</td>
<td>189</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sorghum</td>
<td>5</td>
<td>3.8</td>
<td>55</td>
<td>55</td>
<td>147</td>
<td>132</td>
<td>25</td>
</tr>
<tr>
<td>Soybeans</td>
<td>35</td>
<td>31.5</td>
<td>139</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>35</td>
<td>55</td>
<td>31.5</td>
<td>130</td>
<td>117</td>
<td>60</td>
<td>35</td>
</tr>
<tr>
<td>Tobacco</td>
<td>20</td>
<td>18</td>
<td>100</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>45</td>
<td>55</td>
<td>31.5</td>
<td>138</td>
<td>124</td>
<td>42</td>
<td>35</td>
</tr>
</tbody>
</table>

Explanatory Notes:

a. The base is the tariff equivalent that actually prevailed for the period 1986–88, as reported by the government to GATT.
b. "Bound" represents the ceiling binding of tariffs.
c. All import tariffs will be consolidated at the uniform rate of 35% ad-valorem unless otherwise stated. If current consolidated tariffs are lower than 35% they will be maintained without changes.
d. Consolidation at a rate of 25% ad-valorem for all agricultural products unless otherwise stated.
e. The Dominican Republic did not submit agriculture tariff equivalents for the base period to GATT (deadline: April, 1994).
f. Bound tariff rate of 40% ad-valorem.
g. Consolidation at a rate of 35% ad-valorem.

**C Consolidation renegotiated.

Source: A. Valdés, Surveillance Project 1996.
during the early 1990s; a phenomenon which was amplified by the tariff reduction and, in some cases, by a fall in border prices (Annex Table 1).

Although there is no single story that fits all cases, some important common factors can be highlighted:

- There is a common and substantial decline in international prices of these agricultural products during the subperiod 1990–1993, more or less coinciding with the beginning of the trade liberalization programmes in most of these countries. There is also a substantial decline on the real exchange rate (RER) in all of these countries during 1990–1993, ranging from a decline of 11.5 percent in Colombia to a decline of 65.8 percent in Argentina. This fall in RER reinforces the decline in border prices in terms of their effect on the downward evolution of domestic prices.

- For instance in Argentina, the real domestic price of beef (an exportable) fell considerably during 1990–1993 (a cumulative decline of 60 percent) in spite of an increase in border prices of 14 percent. This decline is explained by a strong RER appreciation, which was compensated by lower export taxes (reflected in higher producer subsidy equivalents for beef), which have increased from -27.2 percent in 1989 to 4.9 percent in 1993. Similar is the case of milk in Colombia. During 1990–1993, real prices of milk fell by much less (a 15 percent drop in real terms) than would be explained by declines in border prices and real exchange rates (-26 percent and -12 percent, respectively). The explanation seems to be again an increase in direct price intervention in this subsector.

- The changes in domestic intervention suggest some countercyclical behaviour; changes in direct interventions partially compensate for movements in international prices and the RER, particularly in the case of importables.

- The results also shed some light on the issue of timing of economic reforms and that interaction between sectoral and economy-wide reforms. It was most unfortunate that for this set of countries the initiation of trade reforms leading to the opening up of the economy coincided unexpectedly with a fall in border prices of most agricultural commodities (beyond their long-term trend) and an appreciation of the exchange rate. The results of this interaction, reflected in the evolution of domestic farm prices, have created considerable tension in the local policy debate, with a strong pressure in favor of a policy reversal toward more protection for agriculture.

The recent reforms do not remain unquestioned. The current debate in the region on trade and price policy for agriculture suggests that we could not conclude that most of these reforms will remain intact. The current strain on profitability is leading to intense pressure for more protection to import-competing subsectors, and one should not be surprised if some backsliding into protectionism occurs. Hopefully, the removal of QRs will survive. There is an urgent unfinished task to continue the debate with policymakers on the implications of the recent reforms, on how to improve the institutional set up for trade (customs administration, mechanism for implementation of safeguard measures, etc.), on policies to deal with world price instability and, most important, on a continuing reform agenda beyond trade policies to enhance competitiveness of the sector. However, during the transition, perhaps the largest challenge to maintaining the trade reform arises from the macroeconomic conditions, specifically the high (real) interest rates and the fall in the (real) exchange rate.

(f) The need for a surveillance system to improve agricultural trade and price "policies." There is a growing awareness that surveillance can “improve” trade policies, that is, policies that include both border measures and domestic measures which directly affect the competitiveness of domestic tradable products. The justification for enhanced surveillance is based on the argument that both the public and government officials should be fully informed not only of economic policies undertaken by the government, but also of the best estimate of the benefits and costs of such policies.

Surveillance can be an important tool for combating protectionism, as in many cases officials support protectionist measures as a response to perceived political pressures rather than an intellectual commitment to trade barriers. In this case, the greater information and transparency provided by surveillance activity can help promote a more open national debate of trade policies, and support those groups and officials who are pro-liberalization.

Although the WTO provides a forum to monitor a country's compliance with the URA, it does not monitor
policies nor their economic impact. Furthermore, the WTO has very limited resources to undertake such monitoring. Therefore, there is substantial potential value of establishing local "transparency institutions" to monitor competition and openness in both internal and external trade. Such institutions do not exist today.

References


Annex Table 1. Decomposition of Relative Agricultural Prices of Exportables in Latin America, 1986–93 (cumulative percentage change over the period)

<table>
<thead>
<tr>
<th>Country</th>
<th>Period</th>
<th>Real Domestic Price (1)</th>
<th>Real Border Price (2)</th>
<th>Real Exchange Rate (3)</th>
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</tbody>
</table>

A Synthesis of Assessments of the Impact of the Uruguay Round on Global and South Asian Agriculture

Ramesh Sharma, Panos Konandreas and Jim Greenfield*

I. Introduction

Several individual researchers and international organizations have recently assessed the impact of the Uruguay Round (UR), focusing on the Agreement on Agriculture but also the other quantifiable agreements. Some of them provide details of the impact on the agricultural sector in individual countries or country groups while others report results for selected commodity and country aggregates. In addition, some of these models were used earlier to assess the effects of various assumed degrees of agricultural liberalization including that of the Draft Final Act of the UR. More ambitious policy reforms were also simulated prior to that starting with the study by Valdés and Zietz (1980)1. Thus, the literature provides a wide range of different assessments for a comparative review.

This paper focuses on assessments of the impact of agricultural reforms under the UR, covering world market prices and price stability, agricultural production and consumption, trade and income, with special emphasis on the South Asian region. In view of the fact that changes in world market prices are the key determinant of other effects, the price effects as projected by various models are reviewed first, together with an account of the main differences among the models which helps to explain the differences in price effects. Some concluding remarks are made in the last section.

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The views expressed here are those of the authors and not necessarily of the organization.
II. Incorporation of the Uruguay Round Commitments in the Models

The four key (and quantifiable) areas of commitments under the Agreement on Agriculture are on tariffication and tariff reduction, market access, export subsidies and domestic support. These are potentially overlapping instruments, e.g. a tariff cut need not necessarily lead to any imports, hence the need to add the special provision on minimum access. The incorporation of these commitments in the models, from a technical viewpoint, appeared to be a problem for all modellers. In fact, some models simply chose to ignore one or more commitments, on the ground that they would not be binding. Table 1 shows for the five models the position as regards the incorporation of these commitments.

As regards the modelling of tariffication and tariff reduction, the general approach followed by three of the models reviewed (namely, WFM, RUNS and MRT) was to use Producer Subsidy Equivalents (PSEs), where available, as a starting point for quantifying the base period protection level. In this approach, a PSE unit (aggregate PSE divided by output volume) is divided into its three main components, i.e.

\[ \text{PSE unit} = m + d + i \]

where,

\[ m = \text{per unit market price support (subject to reduction commitments), representing the wedge between the world price and the domestic producer price (e.g. an administered price);} \]
\[ d = \text{per unit total direct payments (not subject to reduction commitments); and} \]
\[ i = \text{per unit total indirect payments such as input subsidies (subject to reduction commitments).} \]

The WFM takes a somewhat different route from that by RUNS and MRT in modelling tariffication and tariff reductions. The WFM uses information in the PSE measure to obtain a transmission equation of the world market price to the domestic price (see FAO, 1995b). For countries for which PSE and tariff data were available, the transmission formula takes the following general form:

\[ P_d = a_0 + a_1 + a_2 + T_s (1 - r_s) + [(1 + T_v (1 - r_v)] P_w \]

where,

\[ a_0 \text{ is a constant reflecting "natural protection" of a country, i.e. a price wedge that is invariant to changes in world market prices;} \]
\[ a_1 \text{ represents those policies that are not subject to reduction;} \]
\[ a_2 \text{ represents those domestic policies that are not related to changes in world market prices, such as input subsidies but subject to reduction commitments (i.e. this corresponds to the "i" component of the PSE measure);} \]
\[ T_s \text{ and } T_v \text{ are specific and } ad \text{ valorem tariffs in the base period (1986–88) as in the country schedules;} \]
\[ r_s \text{ and } r_v \text{ are the corresponding rates of reduction;} \]
\[ P_d \text{ and } P_w \text{ are domestic and world market prices.} \]

Because of the presence of the first four constant terms, the elasticity of price transmission is less than unity. For those countries where PSE and tariff data were not available, the WFM uses constant price transmission elasticities to relate world prices to domestic producer prices, but again the transmission elasticities were less than one. In the latter case, the transmission equations were of the form

\[ P_d = a_0 P_w o \]

where \( o \) is the price transmission elasticity estimated or compiled from various sources.

Calibration of the WFM model for the base period yields values for the constant terms of the above transmission equations which are subsequently used in the policy simulation runs.

In the RUNS model, the general expression used is as follows:

\[ P_d = [(P_w + (1 - o) P_{eq}) (1 + o) (1 - r)] \]

where,

\[ P_d \text{ and } P_w \text{ are domestic and world prices;} \]
\[ P_{eq} \text{ is a domestic price index;} \]
\[ o \text{ is a pass-through coefficient that determines the relative weight of the domestic price index and world price in determining the price of the specific commodity;} \]
\[ r \text{ is the rate of reduction.} \]
For policy simulations, \( I \) was, however, set equal to one (perfect transmission of world prices) on the assumption that at least for a majority of developing countries following liberalization such assumption is likely to be more valid. With perfect price transmission (i.e. \( I = 1 \)), the expression above reduces to

\[
P_d = P_w [1 + \cdot (1 - r)].
\]

This last expression was used to define a price wedge for the base period derived from the market price support component of the PSE, i.e., in terms of the base period price:

\[
1 + \cdot \cdot = 1 / (1 - k) \text{ where } k = m_d / Pd
\]

The base price wedges \( \cdot \cdot \) ranged, for example, between 0.65 for China to 3.91 for the Gulf Region for food crops. In the simulations of tariff reductions, these base wedges were reduced by the parameter \( r \), as required by the commodity and country specific commitments.

The access commitments were introduced in the WFM model as constraints. Thus in those cases where the model did not generate a sufficient volume of imports to meet national commitments such imports were forced by decreasing the production and/or increasing the demand, depending on the particular case. A similar approach seems to have been followed in the ATPSM model. The FMN model incorporates market access commitments as tariff-quotas. Imports up to the level of current or minimum access, whichever was higher, would benefit from lower tariffs. Imports above that level would face the MFN tariffs as stated in the country Schedules, which were assumed to be prohibitive. However, as access commitments were modelled for four aggregated agricultural products in the FMN model, increased access in certain key sectors (e.g. rice in Japan) was not adequately captured in the simulation. Market access commitments were not incorporated in the RUNS model.

As regards domestic support reduction commitments (the Aggregate Measurement of Support, or AMS), the WFM did not incorporate this provision partly because reduction commitments do not apply at the individual commodity level. Also, it was considered that meeting the AMS would not be binding in most cases, a conclusion prompted also by a recent review for the OECD countries.

<table>
<thead>
<tr>
<th>Table 1. Main features of the models reviewed</th>
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<td>Model</td>
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<tr>
<td>-------</td>
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<tr>
<td></td>
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<tr>
<td>ATPSM (UNCTAD, 1995)</td>
</tr>
<tr>
<td>WFM (FAO, 1995a)</td>
</tr>
<tr>
<td>RUNS (Goldin &amp; Mensbrugghe, 1995)</td>
</tr>
<tr>
<td>FMN (François et al. 1995)</td>
</tr>
<tr>
<td>MRT (Harrison et al. 1995)</td>
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</table>
which showed that for most of them actual AMS levels for recent years were already below AMS targets (OECD 1994). In the RUNS model, input subsidy rates were defined and computed from the third component of the PSE (i.e. the term "i" referred to above) as the ratio of the sum of all other payments (other than direct payments) to the adjusted value of production (total value of production at world price less direct payments). As an example, for the European Union (EU), the base input subsidy rates were 36.5 percent for crops and 8.4 percent for livestock. In the simulations of policy reforms, these base rates were adjusted to reflect the reduction in the subsidy rates committed under the policy reforms.

The approach followed in the WFM to incorporate export subsidy reduction commitments differed according to the subsidizing country. First, for a country that used subsidies for all its exports, a maximum was introduced on the volume of exports according to the country's export subsidy commitment for a given commodity and year. In order to accommodate this reduction, it was necessary to make certain ad hoc adjustments in the model, i.e. to increase domestic demand (e.g. by the feed sector) or adjust production by lowering yields or restricting the projected cultivated area. The specific corrections introduced took into account current and expected adjustment policies and plans for the countries concerned. Second, for those exporters which subsidized only a part of their exports targeted at some countries, no such constraint was modelled, but it was still assumed that part of the exporter's competitiveness would be eroded. The approach adopted here for simulating reductions in the volume of subsidized exports was to include an additional element in the price transmission equations that would reflect a price reduction in the domestic market of the

<table>
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<td>1.0</td>
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<td>1.2</td>
<td>6.3</td>
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<td>9.0</td>
<td>2.5</td>
<td>0.6</td>
<td>-1.1</td>
<td>3.2</td>
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<tr>
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<td>5.9</td>
<td>5.9</td>
<td>3.8</td>
<td>-</td>
<td>-</td>
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<td>7.7</td>
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</tr>
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<td>11.3</td>
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<td>-</td>
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<td>1.4</td>
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<td>-</td>
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<td>-</td>
<td>-1.1</td>
<td>-</td>
<td>0.5</td>
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<td>Cotton</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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</table>

Note: ATPSM I refers to a scenario where domestic markets in non-OECD countries are assumed not to respond to changes in world market prices while ATPSM II assumes that they do. RUNS II (from Table 3 of Goldin and Mensbrugghe 1995) simulates the UR reform from the 1991-93 average base protection level, while RUNS I uses 1982-93 as the base period.

1 These are year 2000 for WFM and ATPSM, and 2002 for RUNS.
2 In the RUNS, there are only two meat groups, bovine and sheep meats, and pigmeat and poultry meats.
subsiding exporter. Conversely, for the targeted importing countries benefiting from the subsidies, the adjustment in the price transmission equations reflected the higher price that would prevail in the domestic market (compared with what otherwise would be the case) as a result of a reduction in subsidized imports.

The RUNS model included base period export subsidies in terms of reductions in per unit export subsidy rates, defined as the ratio of the value of export subsidies to the volume of subsidized exports. These per unit subsidy rates were translated to ad valorem rates and the reduction commitments applied to them. Finally, the MRT model incorporated reductions in expenditures on export subsidies (i.e. by 36 percent and 24 percent for developed and developing countries, respectively). The authors, however, remarked that by ignoring reduction commitment on volumes, the impact of the UR would be underestimated in cases where the volume commitments became binding.

III. Impact of the Uruguay Round on Agriculture

A majority of the studies on the impact of the UR only model parts of the entire UR agreements and understandings. The WFM and ATPSM models are partial in their nature and limit their assessment to agricultural sector reforms and market prospects for individual commodities within this sector. The other three general equilibrium models reviewed, namely the FMN, the MRT and RUNS, go one step further and attempt to assess income or welfare effects of the components of the overall UR agreements that are amenable to quantification, i.e. agricultural sector reforms, market access reforms in manufactured and industrial products and the phasing out of the Multi-Fibre Arrangement (MFA). Furthermore, not all models assessed or, perhaps more correctly, reported results for all impact indicators. Therefore, the results reviewed here are selective: drawing mainly from the WFM for the review of the impact on global and South Asian agriculture and from the general equilibrium models for income effects.

The key variable that drives all the models is the resulting world market price. Thus the first assessment of the models is in terms of the direction and size of world market price changes.

3.1. Impact on World Market Prices

Table 2 shows the price effects from three models. Both WFM and ATPSM show positive price effects of the UR for the year 2000, typically within the range of 4 percent to 10 percent, and compare fairly closely, both for the individual products and overall, with a simple average of 6.3 percent for WFM versus 8.7 percent for ATPSM I (where the non-OECD domestic markets were assumed not to respond to changes in international prices). However, under ATPSM II when non-OECD markets are assumed to respond to changes in world prices, the impact is greatly muted, with prices rising by about 3.5 percent on the average. A priori, one would expect that the ATPSM II price effects (although smaller than ATPSM I) should have been closer to those from WFM, since WFM incorporates price responses of the non-OECD countries as well. Perhaps the reason for their differences can be found on the degree of price transmission of world market to domestic prices, as discussed above. The smaller price increases projected by ATPSM II suggest that essentially the effective degree of transmission in that model for non-OECD countries was higher than that of WFM.

The similarity in projected prices breaks down further when the WFM results are compared with those from the RUNS model. The latter shows much muted price effects, even negative in some cases. There is, however, some similarity. Both WFM and RUNS III project similar, positive impacts on the prices of wheat, coarse grains (mainly maize) and vegetable oils, the three commodities relatively heavily protected in the OECD countries. This reasoning, however, fails for dairy products which also should have belonged to that group.

The differences between the two RUNS simulations included in Table 2 are due to different assumptions about initial (benchmark) protection levels. In RUNS III, reforms were made over the relatively high protection levels of recent years (1991–93) in the OECD countries while in RUNS I they were made over the relatively low protection levels of the 1982–93 period. The results are intuitively in the right direction in that liberalization from a high protection base (RUNS III) caused stronger price effects.

Both RUNS scenarios show negative price effects for tropical beverages under the UR. This was not fully explained, but was attributed partly to the effects of resources shifting from beverages to cereals in the major tropical beverage producing areas (Latin America and Africa) as rela-
Table 3. Percentage Producer Subsidy Equivalents in the OECD countries¹

<table>
<thead>
<tr>
<th>Period</th>
<th>Wheat</th>
<th>All crops</th>
<th>All livestock products</th>
<th>All agricultural products</th>
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<tbody>
<tr>
<td>Average 1979-85</td>
<td>27</td>
<td>32</td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>Average 1986-88</td>
<td>56</td>
<td>58</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Average 1991-93</td>
<td>49</td>
<td>51</td>
<td>38</td>
<td>42</td>
</tr>
</tbody>
</table>

¹ Percentage PSE is defined as the total value of transfers as a percentage of the total value of production (at domestic prices), adjusted to include direct payments and to exclude levies.


The decrease in the price of rice under RUNS I (and small effect under RUNS III) is also explained along these lines.

As discussed above, the world market price effect of the UR results from complex interactions among the various reduction commitments made so that it is not easy to associate a specific change to a specific factor. However, it is possible to indicate, in fairly general terms, the likely reasons for the broad differences in price changes derived by the different models by referring to technical differences among them, their key assumptions and how they incorporated the UR commitments as discussed above. First, as Table 1 shows, not all models fully incorporated all the components of the UR. Although not all of these commitments were expected to be binding all the time (e.g. the AMS), ignoring some of them should make a difference. More importantly, ignoring a component in the price transmission equation (e.g. the non-price related support) would be to overstate the price transmission effect, which can not be unity as assumed by some models.¹⁶

The second, perhaps most important, factor responsible for differences in assessed price changes is the extent of tariff reduction actually simulated in the models. This is related to cases when base tariff rates in the country Schedules were found to differ often markedly from those that were estimated to prevail in the base period (the "dirty tariffication" case shown by Ingco, 1995)¹⁷. The obvious dilemma that an analyst faced was which of the two base tariffs (actual or "dirty") should be used to apply the committed tariff cuts, or whether in fact to apply any cuts at all (i.e. when the "dirty" base tariff is well above the actual base tariff)¹⁸. The option chosen by RUNS was largely in line with the latter, that is it was assumed that in countries where estimated tariff equivalents were below the committed bound rate, no reductions in tariffs would take place. Similarly, other models ignored those cases where the bound rates committed were higher than the applied rates. This includes the MRT model which also used the same assumptions and data base on tariffs as used in the RUNS model. At the extreme, the FMN model simply ignored any reduction in the MFN rates, assuming these to be prohibitive for trade. This assumption also implies zero price transmission. This contrasts sharply with the approach adopted by other models (e.g. WFM) which assume that the spirit rather than the letter of the Agreement will be followed so that a reduction in tariff rates would take place in those countries that committed to do so even though actual rates may be below bound final rates. Clearly, any assumption on the path that may be followed by a country in those cases is very uncertain.

Third, differences in the results are also due to the use of different base periods. For example, under RUNS III (1991–93 base), where the benchmark protection level was higher than RUNS I (1982–93 base), liberalization resulted also in larger world market price increases. This is expected as the same degree of liberalization (e.g. 36 percent cut in tariff) from a higher base implies a greater reduction in the absolute level of protection, a greater reduction in output and consequently a larger price increase. This also explains the larger price increases predicted by the WFM and ATPSM models compared to RUNS III. As shown in Table 3, the PSEs during the 1986–88 UR base period for tariffs (and the base tariff level actually used by WFM and ATPSM) are some 12–15 percent higher than the 1991–93 period (the RUNS III base period).

Fourth, differences also arise due to model structure. One such difference is between the partial equilibrium and
the general equilibrium models. As larger adjustments take place within economy-wide models, the effects of agricultural/food policy changes on prices tend to be muted relative to those from partial equilibrium models. To a large extent, this shows in the results of Table 2.

Fifth, differences also stem from dissimilar aggregations of countries and commodities. In particular, where commodities (and countries) are grouped such that the distortions tend to cancel out, the impact would be less pronounced. Both WFM and ATPSM are highly disaggregated on both counts, and the higher price effects from these models are at least consistent with this reasoning. François et al. (1995) make this point explicit when they say that in their aggregation of cereals for the FMN model in one group, the impact that would have been evident for rice (in Japan) was muted.

Finally, there are significant differences in the transmission elasticities across the models. In the WFM and ATPSM, the elasticities are always less than unity whereas they are assumed to be unity in the RUNS model. Assuming a value of unity probably leads to an underestimation of price changes at the global level. In addition, the differences in projected price changes between models are also due to the use of different elasticities for domestic demand and supply. The sensitivity of such models to elasticity values was emphasized by Zietz and Valdés (1990). There is clearly a case for reviewing differences in such parameters across the models.

3.2. Impact on Production and Consumption
The outlook for the agricultural commodities covered in the FAO study is for a slowdown in growth rates in output and consumption compared with the 1980s, even after all the ongoing trade liberalization efforts are implemented. The UR effect on aggregate production at the global level is in fact negligible. Aggregate output for agricultural commodities is projected to grow at 1.6 percent per annum from 1987–89 average (the WFM base period, written "1988" in this and the next section) to 2000 in the Baseline scenario and that growth rate remains the same under the UR scenario. This compares with a growth rate of 2.2 percent per annum during 1978–88.

In absolute terms, production changes at the global level in the year 2000 due to the UR are generally small, exceeding three million tons only for coarse grains (Table 4). Overall, the increase in output is in the range between 1 percent to 3 percent of the Baseline volumes in the year 2000. This is an

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Global production</th>
<th>Developing countries</th>
<th>Developed countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Production</td>
<td>Consumption</td>
</tr>
<tr>
<td>Wheat</td>
<td>-1,583</td>
<td>5,143</td>
<td>-1,578</td>
</tr>
<tr>
<td>Rice</td>
<td>683</td>
<td>1,657</td>
<td>662</td>
</tr>
<tr>
<td>Coarse grains</td>
<td>3,423</td>
<td>804</td>
<td>-230</td>
</tr>
<tr>
<td>Fats and oils</td>
<td>1,067</td>
<td>1,010</td>
<td>574</td>
</tr>
<tr>
<td>Oilmeals</td>
<td>516</td>
<td>565</td>
<td>471</td>
</tr>
<tr>
<td>Bovine meat</td>
<td>164</td>
<td>-249</td>
<td>-195</td>
</tr>
<tr>
<td>Pig meat</td>
<td>-1,567</td>
<td>-739</td>
<td>-590</td>
</tr>
<tr>
<td>Ovine meat</td>
<td>-36</td>
<td>-25</td>
<td>-46</td>
</tr>
<tr>
<td>Poultry meat</td>
<td>-36</td>
<td>-8</td>
<td>104</td>
</tr>
<tr>
<td>Milk</td>
<td>371</td>
<td>439</td>
<td>-951</td>
</tr>
<tr>
<td>Butter</td>
<td>-73</td>
<td>-103</td>
<td>28</td>
</tr>
<tr>
<td>Coffee, cocoa,tea</td>
<td>155</td>
<td>155</td>
<td>80</td>
</tr>
<tr>
<td>Sugar</td>
<td>1,081</td>
<td>629</td>
<td>739</td>
</tr>
<tr>
<td>Bananas</td>
<td>-1,092</td>
<td>-1,034</td>
<td>-145</td>
</tr>
</tbody>
</table>

¹ These are projected volumes for the year 2000 with UR minus volumes for the baseline 2000.

anticipated result in view of the relatively modest nature of trade liberalization commitments made under the UR\(^2\).

The production effects of the UR, however, are much more marked in terms of shifts in production across regions or countries. The FAO assessment on the whole confirms what has been now regarded as one of the robust findings of most agricultural trade liberalization studies, namely that multilateral agricultural liberalization would lead to lower production in the developed countries of those commodities which have been subject to a high degree of protection in the past, and that output would expand in the traditional non-subsidizing, low-cost producing countries, including on the whole the developing countries. Thus, among the developed countries, production of a number of farm products (notably cereals, meat and dairy products) declines as a result of the UR, mostly in Western Europe and much less or none in North America. By contrast, Oceania substantially increases output of these commodities. Similarly, there are considerable increases for developing countries, notably in the cereals and fats, oils and oilmeals sectors, especially in those developing countries which have a higher degree of transmission of world market prices to the domestic market.

### 3.3. Trade Flows and Trade Balances

For the developing countries as a whole, growth in the output of the principal food commodities, at 3.2 percent per annum, would exceed that of population resulting in some further gains in per caput food consumption, although such gains are not strictly due to the UR and would have largely taken place due to other developments. In fact, for some commodities, notably wheat, milk and some meat products, consumption is seen to be adversely affected (Table 4). In these cases, increased production usually leads to reduced net imports (lower imports and increased exports). This seems to be due to the price effects of the UR dominating the income effects. To the extent the assumed income gains for the various developing regions underestimate incomes that may be actually realized, consumption could, however, be higher than that assessed by the WFM and export gains lower. In that case, increased demand would also further stimulate production.

Following the slowdown in growth of global production and consumption of agricultural commodities, the growth of international trade is also projected to slow down considerably during 1988–2000 compared to 1978–88. The UR is not seen as arresting this slowdown, despite a positive effect on the growth in trade for some commodities. For the UR scenario, growth rates of total agricultural imports and exports of developed countries, in particular, are projected to be reduced drastically in 1988–2000, to just 0.6 percent and 0.5 percent per annum respectively, compared to 2.3 percent and 2.8 percent respectively in the earlier period.

The growth of agricultural trade of developing countries as a whole is also expected to slow down during 1988–2000 compared to 1978–88. The growth rate of their agricultural imports is projected to decline from 5.5 percent in 1978–88 to 2.9 percent in 1988–2000 and those of agricultural exports from 4.6 percent to 2.7 percent, respectively. However, it is worth emphasizing that the effects that can be attributed to the UR are rather small (growth rate of exports increases by 0.2 percent, whereas that of imports increases by 0.1 percent due to the UR).

In view of the modestly higher growth rates of agricultural exports than agricultural imports, the agricultural trade balance of developing countries as a whole is projected to improve by US$1.9 billion from US$15 billion in 1988 to US$16.9 billion in 2000. Of this increase, some US$0.8 billion would be due to the UR and results from the difference between additional exports of US$8.3 billion and additional imports of US$7.5 billion. The commodity composition of these additional trade expected from the UR is shown in Figure 1. Both imports and exports of developing countries are anticipated to expand for all commodities, but more notably for sugar, fats and oils, cereals and meats.

### 3.4. Impact on South Asian Agriculture

This section briefly summarizes the impact of the UR on South Asian agricultural markets based on FAO's assessments with the WFM and other single-commodity models.\(^{21}\) Figure 2 shows for the Region as a whole the net impact of the UR in the year 2000, in terms of additional values of imports, exports and net exports of selected commodities. For the seven commodities shown in the figure, the total impact is assessed to be reduced imports of close to one billion dollars, an additional exports of about 300 million dollars and thus a net trade balance of about over US$1.3 billion. What follows is a brief account of the assessments for commodities of importance for the Region.
In 1987–89, the base period for the WFM, all countries of the Region were net importers of wheat, although the deficits, a total of over 4 million tons for the Region as a whole, were substantial only for Bangladesh (2 million tons) and Pakistan (one million tons). Under the baseline 2000 scenario, the deficit more than doubles to almost 10 million tons with all major countries importing more. However, production rebounds under the UR 2000 scenario, cutting the Region’s net imports by almost 4 million tons, with deficits mainly limited to Bangladesh and Pakistan while India’s entire deficit disappears. The production response is fairly strong for both India and Pakistan. While most of the reduction in imports is explained by increased production, consumption also falls across the board as the consumer price of wheat rises in all countries under the UR scenario. The net outcome for both India and Pakistan is lower wheat import bills, despite increased world market prices. On the other hand, as Sri Lanka does not produce wheat, its import bill for that commodity would not fall, whereas for Bangladesh the assessed import substitution was insufficient to lower import bills.

As regards rice, the Region was a net exporter of about 500 000 tons in the base period. Pakistan’s exports more than offset net imports of Bangladesh and Sri Lanka. (Other countries were more or less self-sufficient.) In the baseline 2000 scenario, Bangladesh becomes a net exporter of over 100 000 tons while India raises its net exports to over 400 000 tons. Pakistan also increases its volume of exports while net deficits deepen for Nepal and Sri Lanka. Under the UR scenario, the most conspicuous impact is foreseen for India which doubles its net exports to about one million tons, due to a sharp increase in production. The impacts on other countries are largely trivial. Moreover, unlike that for wheat, the Region’s net exports rise along with consumption, the latter despite increased world market price. This shows that, first, there were dissimilar transmissions of world market prices into domestic markets for wheat and rice, and second, some substitution seems to have taken from wheat to rice consumption, most probably as a result of assumed values of own and cross elasticities of demand for the two cereals.

There was hardly any trade in coarse grains in this Region during the base period. Under the baseline 2000 scenario, the only conspicuous change projected by the model was for India to utilize an additional 2 million tons of
coarse grains, half of it sourced from additional production and the rest from imports. With the UR, the Region boosts its net exports by almost one million tons, mainly by India due to increased output, while the effects are foreseen to be negligible for other countries. On the whole, these changes translate into a lower import bill for the Region despite higher world market prices.

**Vegetable oils and fats** are important traded commodities for this Region, and unlike other commodities, import dependency was high in the base period, at 30 percent for the Region as a whole, and on average more than double (64 percent) for five countries excluding India (which had a dependency rate of 18 percent). Under the baseline 2000 scenario, these deficits deepen considerably for all countries except India, as rapid growth in demand outpaces production. The impact of the UR on this Region is expected to be fairly small. In both India and Pakistan, consumption as well as imports are expected to fall somewhat due to increased world market prices and, as a result, the Region’s import bill will fall, however, as in the case of wheat, due to reduced consumption.

As regards **oilmeals**, whose production is linked to those of oils and whose trade is largely driven by changes in the livestock sector, the net impact of the UR for the Region is expected to be small, consistent with similar effects on oilseeds and meat production. However, projections show that the Region would expand considerably the production and use of oilmeals by the year 2000, with or without the UR effects.

This Region is one of the important **milk** producing and consuming areas of the world, with a high degree of self-sufficiency. Under the baseline 2000 scenario, the Region’s net imports increase considerably, by 36 percent from the 1987–89 volumes despite a 63 percent rise in production. As a result, import bills rise by almost 80 percent as import prices also increase. Under the UR scenario, the Region will in the year 2000 reduce its net imports by one million tons over the baseline projection, as an additional (over the baseline level) 7 percent rise in world market prices cut import demand. As there is no change in production, consumption demand is seen to fall by the same amount as imports.
For meat, imports accounted for less than 2 percent (about 70,000 tons) of the total consumption in 1978–79 and are projected to be 2.4 percent in the year 2000 (baseline). The net impact of the UR on the meat sector is assessed to be very small, and barely noticeable except for India and Pakistan: for India, the projected loss in net export earnings of about US$170 million is due to higher imports of poultry and reduced exports of beef, while for Pakistan, a gain of about US$100 million in export earnings is due to increased exports of sheep and goat meat and reduced imports of poultry. The impact on other countries is assessed to be very small.

Trade in jute and jute products were already subject to small levels of protection: raw jute being traded free of duty while products faced relatively low tariffs. Moreover, at the UR, tariffs on the latter were reduced fairly sizeably by importing developed countries, but not as deeply by the developing importing countries. Thus, trade being mostly free of duty already, the UR is not expected to impact on the production or trade of raw jute, kenaf and allied fibres. On the other hand, the UR could impact jute products indirectly, by reducing non-tariff barriers and lowering tariff rates for synthetic products which compete with jute products (FAO, 1995c). As a result, jute prices are expected to continue to face downward pressure in the coming years.

As regards tea, imports into major importing developed countries are already duty free and demand is largely insensitive to changes in incomes or prices. Therefore, the UR per se is expected to have very limited impact on imports over their baseline levels (FAO, 1995d). By contrast, tariffs on tea were substantial prior to the UR in many of the larger importing developing countries, where demand tends to be sensitive to incomes and prices. In these countries, the post-UR bound tariff rates, despite some reduction, are still relatively high (between 15–40 percent) and, as a result, the impact of the UR on imports is assessed to be modest, growing at 5.3 percent per annum during 1992–2005 versus 4.8 percent in the baseline scenario.

3.5. Impact of Agricultural Reforms on Incomes
As noted earlier, only three of the five models covered in this paper measure income effects, namely the FMN, the MRT and the RUNS. Of these three, only the FMN and the MRT report income effects separately for each of the three areas of reform modelled, namely agricultural sector, market access in manufactured and industrial products and the phasing out of the Multi-Fibre Arrangement, and thus provide a perspective on how the income effects from agricultural sector reforms compare to the overall effects. These results are shown in Table 5.

As regards the income effects from agricultural sector reforms, the two models differ sharply at both the global level and for individual regions. Under the scenarios shown in Table 5, gains from agricultural reforms amount to only about US$5 billion (about 12 percent of the total gains from reforms in all three areas) in the FMN model and US$58 billion (about 63 percent of the total) in the MRT model. However, the bulk of this discrepancy is accounted for by differences for three areas: developing East Asia, Japan and the EU. One probable reason for this difference is different degrees of aggregation of commodities and regions in the two models. For example, the MRT's larger income effects from agricultural reforms are consistent with its disaggregation of agricultural sectors into eight, compared to only four in the FMN. Similarly, the larger impact shown for East Asia in the MRT is again consistent with its modelling of nine separate countries, versus only two in the FMN (China and rest of East Asia).

For South Asia, the income gains from full reforms under the base scenarios of the two models range between 0.4 percent (about US$1.2 billion) of base GDP and 1 percent (about US$3.3 billion) of the base GDP. These are among the highest percentage gains relative to those for other regions, with an exception to East Asia in several scenarios. As regards income effects from agricultural sector reforms, the difference between the two models was, however, small for this Region, with the FMN showing income losses and the MRT showing a small gain (equal to 3 percent of the total from full reforms). In fact, the former model shows negative effects under all scenarios while the results are mixed in the MRT simulations. On the other hand, both models consistently show that reforms in non-agricultural components of the UR, including the phasing out of the MFA, may be the most important source of income gains for this Region.

3.6. World Price Instability
An important anticipated benefit accruing from the UR was reduced price instability. The consensus view was that, by
### Table 5. Estimated income effects of the Uruguay Round (US$ billion)\(^1\)

<table>
<thead>
<tr>
<th>Region</th>
<th>MRT base scenario</th>
<th>FMN base scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agricultural reform</td>
<td>Economy-wide reform</td>
</tr>
<tr>
<td></td>
<td>as % of base GDP</td>
<td>as % of base GDP</td>
</tr>
<tr>
<td>Developing</td>
<td>9.21</td>
<td>17.65</td>
</tr>
<tr>
<td>Africa</td>
<td>-0.29</td>
<td>-0.42</td>
</tr>
<tr>
<td>East Asia</td>
<td>8.04</td>
<td>12.30</td>
</tr>
<tr>
<td>South Asia</td>
<td>0.10</td>
<td>3.29</td>
</tr>
<tr>
<td>Near East (^4)</td>
<td>-0.45</td>
<td>-0.39</td>
</tr>
<tr>
<td>Latin America</td>
<td>2.07</td>
<td>3.30</td>
</tr>
<tr>
<td>Developed</td>
<td>49.10</td>
<td>75.21</td>
</tr>
<tr>
<td>Australia/NZ</td>
<td>1.11</td>
<td>1.52</td>
</tr>
<tr>
<td>Japan</td>
<td>15.23</td>
<td>16.69</td>
</tr>
<tr>
<td>Canada</td>
<td>0.24</td>
<td>1.16</td>
</tr>
<tr>
<td>United States</td>
<td>1.66</td>
<td>12.84</td>
</tr>
<tr>
<td>EC–12</td>
<td>28.54</td>
<td>38.85</td>
</tr>
<tr>
<td>EFTA</td>
<td>2.41</td>
<td>4.15</td>
</tr>
<tr>
<td>East Europe and former USSR</td>
<td>-0.025</td>
<td>-0.42</td>
</tr>
<tr>
<td>Rest of world</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>World</td>
<td>58.3</td>
<td>92.9</td>
</tr>
</tbody>
</table>

\(^1\) Incomes were measured in terms of equivalent variation for a 1992 counterfactual simulation in 1992 US dollars.

\(^2\) Base runs assume constant returns to scale and perfect competition.

\(^3\) Full reforms simulate agricultural sector reforms plus reforms in non-agricultural sectors and the phasing out of the Multi Fibre Arrangement.

\(^4\) In FMN, the Near East region is covered under Africa.

Sources: MRT model from Harrison et al. (1995) and FMN model from François et al. (1995).

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Opening up national agricultural markets, the absorption of production shocks would increase and hence prices would have less work to do. There are two problems with this analysis. One is that the stabilizing of markets by trade liberalization depends on whether changes in the location of production resulting from liberalization increases or decreases the size of production shocks in the aggregate. If output shifts from a high cost but stable producing area to a low cost but unstable area, the instability may increase and vice versa. The other issue concerns the level and ownership of stocks. The implementation of the Agreement on Agriculture is likely to lead to a reduced level of government owned stocks, basically because purchases for intervention get counted against the AMS and will be cut. In addition, some major exporters have been trying to reduce government stocks for domestic policy reasons. Smaller public stocks however will not be replaced entirely by larger private holdings. FAO's analysis of this issue suggests that the degree of replacement or "crowding out" could be about 40 percent (FAO, 1990). As a result, total stocks are likely to fall in the future. This on its own would tend to increase the variability of prices.

Some preliminary tests with FAO's WFM on the possible effect of trade liberalization on price instability are shown in Table 6. This examines the impact of hypothetical production shocks (plus or minus 5 percent around projected trends) in the year 2000, with and without the UR, but excludes consideration of the two factors mentioned above, i.e. it only concentrates on the effect of tariffication which should ceteris paribus reduce price instability. The assumed production shocks are reflected by
wide price fluctuations (although not symmetrical) around those of the normal crop year. The important conclusion, however, is that tariffication and tariff reductions, as modelled here, have very little effect on the stability of cereal market prices. This is clearly not a complete answer to the question of the effect of the UR on price instability, as only one factor that has a bearing on price instability is taken into account. More work is needed, especially as regards stock behaviour and the relationship between public and private stockholding.

IV. Concluding Remarks

The main conclusions of this review are as follows. First, not all models fully incorporated all four specific commitments under the Agreement on Agriculture, namely tariffication and tariff reduction, current and minimum access, and reduction in export subsidies and domestic support. A typical reason given for not doing so was that one or more of them would not be binding. Second, there were several differences among the models in the way they incorporated specific reduction commitments and as a result their assessment of the impact on world market prices varied accordingly. Such factors, discussed in Section 3.1, included the partial incorporation of commitments, different practices followed in modelling tariff reductions, the use of different base periods to apply UR reduction commitments, the model structure (e.g. partial versus economy-wide), different aggregation of countries and commodities, and differences in the demand, supply and price transmission elasticities. Third, as regards the impact on agriculture, while the UR was not expected to produce large aggregate, global impact on most variables, the effects could be more significant at the level of individual regions and countries. For South Asia, the UR is expected to contribute to increased production of most basic foodstuffs and thus reduce net imports, leading to a reduction in the food import bill. There will, however, be some reduction in the consumption of some key foodstuffs as a result of higher world market prices.

References


FAO (1990), The Effects of Trade Liberalization on Levels of Cereal Stocks, Document CCP: GR 90/3, Rome.

FAO (1995a), Impact of the Uruguay Round on Agriculture, Rome.

| Table 6. Effect of crop shortfalls/bumper crops on cereal prices, with and without Uruguay Round |
|---------------------------------|---------|---------|---------|---------|---------|
| Normal crop (index 1987–89 = 100) | Wheat | Rice | Maize | Millet/sorghum | Other grains |
| Baseline (2000) | 97 | 107 | 103 | 105 | 98 |
| Uruguay Round (2000) | 104 | 115 | 108 | 110 | 105 |
| Crop failure (percentage change above normal crop prices) | | | | | |
| Baseline (2000) | +25.8 | +50.5 | +24.3 | +29.5 | +24.5 |
| Uruguay Round (2000) | +25.0 | +50.4 | +24.1 | +29.5 | +23.8 |
| Bumper crop (percentage change below normal crop prices) | | | | | |
| Baseline (2000) | -19.6 | -31.8 | -18.4 | -20.0 | -18.4 |
| Uruguay Round (2000) | -19.2 | -31.3 | -18.5 | -20.0 | -18.1 |

1 An across the board shortfall (bumper crop) of 5 percent below (above) normal projected level is assumed for 1999 and its effect on price in year 2000 is measured.


Some Aspects of the Liberalization of South Asian Agricultural Policies: How Can the WTO Help?

Garry Pursell*

I. Introduction

Before considering the agricultural policies of the principal South Asian countries, i.e., India, Pakistan, Bangladesh, Sri Lanka and Nepal, it is important to remember that, in contrast to developed countries, agriculture is still by far the largest sector of these economies. In 1994 agriculture accounted for 29 percent of their combined GDPs, and employed over 300 million people, equivalent to about 60 percent of the work force.1 By country, agriculture’s role is inversely related to per caput income, accounting for 44 percent of GDP and 94 percent of employment in Nepal and 24 percent of GDP and 48 percent of employment in Sri Lanka. It is also important to bear in mind that India is by far the largest agricultural economy, in 1994 accounting for 78 percent of South Asian agricultural GDP. The shares of Pakistan, Bangladesh, Sri Lanka and Nepal were only 11, 7.2 and 2 percent respectively. Sri Lanka and Nepal’s agricultural economies are smaller than the agricultural economies of most of the Indian states.

It is also useful to bear in mind a few points about the recent history of South Asian agriculture and the policies which have affected it. Firstly, after independence all the South Asian countries — and especially India — followed highly interventionist trade and other policies the net effect of which was to heavily discriminate against their agricultural sectors for standard and well documented reasons, including manufacturing protection, exchange rate overvaluation, and direct controls and/or taxation of agricultural exports which suppressed domestic prices of these commodities prices below border prices. Despite this discrimination, green revolution technologies were introduced and spread rapidly with support especially from large scale public and private investments in irrigation. As a result, during the 1970s and 1980s domestic grain prices fell very substantially in real terms, and with some exceptions the sub-continent became

*Consultant, International Trade Division, International Trade Department, World Bank, Washington, DC. In preparing this paper, I have greatly benefited from correspondence with Chris Carson, and from discussions with Bernard Hoekman and Merlinda Ingco. I would also like to express my appreciation for information and data on Pakistan, Bangladesh and Sri Lanka provided by Tom Maxwell, Charles Draper, and Sona Varma. However, I am entirely responsible for any mistakes and for the opinions expressed in the paper, which do not necessarily represent the views of the World Bank.
Table 1. Schiff-Valdes indicators of agricultural protection: percentage rates

<table>
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<tr>
<th>Period average</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan 1960-86</td>
<td>-6</td>
<td>-33</td>
<td>-39</td>
</tr>
<tr>
<td>Sri Lanka 1960-85</td>
<td>-9</td>
<td>-31</td>
<td>-40</td>
</tr>
<tr>
<td>India 1971-85</td>
<td>-3</td>
<td>-26</td>
<td>-29</td>
</tr>
<tr>
<td>1986-91</td>
<td>+7</td>
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<td>-18</td>
</tr>
<tr>
<td>1992-95</td>
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<td>-2</td>
<td>-9</td>
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</tbody>
</table>

Sources and notes: The estimates for Sri Lanka and Pakistan are reported in Schiff, Maurice and Alberto Valdes (1992), which also describes the concepts of direct, indirect and total protection of agriculture used in the multi-country study of agricultural incentives synthesized in their book. The estimates for India are from Rosenblatt, David, Garry Pursell, Anju Gupta, and Benoit Biarel (1996). Schiff-Valdes estimates of agricultural protection have not been made for Bangladesh and Nepal. The Indian estimates of direct protection are an aggregate of 13 crops. They assume that Indian exports of rice would reduce world rice prices, and define nominal protection of rice as the difference between observed domestic prices and the estimated domestic prices with optimal export taxes. The estimates of direct protection would have been more strongly negative without this adjustment. If the Indian estimates up to 1985 had included the 1960s, direct protection probably would have been positive, but indirect protection would have been more marked owing to high manufacturing protection and large current account deficits before the 1966 Rupee devaluation. The average positive direct protection of agriculture in India between 1986 and 1991 was principally due to the record-breaking trough in world commodity prices between 1986 and 1988, and in part due to import substitution policies in oilseeds which at the time raised Indian domestic edible oil prices to two to three times the levels of imported edible oils.

a) A low-cost grain producer by world standards, with India emerging in the 1990s as the world's second largest rice exporter. Thirdly, starting in Sri Lanka in the late 1970s, by the mid-1980s all the South Asian countries had embarked on a gradual process of economic liberalization which accelerated in the 1990s, especially in 1991-92 in India. These reforms were underway during the Uruguay Round negotiations, but the Round itself had no influence on them, except to the extent that it constituted part of an international liberalizing consensus of which the South Asian policy makers were aware. Although there was strong international support through the multilateral banks, the impetus for the reforms was essentially indigenous and represented the erosion of, and disillusion with economic planning as it had been implemented in South Asia, and the recognition of the extent of past lost opportunities and impatience—spurred by the examples of China, Indonesia and other east Asian countries—that these opportunities should not be frittered away in the future.

The liberalization of South Asian economic policies, and especially trade policies that occurred during the 1980s and 1990s, shared a number of common features, but there were also some differences, especially as between the reforms in India and those in the other four countries.

Very summarily:

a) Between the mid-1980s and the mid-1990s the exchange rates of the South Asian countries were substantially devalued in real terms, the Indian Rupee by about 130 percent between 1985 and 1992. These devaluations supported the liberalization of their import regimes for manufactured goods and also the rapid growth of manufactured exports. As a result, the manufacturing sectors of all the South Asian countries have become much more efficient than they were in the early import-substitution years.

b) Although the liberalization of Indian trade policies has been substantial, it has been much less far reaching than in the other South Asian countries. In particular, the removal of import QRs was largely confined to manufactured intermediate and caput goods. Nearly all consumer goods have remained subject to import licensing, in practice for most of them an import ban. As most agricultural products are defined to be consumer goods, the share of tradable Indian GDP protected by QRs has remained very high. Between 1990 and 1995 it fell from about 93 percent of tradable GDP to about 66 percent of tradable GDP. The shares of tradable GDP still protected by QRs in the other South Asian countries is certainly much lower, at a guess probably well below 10 percent.

c) The ways in which the exchange rate devaluations and the decline of implicit and explicit manufacturing protection have affected agriculture are complex and have varied from commodity to commodi-
ity, but in the aggregate the marked indirect disprotection of agriculture which existed before the mid 1980s has fallen very considerably. There are quantitative estimates of this change only for India (Table 1), but there are good reasons for thinking that there have also been substantial declines in the other South Asian countries.

d) The liberalization of trade policies which occurred in Pakistan, Bangladesh, and Sri Lanka included agricultural trade policies, and Nepal's policies have always been quite open. But in India reforms affecting agricultural trade policies have been much less far reaching. Firstly, there is the general ban on the import of consumer goods, which includes basic agricultural commodities as well as processed foods i.e. in the latter case, most HSC tariff lines in Chapters 16 to 24 of the tariff code. In addition, India has continued to control agricultural imports and exports by the use of parastatal import and export monopolies. As regards basic agricultural commodities, however, these instruments are redundant, since on average Indian domestic agricultural prices are about equal to world prices. Moreover, the Rupee devaluation combined with increases in world prices, have for the time being eliminated or substantially reduced some previous pockets of high agricultural protection which emerged in the 1980s, notably for sugar and oilseeds. However, the QR protection of the local food processing industries is probably more significant, owing to the importance of quality, packaging, brand image, advertising and similar considerations.

e) In real terms, the post-1985 currency devaluations in South Asia have been much greater for the Indian Rupee and incidentally for the Nepalese Rupee (which is linked to the Indian Rupee) than for the Pakistan, Bangladesh and Sri Lankan currencies. Between 1985 and 1995, the Indian devaluation in real terms was approximately 40 percent in relation to Sri Lanka, 30 percent in relation to Bangladesh, and 21 percent in relation to Pakistan. More than the other currencies, the Indian Rupee was supported in the past by its far-reaching protectionist policies, and the new relative exchange rates in the region should help reduce Indian resistance to initiatives to open up regional trade.

f) However, regional trade is still minimal by comparison with pre-independence levels or its future potential. India's trade with other South Asian countries is less than two percent of its total trade, and according to one estimate would be 10 times greater under free trade conditions. There are three major impediments to greater regional trade. Firstly, one by-product of the long standing political conflict between Indian and Pakistan, is that Pakistan formally restricts and in practice bans most imports from India, while India is reported to informally control imports from Pakistan. Restrictions on travel and other contacts also inhibit trade. Secondly, India's general ban on the import of consumer goods and its highly restrictive agricultural import policies discriminate against the import of precisely those products in which regional trade would be likely to occur. Thirdly, although in all the countries tariffs have been brought down from previously prohibitive levels, many of the new "low" tariffs (say in the range of 20 to 40 percent) are still very high by international standards and are serious impediments to trade within as well as outside the region. By comparison with this active discrimination against regional trade, the negotiations of mutual tariff reductions that have occurred so far under SAPTA principally have a diplomatic and symbolic function.

II. The Uruguay Round commitments of the South Asian Countries

The reforms summarized above have greatly improved the incentive environment of South Asian agriculture, by substantially reducing the previous marked general level of anti-agricultural bias, in addition to which incentives within agriculture are more even than they were in the past, and the exchange rate devaluations have improved incentives for exports of both basic commodities and processed agricultural products. The Uruguay Round had practically no influence on this outcome, but it is pertinent to consider the extent to which the agricultural agreement and the new GATT might help keep South Asia from
wandering very far from this new and highly desirable policy direction. Before considering these questions, it is useful to note for future reference a few outcomes of the Round and commitments by the South Asian countries which are relevant for their agricultural policies.

(1) Before the Round India, Pakistan, Bangladesh and Sri Lanka had routinely used the balance of payments exception (GATT Article XVIII: B) to justify the general use of import licensing, including import licensing of agricultural products. During the 1980s and 1990s reforms, nearly all import licensing was abandoned in Sri Lanka, Pakistan and Bangladesh, and its scope considerably reduced in India, but at the close of the Round all four countries continued to invoke this article to justify their remaining QRs. In India these are still very extensive. Currently, about 40 percent of approximately 11,700 8-digit tariff lines were subject to some kind of import restriction, principally import licensing. The import licensing status of some major agricultural products produced in India and in the other South Asian countries is shown in Table 2.

(2) Under the State Trading provisions India notified and gave information to the WTO on a number of parastatal enterprises, including state trading enterprises (STEs) with statutory import monopolies of rice, wheat, coarse grains, oilseeds and some edible oils. The agricultural products “canalised” in this way account for about 55 percent of the value of Indian agricultural and livestock production. None of the other South Asian countries notified agricultural STEs, but there are a few additional situations in India, and some in Pakistan Bangladesh, and Sri Lanka which probably qualify as STEs under the new broader UR definition. These have been indicated in Table 2.

(3) The South Asian countries set very high ceiling tariff bindings for most of the products included in the Agreement on Agriculture. Most bindings in India are at 100 percent or 150 percent, in Pakistan at 100 percent, in Bangladesh at 200 percent, and Sri Lanka at 50 percent. The distributions in each country of the bound tariffs for the approximately 670 six-digit tariff lines covered by the agricultural agreement are shown in Table 3. No other countries negotiated lower rates than these standard bindings with Pakistan, Bangladesh and Sri Lanka, but in India 110 six-digit ceiling bindings were set below 100 percent, and 92 of these were the outcome of discussions with countries with initial negotiating rights. The most active of these appeared to be the USA, followed by the EU and Australia. No South Asian countries are mentioned as having initial negotiating rights as regards the ceiling bindings of other South Asian countries. Apart from these negotiated concessions in India, there are only a few ceiling bindings lower than 100 percent, most of which are inherited bindings from the pre-UR period. In India, some of these are zero bindings on rice, sorghum, maize and millet. India has recently requested that these and a number of other lower bindings be increased as provided by GATT Article XXVIII.

(4) None of the South Asian countries tariffied pre-existing agricultural QRs and they did not offer minimum access levels to imports under tariff quotas. This was because practically none of their agricultural tariffs were bound before the Round, and because they justified their QRs under the balance of payments exception.

(5) As required, the South Asian countries submitted ceiling tariff bindings for all the tariff lines covered by the Agreement on Agriculture, but except India they bound very few of their non-agricultural lines. Following additional bindings of textile tariffs negotiated with the United States and the EU after the Round was concluded, the shares of bound 6-digit non agricultural lines for India, Pakistan, Bangladesh and Sri Lanka are respectively 63, 35, 0.5, and 15 percent.

(6) According to the calculations in their supporting tables, the base period AMS values of India, Pakistan and Sri Lanka are negative. This was the result of apparently negative commodity-specific support, which outweighed positive general input subsidies. In all three countries, these non-commodity specific subsidies were in any case reported to add up to less than the allowable de minimis level of 10 per-
Some Aspects of the Liberalization of South Asian Agricultural Policies: How Can the WTO Help?

percent of the value of agricultural production. Bangladesh, as a least developed country, is exempt from AMS reduction commitments, and did not submit AMS estimates. Consequently, like most developing countries, the South Asian countries have no AMS reduction commitments, but (except for Bangladesh and presumably Nepal when it joins the WTO) they are obliged to ensure that their AMS values do not go above zero during the implementation period.

(7) India, Pakistan and Sri Lanka notified a standard list of exempted Green Box support measures and Special and Differential Treatment (SDT) measures. None of them reported Blue Box measures associated with production limiting programmes.

(8) None of the South Asian countries notified any export subsidies on agricultural products, apart from a general scheme in India for the exemption of profits earned by exporting from income taxes. Apart from permitted subsidies for the transport and marketing of agricultural products, they have therefore committed themselves to not pay any export subsidies in the future.

(9) However, principally in India but to a lesser extent in Pakistan, some important agricultural products are subject to quantitative export controls. In India, some of these are implemented by parastatals, but the majority are implemented by export licensing and were not required to be notified.

(10) Nepal has not yet acceded to the WTO. Negotiations on accession have been under way for a number of years. Like Bangladesh it is on the UN list of “least developed” countries and will presumably be able to take advantage of the special leeway available to least developed countries both in the Agreement on Agriculture and in the WTO more generally. Its economy and its economic policies—especially its trade policies—are strongly influenced by India.

In addition to the commitments and agreements just listed, the Round introduced a number of new multilateral disciplines which affect agriculture, notably on intellectual property rights and the agreement on sanitary and phytosanitary measures. These involve issues which are somewhat different from the traditional questions of openness versus protection and are not discussed in this paper.

III. Future Policies and Issues for the Mini-Round

Despite some major improvements resulting from the reforms of the late 1980s and of the 1990s, much still remains to be done to increase the economic efficiency of South Asian agriculture, in particular by reducing the dispersion of agricultural incentives across crops, diminishing or removing distortive input subsidies, and by freeing up regional trade and thus cutting back the economic costs of the resulting diversion of trade to countries outside the region. In addition it will be important to guard against three dangers: the reemergence of high levels of general anti-agricultural bias; the emergence of ad-hoc protectionism and large dispersions of incentives within the agricultural sectors of these countries, without necessarily the development of marked pro or anti-agricultural bias in the aggregate; and—realistically only in the relatively long run—a trend towards generalized high agricultural protection of the kind seen in the EU and other developed countries. To what extent can the present Agricultural Agreement and the other WTO disciplines contribute to an economically efficient environment for South Asian agriculture, and to that end, what changes would one like to see introduced or foreshadowed in the 1999 mini-Round? This is first discussed below with respect to possible reemergence of high levels of anti-agricultural bias on the one hand, or agricultural protectionism on the other; and secondly with respect to domestic support and stabilization policies and the South Asian countries’ AMS commitments.

3.1. The Future: Anti-Agricultural Bias, Agricultural Protectionism, or Rough Neutrality?

(a) Indirect Anti-Agricultural Bias. The high levels of anti-agricultural bias which existed in the pre-reform years in South Asia were principally the result of indirect disprotection i.e. high protection of manufacturing and the related overvaluation of exchange rates, and to a lesser extent of direct disprotection i.e. export controls and taxes which kept domestic prices of some important crops below world prices and more than offset the effects of the protection of import competing crops. Whether indirect anti-
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<td>Bound tariff</td>
<td>QR status</td>
<td>Applied tariff</td>
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<td>0</td>
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<td>0</td>
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<td>100</td>
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<td>10</td>
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<td>45,300</td>
<td>QR(C),F</td>
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<td>42</td>
<td>150</td>
<td>F</td>
<td>15</td>
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<td>Non-edible oils from seeds</td>
<td>QR (C)</td>
<td>32</td>
<td>300,100</td>
<td>F</td>
<td>30,45</td>
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<td>Coarse grains</td>
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<td>0,100</td>
<td>F</td>
<td>25</td>
</tr>
<tr>
<td>Coarse grain flours</td>
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<td>150</td>
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<td>10</td>
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<td>QR</td>
<td>25,10,15,45</td>
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<td>Meat</td>
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<td>55,150</td>
<td>QR</td>
<td>15,45</td>
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<tr>
<td>Hides and skins</td>
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<td>25</td>
<td>F</td>
<td>10</td>
</tr>
<tr>
<td>Leather</td>
<td>F</td>
<td>0</td>
<td>25</td>
<td>F</td>
<td>15</td>
</tr>
<tr>
<td>Milk and cream</td>
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<td>100</td>
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<td>Other dairy products</td>
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<td>0,40,100,150</td>
<td>F</td>
<td>30,45</td>
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<td>F</td>
<td>35,0</td>
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<td>100,30,55</td>
<td>F</td>
<td>30,45</td>
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<td>Cotton</td>
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<td>F</td>
<td>0</td>
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<td>Wood and wood products (O)</td>
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<td>25–40</td>
<td>F</td>
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<td>Fish and marine products (O)</td>
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<td>n.b.</td>
<td>F</td>
<td>45,35</td>
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Table 2. (Cont.) Some major agricultural commodities: import QRs, tariffs and tariff bindings in South Asia in 1996 or 1997

<table>
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<tr>
<td></td>
<td>QR status</td>
<td>Applied tariff</td>
<td>Bound tariff</td>
<td>QR status</td>
<td>Applied tariff</td>
<td>Bound tariff</td>
<td>QR status</td>
<td>Applied tariff</td>
<td>Bound tariff</td>
<td>QR status</td>
</tr>
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<td>Spices: cassia,</td>
<td>QR (C)</td>
<td>32</td>
<td>100,150</td>
<td>F</td>
<td>35</td>
<td>100</td>
<td>F</td>
<td>30,45</td>
<td>200</td>
<td>F</td>
</tr>
<tr>
<td>cinnamon, cloves</td>
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<td></td>
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<tr>
<td>Spices: all others</td>
<td>QR</td>
<td>32</td>
<td>150,100,35</td>
<td>F</td>
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<td>100</td>
<td>F</td>
<td>45</td>
<td>200</td>
<td>F</td>
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<td>Tea</td>
<td>QR</td>
<td>12</td>
<td>150</td>
<td>F</td>
<td>45</td>
<td>150</td>
<td>F</td>
<td>45</td>
<td>50,200</td>
<td>F</td>
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<td>Raw tobacco</td>
<td>QR</td>
<td>42</td>
<td>100</td>
<td>F</td>
<td>45</td>
<td>100</td>
<td>F</td>
<td>15</td>
<td>200</td>
<td>F</td>
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<td>Natural rubber (O)</td>
<td>QR</td>
<td>22</td>
<td>25</td>
<td>F</td>
<td>10</td>
<td>n.b.</td>
<td>F</td>
<td>22.5</td>
<td>n.b.</td>
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<tr>
<td>Coffee beans, processed coffee</td>
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<td>12</td>
<td>100,150</td>
<td>F</td>
<td>45</td>
<td>100</td>
<td>F</td>
<td>45</td>
<td>200</td>
<td>F</td>
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<tr>
<td>Cocoa beans, processed cocoa</td>
<td>QR, F</td>
<td>42,32</td>
<td>100,150</td>
<td>F</td>
<td>25,35,45</td>
<td>100</td>
<td>F</td>
<td>45,22.5</td>
<td>200</td>
<td>F</td>
</tr>
<tr>
<td>Jute (O)</td>
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<td>0</td>
<td>40</td>
<td>F</td>
<td>25</td>
<td>n.b.</td>
<td>F</td>
<td>30</td>
<td>50</td>
<td>F</td>
</tr>
<tr>
<td>Sisal, coir (O)</td>
<td>F, QR</td>
<td>32</td>
<td>40</td>
<td>F</td>
<td>25</td>
<td>n.b.</td>
<td>F</td>
<td>30</td>
<td>n.b.</td>
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</tr>
<tr>
<td>Flax, hemp</td>
<td>F</td>
<td>22,32</td>
<td>100</td>
<td>F</td>
<td>25</td>
<td>100, n.b.</td>
<td>F</td>
<td>30</td>
<td>200</td>
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<td>Greasy wool</td>
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<td>25</td>
<td>F</td>
<td>10</td>
<td>30</td>
<td>F</td>
<td>0</td>
<td>200</td>
<td>F</td>
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<tr>
<td>Raw silk</td>
<td>QR</td>
<td>32</td>
<td>100</td>
<td>F</td>
<td>25</td>
<td>100</td>
<td>F</td>
<td>0</td>
<td>200</td>
<td>F</td>
</tr>
</tbody>
</table>

Notes: The products in this Table account for more than 90 percent of rural GDP in each of the five countries. They are listed in approximate order of the value of their production in India. Their relative importance in the other four countries is generally not the same as in India. Related products with differing QR status or tariffs are grouped as indicated. QR means there is some form of quantitative restriction. QND means that the restriction has been judged to fall within the UR definition of state trading, usually in the form of a parastatal import monopoly or in a few cases a private import monopoly enforced by the government. Not all of these apparent cases of state trading have been notified as such to the WTO, however. F means that trade is free of quantitative restrictions as defined in the GATT, except for a few cases of tariff quotas. When some products under a general heading are subject to QRs and some are free, the status of the most important or the largest number is indicated first. Tariffs are indicated following the same principle. Tariffs separated by commas indicate the rates for different tariff lines under a general heading. Tariffs separated by a hyphen indicate a number of rates between the indicated minimum and maximum. The tariffs shown are for imports intended for consumption, not for imports of seeds or cuttings etc intended for planting. In India tariffs on the latter are generally zero, and in many cases are also exempt or lower than the general level in the other countries. The rates shown are those actually applicable at the indicated dates. These are sometimes lower than the rates given in the official tariff schedules owing to exemptions or partial exemptions. Products not covered by the UR agricultural agreement are indicated with an (O). Many of these tariffs are not bound; this is indicated by n.b. Tariff bindings being renegotiated under GATT Article XXVIII are indicated by an R. In Sri Lanka rice imports are subject to a tariff quota scheme under which licenses are allocated to traders which allow them to import at tariffs below the scheduled level. The zero rates for wheat and wheat flour are those applied in connection with the de facto state trading arrangements for these products, and are lower than the "official rates" of 20 and 35 percent respectively. Sugar and milk imports are subject to a variable tariffs aimed at maintaining "remunerative" domestic prices. See Athukorala and Kelegama (1996). Apart from this arrangement none of the five countries appear to use tariff quotas, and no tariff quotas were listed in their UR schedules. The Bound tariffs are the rates that will apply in 2004, at the end of the implementation period. Except for India, practically all of these also applied at the beginning of the implementation period i.e. in 1995. A number of the Indian bindings are being reduced in stages from initially higher base period levels see discussion in the text.
### Table 3. Uruguay Round tariff bindings in South Asia: agricultural and other rural products

<table>
<thead>
<tr>
<th>Distribution of 673 lines</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Sri Lanka</th>
</tr>
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<tbody>
<tr>
<td>Specific tariff</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>300%</td>
<td>3.9</td>
<td>0.0</td>
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<tr>
<td>200%</td>
<td>0.0</td>
<td>0.1</td>
<td>98.1</td>
<td>0.0</td>
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<tr>
<td>150%</td>
<td>33.1</td>
<td>1.2</td>
<td>0.0</td>
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</tr>
<tr>
<td>100%</td>
<td>46.5</td>
<td>98.0</td>
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<tr>
<td>&lt;100%</td>
<td>16.2</td>
<td>0.7</td>
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<td>0.0</td>
<td>0.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Bound rates: simple average</td>
<td>114.8</td>
<td>199.5</td>
<td>197.1</td>
<td>50.0</td>
</tr>
<tr>
<td>Average of rates &lt;100%</td>
<td>39.3</td>
<td>30.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution of 132 lines</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bound</td>
<td>73.5</td>
<td>90.9</td>
<td>100.0</td>
<td>26.5</td>
</tr>
<tr>
<td>Bound</td>
<td>26.5</td>
<td>9.1</td>
<td>0.0</td>
<td>73.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Bound rates: simple average</td>
<td>37.9</td>
<td>50.0</td>
<td>not appl.</td>
<td>50.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution of 805 lines</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific tariff</td>
<td>100%</td>
<td>99.6</td>
<td>197.1</td>
<td>50.0</td>
</tr>
<tr>
<td>100% to 300%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;100%</td>
<td>38.9</td>
<td>44.1</td>
<td>50.0</td>
<td>50.0</td>
</tr>
</tbody>
</table>

Sources and Notes: From the Uruguay Round country schedule, Part I, Section I, Agricultural products and Part I, Section II, Other Products. "Other Products" includes the following HSC tariff lines: Chapter 03: Fish crustaceans etc; 1604L: Processed fish; 4401: Natural rubber; 4401 to 4407: Logs, sawn, chipped timber, etc.

Agricultural bias will reemerge principally depends on what happens to manufacturing protection. In this regard it is encouraging that a great deal of pressure has been exerted on the South Asian countries in recent years to disinvolve India, at which the Balance of Payments committee asked India to present a plan for phasing out its QRs when the consultations resume in June 1997. The abolition or phasing out of these QRs would represent a major liberalization of Indian trade policies and would allow bound tariffs to set an upper limit to the protection of many manufactured products. But most of these tariffs (present...
maximum 42 percent) are quite high even though they are far lower than the prevailing pre-reform rates of 100 percent or more. Furthermore the bindings offered by India during the Round (mostly 40 percent or 25 percent to be effective in the year 2001/02), although capping them at about their present levels, will not do anything to reduce them further. Moreover, they are systematically escalated according to the degree of processing, and hence are capable of providing high levels of effective protection. Finally, many tariff lines are not bound — especially tariffs on consumer goods which are subject to India’s consumer good import ban — and in these cases the GATT provides no constraint on the level of protection that can be provided by tariffs. In addition, in recent years local content or “indigenisation” programmes are being used with increasing frequency and India has revived and its long dormant anti-dumping and anti-subsidies legislation. Local manufacturing lobbies have become especially active in pushing for and obtaining, with little apparent trouble, substantial anti-dumping duties. All this suggests that realised manufacturing protection, i.e. the actual difference between the domestic and international prices of manufactured goods, is on the rise again in India, after a period following the 1991 devaluation during which it which it was quite low, and that indirect anti-agricultural bias is increasing again from the historically low levels which seem to have existed in the first half of the 1990s.

As noted already, Sri Lanka has ceased to use the balance of payments exception to justify QRs, and it seems unlikely that Pakistan would be able to continue using QRs if India agrees to phase them out following the next Balance of Payments committee consultation. If it wishes, Bangladesh may possibly be able to use its status as a least developed country to use Article XXVIII-justified QRs, but this would probably be unlikely if the Indian QRs are phased out. Likewise, it would be most unlikely for Nepal to use QRs after it accedes if India and Bangladesh give them up, since — among other things — the MFN principle would require them to be applied to imports from India. All of this underlines the importance for the region of the outcome of the Balance of Payments Committee consultations with India. For South Asia, the UR Understanding on the removal of QRs and how it is implemented in practice is potentially the single most important contribution of the Round to trade liberalization in the region.

Having said this, it must also be recalled, however, that very few non-agricultural tariff lines have been bound by Bangladesh and Sri Lanka, and only about 35 percent by Pakistan. This means that that even if QRs are not used, there are no commitments with the WTO on upper limits to tariff protection. Until a much larger proportion of their non-agricultural tariffs are bound, there is consequently no effective formal WTO constraint on increases in manufacturing protection, and therefore no constraint to future increases in indirect anti-agricultural bias.

(b) Direct anti-agricultural bias and export policies

During the pre-reform period the South Asian countries used quantitative restrictions, parastatal export monopolies and export taxes to control agricultural exports. As part of the reforms export taxes were cut and eventually removed in all the countries, and the scope of export canalisation and export licensing was reduced. By 1997 there were no agricultural products subject to export NTBs in Sri Lanka, only one (pulses) in Bangladesh, and primary product exports from Nepal were in practice unrestricted. In India, however, despite some important reforms, especially the freeing of rice exports, most major agricultural commodities were subject to some form of NTB or to export canalisation by a parastatal. A number of major agricultural products were also subject to export licensing in Pakistan. These export NTBs are in direct contravention of the GATT Article XI, according to which WTO members agreed to eliminate export as well as import prohibitions and restrictions. This general position was strengthened in the Round by the provision that export restrictions include “restrictions made effective by state trading operations.” On the other hand, exports channelled through export monopolies are recognised by the GATT, provided that they are made in accordance with commercial principles and do not discriminate between buyers and markets. Thus restrictions such as licensing over the activities of independent exporters are unambiguously GATT-illegal, whereas some — albeit uncertain — legal cover is available to shelter parastatal export monopolies. In both cases, however, the mercantilist nature of the GATT process makes it unlikely that either of these ways of restricting exports and depressing domestic prices will be challenged, since competing exporters have no motive to challenge another country which voluntarily removes itself from, or diminishes its role in, export competition. Importers are also unlikely to object unless the effect is to perceptibly raise
world prices or reduce availability. For these reasons the GATT and the agricultural agreement are unlikely in practice to constrain the continued use of these distortionary policy instruments, and by the same argument, there would probably not be much GATT resistance to the introduction of new export controls or to the expansion of export canailization. In addition, it is relevant to note here that it will not be GATT-legal for the South Asian countries to move in the other direction and offset or partly offset direct taxation of agricultural exports by subsidizing the exports of some agricultural products, owing to the zero export subsidy commitments made during the Round. In this regard, the subsidies currently being paid to exporters under India’s SIL (Special Import License) arrangement are probably breaching its zero export subsidy commitment insofar as the products exported are covered by the agricultural agreement.

(c) Agriculture and import protection. It is apparent from the previous description of the commitments undertaken by the South Asian countries in the Round that they have made sure that they will have plenty of room to protect their domestic markets if they wish. In India, for example, there are a number of lines of defence against agricultural imports: firstly, the use of Qrs under Article XVIII: B; secondly, very high ceiling bindings over most products, and thirdly, the parastatal import monopolies. The high ceiling bindings leave India the possibility if it wishes to introduce tariff quotas and de facto import licensing, by setting a prohibitive tariff and a lower tariff-quota rate at which applications to import would be rationed by licensing. The high ceiling bindings also leave considerable scope for the parastatal import monopolies to push domestic prices above world prices by limiting their imports, and there is nothing in the GATT or the agricultural agreement which would prevent India from canalisning new products. There is also scope for price band schemes with variable tariffs aimed at stabilizing domestic prices. Similar possibilities for increased import protection exist in Pakistan, Bangladesh and Sri Lanka, although the scope is much less in Sri Lanka owing to its lower ceiling bindings of 50 percent. In addition, in India GATT-compatible anti-dumping and anti-subsidies legislation is in place, and the introduction of safeguards legislation was foreshadowed in the 1997/98 budget. Since 1993, 41 anti-dumping cases have been initiated. All of these have involved industrial goods which, following the reforms, have lost their previous QR protection and are now subject to much lower tariffs than previously. This process could be extended to agricultural products if other means of protecting them are lifted, and could be used in the other South Asian countries. So far there has been no anti-dumping activity in these countries, probably at least partly because of the large number of unbound industrial tariffs and the very high levels of most of the agricultural ceiling bindings. Despite this, it is significant that the introduction of a GATT-compatible anti-dumping law is currently being discussed in Pakistan. These procedures, with their ad hocism, ideas of "fair competition," their nexus with local lobbies, and complex legalistic procedures fit in very well with the operating modes and mind-sets of the bureaucracies which have traditionally run the South Asian import licensing systems, and as the recent Indian experience is showing, are likely to proliferate as other ways of protecting domestic markets are reduced.

Nevertheless the Round and its implementation is likely to limit the possibilities for increased protection of these markets in some ways. Firstly, as already noted, the balance-of-payments loophole for QRs has already been closed for Sri Lanka, and if the Indian Qrs are phased out and India disinvokes Article XVIII: B it is likely that the past unrestricted use of Qrs in the subcontinent that existed under the old regime will disappear. Secondly, even though many of the ceiling bindings are extremely high, in some cases they will truncate extremes of high protection that have been observed in the past. For example, in India in the late 1980s implicit protection of coconut oil went even higher than the UR ceiling binding of 300 percent. Sri Lanka’s ceiling binding of 50 percent for most products will be particularly effective in this regard. Thirdly, the standard GATT bargaining process has proved effective in getting India to set much lower ceiling bindings than its general level for about 16 percent of its agricultural tariff lines (see Table 3). It is reasonable to suppose that determined bargaining by interested countries should be able to extend the Indian list, and to obtain similar concessions in the other South Asian countries. Finally, less important in the short and medium run, but extremely significant for the longer run, the South Asian countries’ zero export subsidy commitments will constrain domestic prices from being pushed up to the extent that surpluses are generated that can only be profitably exported with export subsidies, either in the form of direct payments to exporters or in the form of cross subsidization by parastatals such as the Food Corporation of India.
3.2. The future: domestic support and stabilization policies and the AMS

Price support policies exist in some form for nearly all major South Asian primary commodities, and are especially important for rice and wheat. Buffer stocks and direct controls over imports and exports have also been used to stabilize domestic prices. In India, domestic rice, wheat, pulses and sugar prices have been much more stable than international prices, but the domestic prices of most other major crops — including coarse grains and oilseeds — have fluctuated just as much, or in some cases more, than international prices, despite the measures taken to insulate their domestic markets from world markets. In India, with the exception of rice, wheat and sugar, the support price schemes are not operative in most years, because the support prices are minima which are set well below market prices, in addition to which the price support organizations do not always intervene when market prices for some commodities (e.g. certain coarse grains) fall below support prices in local markets. Nevertheless, the existence of minimum support prices is extremely important politically, and the South Asian countries will certainly wish to continue using them.

In their UR schedules, none of the South Asian countries notified that they have a positive AMS, and the supporting tables for India, Pakistan and Sri Lanka show fairly large negative AMS values for the base period. Consequently, they have no support reduction commitments, but on the other hand are required to ensure that their Current AMS values do not exceed zero during the implementation period i.e. until 2004. As a “least developed country,” Bangladesh is not required to undertake any reduction commitments, and did not submit base period AMS estimates. For the same reason Nepal will probably have no support reduction commitments if and when it accedes to the WTO. The first Current Total AMS estimates were supposed to have been submitted to the Committee on Agriculture in September 1996, but as of May 1997 none of the South Asian members had done so. This delay is reported to be in part to accommodate lags in the availability of statistics and varying fiscal and crop years, but it may also be that countries are now having to deal with some of the difficulties of the AMS concept, which does not appear to be well understood in South Asia. Some of the issues which will concern them, and other more general issues are discussed below.

(a) Inflation, devaluation and changing world commodity prices. The most difficult and basic of these is the requirement that the key comparisons of the Current AMS with the base AMS are in nominal prices as regards commodity-specific support, with no allowance for inflation, changing exchange rates or changing world prices. That this is not well understood in South Asia is apparent from two studies which follow economic logic rather than the agricultural agreement text, and incorrectly estimate Current AMS values for commodity support by comparing domestic support prices with border prices prevailing during the same period, rather than the 1986–88 average reference prices notified in the UR AMS supporting tables, all of which were expressed in domestic currencies. South Asian inflation has generally been quite modest by the standards of some other developing countries, but the cumulative effect over even relative short periods has been considerable. For example, between the last base year (1988) and 1995 prices increased and nominal exchange rates were devalued as follows:

<table>
<thead>
<tr>
<th>Percentage increase in CPI</th>
<th>Percentage nominal devaluation vs US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>90</td>
</tr>
<tr>
<td>Pakistan</td>
<td>100</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>46</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>121</td>
</tr>
<tr>
<td>Nepal</td>
<td>100</td>
</tr>
</tbody>
</table>

With these rates of inflation and devaluation it is probable that India, Pakistan and Sri Lanka are now breaching their zero AMS commitments if they follow the rules and compare current domestic support prices with the base period nominal reference prices. They could be doing this even if domestic support were to have declined substantially in real terms. If the Current AMS turns out to be greater than allowable “de minimis” support, in theory they would then be obliged to reduce it by cutting or abolishing support prices, cutting back on input and other subsidies if in the aggregate these exceed the “de minimis” level, or replacing “Amber” measures which are counted in the AMS with Green Box measures which are excluded. This brings out a basic problem with the AMS approach, which is that there is absolutely no economic basis for the use of historical border prices to indicate the appropriate direction of changes in current domestic support prices. Some recognition of this is in the agricultural agreement (Article
which suggests the possibility of making the base AMS calculations in a foreign currency. However, this was not done by the South Asian countries, and from a GATT legal point of view it is questionable whether countries, having opted for one method, can change that method and use a different one in the Current AMS notifications. On the other hand, if they do not, the resulting Current AMS for domestic support will give economically meaningless results. As an example, based on the Rupee reference prices in the Pakistan supporting tables and support and border prices given in a study by Qureshi, the following are the percentage differences between some 1994/95 support prices (1993/94 in the case of sugarcane) and their reference prices and current border prices.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Base period reference price</th>
<th>Current border price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>27</td>
<td>-15</td>
</tr>
<tr>
<td>Basmati rice</td>
<td>-24</td>
<td>0</td>
</tr>
<tr>
<td>Coarse rice</td>
<td>33</td>
<td>65</td>
</tr>
<tr>
<td>Seed cotton</td>
<td>54</td>
<td>-19</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>69</td>
<td>1</td>
</tr>
</tbody>
</table>

These disparities in part result from the Pakistan devaluation of the Rupee and the domestic inflation between the base period and the mid 1990s, but also from changes in world prices, most but not all of which increased substantially.

This brings out another issue which is independent of the inflation/devaluation problem, namely the possibility that the AMS levels of some commodities could go above zero just because domestic administered prices are adjusted upwards along with rising world prices. This is true of a number of Indian support prices, which were in the general region of border prices during the base period and have since increased with but not exceeded world prices. Given the existence of support prices, this link to and approximate equality with world prices is desirable economically, but even without Rupee devaluation and inflation, the product support AMS would as a result go above zero and — subject to the de minimis rule — trigger downward adjustments in support prices and in agricultural incentives, insofar as the support prices actually influence market prices.

Of course all of the three difficulties in the application of the AMS rules discussed above would go away if there were no support prices and domestic agricultural markets were protected solely by tariffs and/or STE import monopolies. In that case the product-specific AMS would be zero regardless of the tariff or of the tariff-equivalent of the STE operations, provided there were no other interventions — especially by the STEs — that could be interpreted as price support or administered pricing. As noted previously, with the present high to prohibitive levels of most of the South Asian countries' ceiling bindings, they could stabilize domestic prices of importables by varying STE imports or by operating tariff quotas, and the domestic prices of exportables such as rice could be stabilized by variable export taxes, which are GATT-legal, or even quantitative export controls which are probably de facto if not de iure GATT-legal. They could also assure some minimum domestic price level during downward spikes in world prices by the use of the safeguards mechanism. On the other hand, in the long term economic interests of the South Asian countries and in the interests of the efficiency of world agricultural markets, it will be important that the present high or prohibitive ceiling binding should be reduced very substantially, and this of course will leave less space for tariffs or STEs to stabilize and guarantee minimum domestic prices. In this regard, one key question is how more open South Asian markets will affect the stability of world prices. Simulations of the effects of the removal of export and import controls from Indian common rice over the period 1971–95 resulted in very substantial reductions in the instability of world rice prices during this period, but this result was almost entirely due to export liberalization, over which the GATT has little influence.

Regardless of the possibilities of supporting and stabilizing domestic prices in alternative ways in order to meet the AMS constraints, it is unlikely that the South Asian countries would be willing in the near future to give up their price support policies, certainly not for wheat and rice, nor for the majority of commodities for which in most years the support prices are well below market prices and there are no, or very small, purchases. In the first case, current policies — especially in India — are tied in with long established policies on food security and have the support of powerful farmer lobbies and entrenched bureaucracies. In the second case, the support prices are perceived to be important guarantees to farmers against generally low prices, and (more important in practice) against low prices in local markets that
may result from localized events such as transport bottlenecks during large local harvests. All this means that, from the South Asian viewpoint, some way will need to be found around the apparent impasse to the AMS process which would result from the use of nominal base year reference prices. A simple partial solution which would handle the inflation and exchange rate problems, but not the problem of changing world prices, would be to express both the current AMS and the original base AMS calculations in US dollars. By definition, this would mean revisiting the base AMS notifications, especially the reference prices that were used, but this is likely to involve a separate set of issues.

(b) How reliable are the base period notifications? “Dirty AMSification?” In preparing their UR base period AMS tables, insofar as they wished to protect their policies from GATT constraints, the South Asian countries had a motive to minimize their base period AMS estimates so that they would not be subject to reduction commitments at the conclusion of the Round, and to protect themselves against incurring reduction commitments during the implementation period. A check (Table 4) on the base period reference prices reported in the Indian supporting (AGST) tables reveals that they were very considerably overstated. In addition, Gulati and Sharma (1996) point out that there is at least one egregious error, in that the domestic support prices of seed cotton (kapas) are compared with the border prices of cotton lint! It is possible that errors such as this may just reflect lack of expertise or lack of understanding of the significance of the base AMS estimates, but it is also possible that during the Round India unconsciously or consciously followed the dubious example of the major developed countries, which allowed each other to cheat (“dirty tariffication”) in quantifying their agricultural non-tariff barriers. In any event, in the case of India, the result was that the negative direct support calculated was much too large, and more important that a number of the key base reference prices are much too high. In all probability similar problems will be found in the supporting tables of other countries, and it will be difficult to avoid having another look at these data and if necessary revising them, especially if countries submit Current AMS estimates expressed in US dollars or some other low inflation currency, even though their original submissions were in domestic currencies.

(c) How should market support be measured? How should de minimis support be defined? Recognizing that it is generally only necessary for a marketing board to purchase a small proportion of a commodity in order to support its

<table>
<thead>
<tr>
<th>AMS Tables: estimated base period reference price US$/ton(1)</th>
<th>Base period:Alternative estimate of average border price US$/ton(2)</th>
<th>Percentage excess of (1) over (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat 275</td>
<td>153</td>
<td>79</td>
</tr>
<tr>
<td>Common rice 259</td>
<td>224</td>
<td>16</td>
</tr>
<tr>
<td>Sorghum 216</td>
<td>116</td>
<td>86</td>
</tr>
<tr>
<td>Maize 229</td>
<td>121</td>
<td>89</td>
</tr>
<tr>
<td>Groundnut pods 495</td>
<td>232</td>
<td>113</td>
</tr>
<tr>
<td>Sugar cane 11.20</td>
<td>8.31</td>
<td>35</td>
</tr>
<tr>
<td>Rape/mustard seeds 497</td>
<td>257</td>
<td>93</td>
</tr>
<tr>
<td>Soybeans 226</td>
<td>278</td>
<td>-19</td>
</tr>
<tr>
<td>Seed cotton 1263</td>
<td>525</td>
<td>141</td>
</tr>
<tr>
<td>Gram 309</td>
<td>326</td>
<td>-5</td>
</tr>
</tbody>
</table>

Notes: The AMS Tables reference prices in US dollars are derived at average prevailing exchange rates from the Rupee reference prices given in the Tables. The estimated average actual reference prices are from estimates of Indian border prices in research on incentives to Indian agriculture by Ashok Gulati, Garry Pursell, Anju Gupta, and others. The general methodology of these studies is discussed in Garry Pursell and Anju Gupta (1996). The border prices given above are cif, except for common rice and cotton, which are fob. In both the AMS and the alternative estimates, because groundnut pods and sugar cane are not widely traded internationally in that form, the border reference prices are estimates using information on the costs and margins involved in transforming groundnut pods into shelled groundnuts and sugar cane into sugar and molasses. In the alternative estimates notional border prices for seed cotton have been estimated from the costs and margins involved in transforming it into cotton lint and cotton seeds.
price at some desired level, Annex 3: 8 of the agricultural agreement states that the value for AMS purposes of market support is calculated by multiplying the gap between the reference price and the administered price by the "quantity of production eligible to receive" (author's emphasis) the applied administered price." This presumably means that in calculating the commodity specific AMS in such cases, the total volume of production which benefits from the supported price is supposed to be included in the AMS, not just the quantity actually purchased in support operations. Going beyond this, as a logical extension, support prices which are announced but not operational in the sense that they are consistently lower than free market prices, so that there are no support interventions, should also be included in the AMS. In fact, apart from wheat and rice, most of the Indian base period AMS estimates used announced support prices which were generally significantly lower than free market prices.\(^4\) The Indian estimates also use total production of each commodity, which also appears to be consistent with the AMS rules. However, for wheat, basmati rice, coarse rice, onions and potatoes, the Pakistan base AMS estimates use only the actual quantities procured, which is prima facie inconsistent with the rules. The approach adopted obviously affects the weights of the various crops in the overall AMS, and also raises the question of the appropriate weights to use in the estimation of the Current AMS. In particular, if countries used an incorrect method in their original notification, will they still be obliged to use the same method in their Current AMS notifications, or will the original estimates have to be revised?

Another possible interpretation of the definition of the AMS as referring to the production "eligible to receive" the administered price, is that only marketed production should be included in the AMS estimates, on the grounds that support programmes do not affect subsistence production. This approach was adopted in a number of developing countries, but not in the base-period estimates of India, Pakistan and Sri Lanka. The de minimis rule for developing countries is that they need not reduce support that is less than 10 percent of the "total value of production of a basic agricultural product" (Article 6: 4), and only support in excess of 10 percent is supposed to be included in the overall AMS. But as pointed out by Konandreas and Greenfield (1995), if support is measured only with regard to marketed production, but its de minimis ratio is calculated with respect to total production, for crops with a large share of non-marketed production it would be possible to provide support consider-ably in excess of 10 percent. How this issue will be resolved is important for South Asia, since on-farm consumption accounts for a very large share of the production of many major crops, especially rice, coarse grains and pulses. If it is decided as illustrated above, this would give very considerable leeway for the South Asian countries, if they wished, to use high support prices for these major crops. This would depend, however, on how the inflation issue is resolved.

(d) Input and other subsidies and the AMS. The principal agricultural input subsidies in South Asia which are required to be reported are for the operating (O&M) costs of canal irrigation, electricity (principally for pump sets), fertilizers, and credit. The subsidy which is by far the largest and the most distorting, namely the universal failure to recover the caput cost of canal irrigation, is excluded by Article 6: 2 as an investment subsidy.\(^5\) In the AMS tables, all of the included subsidies were treated as non-product specific subsidies, and as such they are protected from the inflation problem, because in their case the de minimis rule provides that only the value of non-commodity-specific subsidies which exceeds 10 percent of the current value of agricultural production, is to be included in the AMS. In their supporting tables, Pakistan and India estimated that during the base period these subsidies were respectively 0.8 and 4.05 percent of the value of agricultural production, well within the de minimis limit. The remarkably low estimate for Pakistan was in part due to the fact that it excluded 74 percent of its fertilizer subsidy on the ground that this percentage of the subsidy went to "low income or resource poor producers" within the meaning of Article 6: 2 of the agricultural agreement. India included the total of its general fertilizer and other subsidies, but its Table on Special and Differential Treatment includes the comment that if land holders with less than 10 hectares of land "are taken as low income or resource poor, the input subsidies given to 79.5% of the total land holdings will qualify under this exemption." It is apparent from these differing treatments that what is meant by "low income or resource poor" is an issue, but at least as concerns South Asia, how it is resolved will make no difference to subsidy or support policies, since the total subsidies are in any case well below de minimis levels and government budget constraints are likely to keep them well below the 10 percent ceiling in the foreseeable future. Consequently, the
new GATT regime has not and will not provide any support to local initiatives to cut these highly distorting subsidies. There are also no issues of any significance as regards the subsidies or programmes that the South Asian countries have notified as belonging to their Green and Special and Differential Treatment Boxes, which in the aggregate are very small by comparison with the major input subsidies. Even if all of these were taken out of their boxes and included with the general input subsidies, the new totals would remain well below the *de minimis* limits.

**IV. Conclusions**

How the economic policies that affect agriculture evolve in South Asian is an extremely important issue for the efficiency and growth of these economies and for the rate at which poverty — predominantly centred in rural areas — can be reduced. Because of the large share of South Asia in world production and consumption of agricultural products, it is also of great importance for world agriculture. General policies of economic and trade liberalization during the 1980s and the first half of the 1990s have greatly improved the situation of South Asian agriculture, both by reducing the formerly very high levels of generalized anti-agricultural discrimination and by reducing the dispersion of agricultural incentives. The Uruguay Round had little or no direct influence on this outcome, but despite the South Asian countries' very cautious commitments, the new regime offers opportunities to both domestic reformers and the WTO community to further the liberalization process, and to keep policies from regressing back to the old patterns of anti-agricultural discrimination, or in the other direction towards agricultural protectionism of the kind that exists in some of the major developed countries. These opportunities can be grouped into general GATT rules and commitments which affect manufacturing, and those which principally impinge on agriculture.

As regards the first group, the immediate issue which is by far the most important, is the routine use of QRs by India under Article XVIII: B. Unless an agreement is reached on phasing these out in a relatively short period — say over one or two years — India's commitments on non-agricultural tariffs and its commitment to a tariff-only regime for agriculture will be practically meaningless, especially if reserves the right to routinely extend import licensing and other QRs to previously uncontrolled products, as was its practice before 1991. In terms of the criteria in the Round's Understanding on the balance of payments exception, which were reasserted by the Balance of Payments Committee in the Sri Lanka consultations, India would have had a case for imposing temporary QRs during its balance of payments crisis of mid-1991, but its payments position has been strong since that time and effectively managed by fiscal, monetary and exchange rate policies. If Article XVIII: B is to have any teeth at all under the new WTO regime, it is therefore essential that India be persuaded to disinvoke it. This would be a very strong precedent for Pakistan to follow suit. It would also be in Bangladesh's economic interest to help tie in its presently almost QR-free trade regime by doing the same, even though its "least developed" status in the GATT might allow it to keep the right to use QRs in reserve.

Among other things, giving up their past permanent use of the balance-of-payments exception as legal cover for QRs, will help protect the South Asian countries' agriculture sectors against the reemergence of the old high levels of anti-agricultural bias which resulted from QR protection of their manufacturing sectors. But this will need to be supplemented by binding the very large number of non-agricultural tariff lines which at present are unbound. In India, most of these are consumer goods including processed agricultural products which are presently subject to India's general consumer good import ban. Assuming that these balance-of-payments justified QRs will be lifted in the near future, potential exporters to India have an interest to negotiate with India (and with the other South Asian countries) to ensure that high unbound tariffs do not block their exports.

A third set of general protective instruments in South Asia which should be of concern to both local liberalizers and to WTO members, are the various ad hoc measures, especially anti-dumping and local content programmes, which are capable of providing very high levels of protection, and which are now being routinely used in India in response to manufacturing lobbies. India's use of these measures is likely to strengthen arguments for introducing them or using them more widely in the other South Asian countries, especially in Pakistan. There are strong arguments — but not much time — for persuading Pakistan, Bangladesh, Sri Lanka and Nepal when it accedes, to abjure the use of all these measures, or to just use the safeguards mechanism.
The new WTO regime also provides a number of liberalizing opportunities which are more specific to agriculture. These are:

a) Negotiating with India, Pakistan and Bangladesh to bring down their present extremely high and often prohibitive ceiling tariff bindings for agricultural products. Sri Lanka's general rate of 50 percent could serve as an interim target. In the same vein, it would be a mistake to agree to Nepal's accession at the high ceiling bindings presently prevailing in India, Pakistan and Bangladesh. Without a very substantial reduction in the general level of the South Asian ceiling bindings, there will be practically no effective WTO constraint on the use of tariffs, tariff quotas, STEs or other devices to provide high protection to local agricultural industries.

b) Paying careful attention to how STEs are used, especially in India. It has been suggested that STEs operating as import monopolies for agricultural products could be considered to be, by their nature, QRs and therefore GATT-illegal under the agricultural agreement. Assuming that such a determination is unlikely, the restrictiveness of STEs could nevertheless be limited by monitoring their behavior to ensure that their resale margins do not exceed bound tariffs, or if they do not import at all, that the implicit protection which results is below bound tariffs. It might also be possible to negotiate general standstill agreements with India and the other South Asian countries that preclude extending the scope of STEs beyond the products at present subject to their influence or control.

c) The zero export subsidy commitment of the South Asian countries with respect to agricultural agreement products is of major significance, because it in principle sets a limit to domestic support or subsidies that would generate exportable surpluses. However, it needs to be monitored and implemented. Although they are minor in scope and effect, India's present SIL import license scheme which is available to exporters of agricultural agreement products, is probably violating this commitment. If so, this ought at least to recognized and noted at the WTO.

d) As regards price support, the original negative AMS calculations of the South Asian countries means that they are committed to keeping their Current AMS at zero or below during the implementation period. But what this implies for their support price policies is poorly understood in South Asia, and the confusion is exacerbated by the inherent lack of economic logic of the AMS mechanism. In its present form it is replete with problems and uncertainties for the South Asian countries, especially as regards inflation, devaluation, changing world prices, and the interpretation of the rules on how commodity-specific support should be measured. In addition there is evidence that at least one country — India — very considerably overestimated the base period reference prices of a number of major commodities, suggesting the possibility of "dirty AMSification" along the lines of the "dirty tariffication" practiced by the EU and other developed countries during the Round. It will be important to clarify this situation during the mini-round. One partial solution might be to retrospectively revise the whole AMS mechanism by allowing countries to submit Current AMS estimates and revised base AMS estimates in US dollars or some other low inflation currency. But revisiting the base submissions in this way would logically also involve checking the validity of the reference prices, and also the validity of the related calculations.

e) By contrast, the input subsidies provided by the South Asian countries are well below the AMS de minimis limit of 10 percent, mainly because the largest and most distorting subsidy — the failure to capture any of the caput costs of canal irrigation — is excluded from the subsidy definition. The subsidies included by the South Asian countries in the Green and SDT boxes are small by comparison with the major general agricultural input subsidies and would not make much difference to the AMS even if they were included. Overall, this aspect of the AMS at its present de minimis rate will not provide any external constraint to the level and structure of the highly distorting input subsidies which exist in South Asia agriculture. To have any impact, the caput cost of the
canal irrigation subsidies would have to be included, the de minimis rate reduced, and agreement reached on the interpretation of "low income or resource poor" producers in these countries.

References


The Uruguay Round Agreement: The Case of Agriculture
Commitments Limiting Subsidisation: Domestic Support Commitments

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I. Introduction

The reduction and rule-based domestic support or subsidy commitments negotiated as part of the Uruguay Round represent a major reform in the international arrangements relating to governmental interventions at the domestic level in favour of agricultural producers.

In the general GATT scheme of things governments enjoyed a relatively free hand when it came to the use of domestic subsidies, at least so far as concerns their effects on products in respect of which tariffs in the subsidizing country were not bound. At the end of the day the main obligation on the country whose subsidies caused or threatened to cause "serious prejudice" to the interests of other GATT Members was merely to "discuss the possibility" of limiting the offending subsidization. On the other hand subsidies which operated to increase exports were subject to the equitable share rule and subsidizing countries always ran the risk that their subsidized products, when imported into another market, could in certain circumstances be liable to countervailing duties.

Under the Uruguay Round Agreement on Agriculture all domestic subsidies or support (there is no really significant distinction between these terms) are either subject to reduction commitments as specified in Schedules and/or to ruled-based commitments and criteria.

The following sections of this paper review: (a) the pre and post Uruguay Round frameworks as they related or related to domestic subsidies; (b) commitments on domestic support — general aspects; (c) the reduction commitments; (d) the various categories of domestic support not subject to reduction and the related rules and criteria; and (e) the scope or applicability of the Due Restraint or "Peace Clause" as it relates to domestic support.

The foregoing topics are reviewed from the point of view of the basic concepts involved as well as in terms of the implementation aspects. In so doing one is to a certain extent venturing into uncharted waters, if only because the domestic support commitments are an innovation in the domain of international economic and legal commitments. At this early stage in the implementation process there is as yet no accumulation of practical experience on the basis of which generalization might be formulated about how in practice the rules and criteria in this area are interpreted and applied. This paper will of
necessity involve an examination of a number of substantive and legal issues in this area. Any views expressed in this regard can amount to no more than a personal opinion, since only the WTO Members acting jointly can interpret the rules through the Dispute Settlement System or other relevant procedures.

II. Pre- and Post-Uruguay Round Frameworks

Article XVI:1 of the GATT 1947, entitled “Subsidies in General,” was the principal rule relating to domestic agricultural subsidies (as well as to subsidies on other products) and provided as follows:

"1. If any contracting party grants or maintains any subsidy, including any form of income or price support, which operates directly or indirectly to increase exports of any product from, or to reduce imports of any product into, its territory, it shall notify the Contracting Parties in writing of the extent and nature of the subsidization, of the estimated effect of the subsidization on the quantity of the affected product or products imported into or exported from its territory and of the circumstances making the subsidization necessary. In any case in which it is determined that serious prejudice to the interests of any other contracting party is caused or threatened by any such subsidization, the contracting party granting the subsidy shall, upon request, discuss with the other contracting party or parties concerned, or with the Contracting Parties, the possibility of limiting the subsidization."

The obligation to notify subsidies was and is important, not only for transparency reasons but equally importantly because information formally notified by governments about the operation of their subsidy programmes has a status for the purposes of debate and consultations for which secondary or unofficial sources are not adequate substitutes. Although extensive work had been undertaken on what was notifiable, it was not until the early 1980’s, as a result of general political decisions, that reasonably comprehensive agricultural notifications began to make their appearance on a regular basis.

The “serious prejudice” rule was extensively resorted to by GATT Panels, particularly those involving subsidies affecting exports, more often than not as an alternative to formal findings under the rule that subsidies not be used to acquire “more than equitable share” of world export trade in individual agricultural primary products. Although this enabled panels to examine the operation as a whole of price or income support systems for a given product, the drawback was that ultimately the obligation was merely to “discuss” the possibility of limiting the contested subsidization. This is not to say that “serious prejudice” findings by dispute settlement panels did not lead to “adjustments” eventually being made in certain cases. But overall the disciplines were effect-oriented and therefore failed to provide any reasonably reliable guidance for policy makers as to where the boundaries lay between the right to use domestic subsidies and their prejudicial effects on the interests of other trading partners.

The general position with regard to the impact of subsidies as set out in Article XVI:1 was, however, qualified by a GATT ruling applicable to cases where the imported product was subject to a tariff concession or “bound” in the Schedule of the subsidizing country. The general problem in this area is that domestic subsidies can displace imports and can therefore undermine the benefits of tariff concessions or otherwise upset the competitive relationship between imports and domestic products. This ruling established the principle (referred to as “non-violation nullification and impairment of the benefits of tariff concessions”: BISD 3rd Supplement at p. 224) that:

"So far as domestic subsidies are concerned, it was agreed that a contracting party which has negotiated a concession under Article II may be assumed, for the purpose of Article XXIII, to have a reasonable expectation, failing evidence to the contrary, that the value of the concession will not be nullified or impaired by the contracting party which granted the concession by the subsequent introduction or increase of a domestic subsidy on the product concerned."

The same ruling also clarified the position with regard to the negotiability of subsidies in conjunction with tariff concessions and the consolidation of the results in GATT Schedules, by providing that:
Commitments Limiting Subsidisation: Domestic Support Commitments

“there was nothing to prevent contracting parties, when they negotiate for the binding or reduction of tariffs, from negotiating on matters, such as subsidies, which might affect the practical effects of tariff concessions, and from incorporating in the appropriate schedule annexed to the Agreement the results of such negotiations; provided that the results of such negotiations should not conflict with other provisions of the Agreement.”

These basic provisions (notification, serious prejudice and non-violation nullification or impairment) continue to form part of the post Uruguay Round framework but, apart from the general notification obligations, have been substantially modified as a result of the Agreements on Agriculture and on Subsidies and Countervailing Measures (the “Subsidies Agreement”).

Article 3:2 of the Agreement on Agriculture now provides that:

“Subject to the provisions of Article 6, a Member shall not provide support in favour of domestic producers in excess of the commitment levels specified in Section I of Part IV of its Schedule.”

As discussed in more detail in the relevant sections of this paper, the “commitment levels” referred to in this Article relate to the total of all domestic support to agricultural producers in any year (expressed in monetary terms through the Current Total Aggregate Measurement of Support), with the exception under Article 6 of: (i) three categories or “boxes” of domestic support measures which are exempt from reduction provided certain criteria are met; and (ii) domestic support that is within specified de minimis levels.

Under the Subsidies Agreement subsidies that are specific are classified as being: (i) “prohibited” (subsidies contingent on export performance or upon the use of domestic over imported products); (ii) “actionable” under the new rules elaborated in this Agreement regarding serious prejudice, as well as in terms of non-violation nullification or impairment and for countervailing duty purposes; and (iii) “non actionable” in the foregoing sense, provided that certain conditions and criteria are met in respect of such subsidies (assistance for research activities, for disadvantaged regions and to promote adaptation of existing facilities to new environmental requirements).

The general relationship between the WTO Agreement, the GATT as modified following the Uruguay Round (referred to now as “the GATT 1994”) and the WTO Multilateral Trade Agreements on Trade in Goods, such as the Agreements on Agriculture and on Subsidies, is as follows. First of all, in any conflict between the WTO Agreement and another constituent Agreement, the WTO Agreement applies to the extent of the conflict. Secondly, where the conflict is between the GATT 1994 and one of the Multilateral Trade Agreements on Trade in Goods (such as the Agreement on Agriculture or on Subsidies) the latter would prevail to the extent of the conflict. Thirdly, where the conflict is between the Agreement on Agriculture and the Subsidies Agreement, or any of the other Multilateral Trade Agreement Agreements on Trade in Goods, the Agreement on Agriculture would prevail.

In addition to these general relationships, Article 13(a) and (b) of the Agreement on Agriculture (the Due Restraint or “Peace Clause”) spells out, for the duration of the “implementation period” (nine years in this case), the specific relationship between the Agreement on Agriculture and the Subsidies Agreement with respect to the actionability of agricultural domestic support measures. In general, provided that the relevant conditions and criteria are fully complied with, minimally trade distorting measures in the Green Box are non actionable, as are all other domestic support measures in compliance with the Agreement except with respect to countervailing duty measures (see section VI below).

III. Commitments on Domestic Support under the Agreement on Agriculture — General Aspects

Under the Agreement on Agriculture all WTO Members have commitments in respect of the domestic support which they provide in favour of their agricultural producers, including support at both the national and sub-national levels, and through measures directed at agricultural processors to the extent that such measures benefit the producers of the basic agricultural products concerned.

These commitments take form of domestic support reduction commitments (the “annual and final bound commitment levels” that are specified in Section I of
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Part IV of the Schedules of a number of WTO Members) and of rule-based commitments relating to: (i) three categories of support measures that are not subject to reduction under the Agreement, and (ii) support within specified de minimis levels.

The three categories of exempt domestic support measures, mainly government services and direct payments of one type or another, are as follows: (a) measures which have no or at most minimal trade effects or effects on production and which meet the basic and policy specific criteria set out in Annex 2 of the Agreement (so-called “Green Box” measures); (b) developing country measures otherwise subject to reduction which meet the criteria set out in paragraph 2 of Article 6 of the Agreement (so-called “Special and Differential Treatment” or “S & D Box”); and (c) direct payments under production limiting programmes which conform to the requirements set out in paragraph 5 of Article 6 of the Agreement (so-called “Blue Box” measures).

There is no upper limit to support in respect of the measures covered by these three categories of exempt support. However, any new or modified exempt measures have to be notified promptly to the Committee on Agriculture under Article 18:3 of the Agreement. Support which is not covered by these three categories of support measures (often referred to as “Amber support”) generally covers product-specific support measures, such as market price support and non-exempt direct payments, as well as any other non-exempt measures and subsidies, such as input subsidies and marketing-cost reduction measures.

Under the de minimis provisions of Article 6:4 of the Agreement there is no requirement to reduce support in this residual Amber category whose value in any year, in the case of product-specific support, does not exceed 5 per cent (10 per cent for developing countries) of the total value of production of the basic agricultural product in question, or of the value of total agricultural production in the case of non-product-specific support. Amber support that is below the 5 or 10 per cent product-specific and non-product-specific de minimis ceilings may be raised to those levels, although in so doing there could be implications in terms of actionability under the Article 13 Peace Clause.

All developed country WTO Members plus about twelve developing country WTO Members have domestic support reduction commitments in their Schedules. The existence of these commitments is a reflection of the fact that, in the 1986–1988 base period not all support provided in favour of their producers was covered by the permitted exceptions, and of the fact that the residual Amber support in question exceeded the relevant de minimis levels. In general the obligations of these WTO Members may be summarized as follows:

(i) to ensure that support measures covered by one or other of the three categories of exempt measures outlined above are maintained in accordance with the relevant criteria or conditions; and

(ii) to ensure, in accordance with Articles 3:2 and 7 of the Agreement, that any other support in favour of domestic producers in any year is maintained within the scheduled commitment level pertaining to that year, or within the relevant de minimis levels as appropriate.

The obligations of those WTO Members which do not have domestic support reduction commitments in their Schedules are as stated in sub-paragraph (i) in the preceding paragraph, plus an obligation to ensure that any support in excess of that covered by one or other of the three categories of exempt measures is maintained within the limits of the product-specific and non-product-specific de minimis levels specified in Article 6:4 of the Agreement.

IV. REDUCTION COMMITMENTS

4.1. Background

The domestic support reduction commitments in Section I of Part IV of Schedules are expressed in terms of Total Aggregate Measurement of Support and “Annual and Final Bound Commitments Levels” (Article 6:1 of the Agreement). In each case the following AMS aggregates are specified in Schedules of the Members concerned (normally in the national currency of the Member concerned but in some cases other monetary units of account have been employed):

(i) the “Base Total AMS” which is the sum of all domestic support provided in favour of agricultural producers during the average 1986–1988 base period, calculated as the sum of all aggregate measurements of support for basic products, the non-
product-specific aggregate measurement of support and all equivalent measurements of support for agricultural products (but excluding exempt support and support within de minimis levels);

(ii) the Total AMS "Annual commitment levels" which correspond to the Base Total AMS reduced in each successive year by the amount required to achieve the 20 per cent domestic support reduction target (13.3 per cent for developing country Members); and

(iii) the “Final Bound Commitment levels” which correspond to the Base Total AMS minus the 20 per cent (13.3 per cent for developing countries) reduction target.

The “Annual Commitment level” in any year, expressed in terms of Total AMS, constitutes the maximum amount of support (other than support covered by the three categories of exemptions or within de minimis levels) which may be provided in favour of agricultural producers as a whole in that year. It may be noted that the commitment involved relates to the global amount or level of support represented by the Annual Commitment Level and not to the particular mix of products and Amber support measures on the basis of which the Base Total AMS happened to be calculated.

4.2. Compliance with Reduction Commitments

Both the mix of supported basic agricultural products and the type of measures applied to individual products can and may well change over time. What matters is how the “Current Total AMS,” the measurement to be used each year to measure compliance with the Annual Commitment Levels, is calculated. Here there is an important connection between the methodology used to calculate the Total Base AMS and the methodology to be used in calculating the Current Total AMS.

From the implementation point of view, the Current Total AMS as calculated for any year of the implementation period (and beyond-in respect of the Final Bound Commitment levels) has to cover: (i) all basic agricultural products which benefited from product-specific Amber support not covered by the product-specific de minimis provisions; and (ii) all non-product-specific Amber support not covered by the non-product-specific de minimis provisions. The Current Total AMS or equivalent measurements of this support have to be calculated “in accordance with ... the constituent data and methodology used in the tables of supporting material incorporated by reference in Part IV of the Member’s Schedule” (Article 1:h(ii)). In effect these constituent data and methodology, which are organically linked to the Scheduled commitments, form part of, or play a role in determining, the quality of the domestic support reduction commitments. These tables of supporting material have been reproduced as documents in the AGST series, with each Member’s set of Supporting Tables carrying the same symbol that appears in Section I of Part IV of their Schedule (e.g., AGST/AUS for Australia).

In general the calculation of the Current Total AMS in accordance with the constituent data and methodology should present less rather than more problems than were encountered in constructing the Base Total AMS. Thus, in the case of market price support calculations, for example, the same point of sale, the same administered price but at the level applied during the implementation year in question, and the same external reference price would all have to be used. Where budgetary outlays were used to measure non-exempt direct payments in the base period, it would not be consistent with the Agreement to subsequently change the method of valuation by instead using the “price gap” methodology to make the calculation for the purposes of the Current Total AMS. Because the external reference prices as specified in the AGST Supporting Tables remain fixed throughout the implementation period (and beyond in the meantime), compliance with the reducing Annual Commitment Levels will, as necessary, have to be achieved by reducing the administered price in question, or the quantum of production eligible to receive market price support. In the case of non-exempt direct payments any reductions required to achieve compliance would have to involve reducing the per unit amount of the payment or the quantum of eligible production. In either case, another option would be to replace the Amber measures in question with measures covered by one or other of the three exemption Boxes.

Where a formerly unsupported product has to be valued for Current Total AMS purposes, there would be no relevant constituent data or methodology in the supporting material. In such a case an original estimate would have to be made in accordance with Annexes 3 or 4 of the Agree-
ment, using a 1986–1988 external reference price, as appropriate. The method of calculation used would presumably then become binding for the purposes of Current Total AMS calculations in subsequent years.

There are a number of instances where the methodology used to calculate the Base Total AMS differed from the norm. One example concerns the way in which support within the de minimis levels was treated. In general such support was deducted from the Base Total AMS and, in line with Article 6:4(a)(i), such support would also be deductible from the Current Total AMS. However, in some cases support within the de minimis levels was included in the Base Total AMS, thereby inflating the derived annual commitment levels. If such support is then deducted from the Current Total AMS during the implementation period, the result would be an added flexibility (more room under the Annual Commitment Level ceiling) than would otherwise be the case.

This may just be good luck. But, if objected to, the question would be whether the Member concerned continues to be bound in this respect by the methodology used to calculate the Base Total AMS. The manner in which the Current Total AMS is defined in Article 1(h) would suggest that, in the circumstances, such support should also be included in the Current Total AMS in accordance with the constituent data and methodology as incorporated in the Schedule of the Member concerned. Article 6(4) on the other hand provides that a Member "shall not be required to include" such support in its calculation of its Current Total AMS. But as some practitioners in this area have pointed out this is not necessarily the same thing as saying that such support "shall be excluded." Experience gained as the implementation process proceeds will no doubt provide more examples than the selected issues discussed here.

Finally in this particular context, it may be noted that there is no provision in the Agreement under which the Current Total AMS can be adjusted for inflation. The only provision which makes reference to inflation is Article 18:4 of the Agreement. This provides that, in the multilateral review of the implementation of commitments negotiated under the Uruguay Round reform programme, which is undertaken on a regular basis by the Committee on Agriculture, "Members shall give due consideration to the influence of excessive inflation on the ability of any Member to abide by its domestic support commitments."

4.3. De Minimis Calculations

Most developing country Members do not have domestic support reduction commitments in Section I of Part IV of their Schedules. In such cases their obligation under Article 7:2 of the Agreement is to ensure that any support not covered by one or other of the three categories of exemptions (Green, S & D and Blue Boxes) does not exceed: (i) 10 per cent of the total value of production of a particular basic product in the case of product-specific de minimis support; or (ii) 10 per cent of the value of total agricultural production in the case of non-product-specific domestic support. Where the non-exempt domestic support involves budgetary outlays or revenue foregone, the total amount involved in any particular year of the implementation period would have to be calculated as a percentage of the total value of production of the basic product concerned in that implementation year (product-specific de minimis) or as a percentage of the value of total agricultural production in that implementation year (non-product-specific de minimis).

Where it is necessary to make a calculation of the AMS value of an administered market price for de minimis purposes, the calculation would be made on the basis of the external reference price included in the relevant AGST material, or, if no such price was included in the AGST material, on the basis of an original market price support calculation in accordance with the provisions of the Agreement as indicated in paragraph 29 above.

4.4. Notification Requirements

The estimates of Current Total AMS for each year of the implementation period are required to be notified by all Members with Scheduled domestic support reduction commitments and by other Members providing support not covered by one or other of the three categories of exempt measures. In other words there is a requirement to show that support within the product-specific and non-product-specific de minimis levels continues to be maintained within those levels. However, the Committee's Notification Requirements make provision for this latter requirement (in respect of de minimis support) to be set aside at the request of a developing country Member, except in respect of the Supporting Tables (DS:1 to 3) in which exempt measures under the Green, S&D and Blue Boxes have to be listed and described in terms of their conformity with the relevant criteria.
Least-developed Members, which were not required to make reduction commitments and do not have Amber support shown in their Schedules, are only required to notify their exempt support measures in terms of Supporting Tables DS:1 to DS:3 at two yearly intervals. Members which do not provide any support are required to provide a statement to this effect to the Committee on Agriculture.

4.5. Legal Status of Scheduled Domestic Support Reduction Commitments

Under Article 3:1 of the Agreement on Agriculture the domestic support commitments in Part IV of each Member’s Schedule constitute commitments limiting subsidization and are made an integral part of the GATT 1994. They therefore constitute substantive GATT legal commitments. However, it does not follow that the domestic support commitments are re-negotiable in accordance with Article XXVIII of the GATT 1994, as is the case with tariff concessions. Part III of the legal Schedules contain “concessions” that were negotiated on non-tariff measures. In this case specific provision was made in the Marrakesh Protocol (which annexes the Uruguay Round Schedules to the GATT 1994) to the effect that Article XXVIII is applicable to these non-tariff concessions. However, no such provision was made in respect to the newly established domestic support commitments. In general it would appear to be the case that the Scheduled domestic support commitments are to be regarded, in terms of their status under the relevant WTO Agreements, as rule-related rather than contractual commitments and therefore not subject to modification in the same way as ordinary tariff concessions.

V. Domestic Support Measures not subject to Reduction

This section of the paper reviews the rules and other requirements relating to the three categories of exempt domestic support outlined earlier.

5.1. Green Box Measures (Annex 2) to the Agreement on Agriculture

All domestic support measures for which exemption is claimed under the Green Box have to be in conformity with the following “basic criteria” as well as with the “policy-specific criteria and conditions” relating to each sub-category of Green Box measures: (a) the support in question has to be provided through a publicly-funded government programme (including government revenue foregone) not involving transfers from consumers; and (b) the support in question shall not have the effect of providing price support to producers.

In summary form, the Green Box sub-categories cover the following government financed or assisted services and programmes:

(a) “General Services” (Annex 2, paragraph 2). The services or programmes covered include research; pest and disease control; training; extension and advisory services; inspection services; marketing and promotion services (but excluding expenditure for unspecified purposes that could be used by sellers to reduce their selling price or confer a direct economic benefit to purchasers) and infrastructural services (capital works only). The subsidised provision of “on-farm” facilities (other than for the reticulation of generally available public utilities), plus subsidies to inputs or operating costs, or preferential user charges are specifically excluded. It may be noted that this listing of Green Box general services is not exhaustive.

(b) “Public Stockholding for Food Security Purposes” (Annex 2, paragraph 3). The stocks must form an integral part of a food security programme identified in national legislation. The volume and accumulation of such stocks must correspond to predetermined targets related solely to food security. The process of stock accumulation and disposal has to be financially transparent. Food purchases by the government must be made at current market prices and sales from food security stocks must be made at no less than the current domestic market price for the product and quality in question. In the case of developing country WTO Members, the foregoing conditions are modified by two footnotes which provide, with respect to paragraph 3 of Annex 2, that:

(i) Governmental stockholding programmes for food security purposes in developing countries whose operation is transparent and conducted in accordance with officially published objective criteria or guidelines shall be considered to be in conformity with the provisions of this paragraph, including programmes under which stocks of foodstuffs for food security purposes are ac-
required and released at administered prices, provided that the difference between the acquisition price and the external reference price is accounted for in the AMS.

(ii) The provision of foodstuffs at subsidized prices with the objective of meeting food requirements of urban and rural poor in developing countries on a regular basis at reasonable prices shall be considered to be in conformity with the provisions of this paragraph.

(c) Domestic Food Aid (Annex 2, paragraph 4). Eligibility to receive the food aid must be subject to clearly-defined criteria related to nutritional objectives. Such aid must be in the form of direct provision of food to those concerned or the provision of means to allow eligible recipients to buy food either at market or at subsidized prices. Food purchases by the government have to be made at current market prices and the financing and administration of the aid must be transparent. These requirements are modified in the case of developing country WTO Members by the second footnote quoted above.

(d) Direct Payments to Producers (Annex 2, paragraphs 5 to 13). There are eight categories of exempt direct payments to producers. Each category has its own set of detailed conditions, including as appropriate the requirement that eligibility for such payments must be determined by clearly-defined criteria. The following précis is selective as regards the conditions specified:

(i) Decoupled Income Support (Annex 2, paragraph 6)

Basically the conditions preclude any linkage between, on the one hand, the amount of such payments and, on the other, production, prices or factors of production in any year after the relevant base period. In addition no production shall be required in order to be eligible to receive such decoupled income payments.

(ii) Government Financial Participation in Income Insurance and Safety-Net Programmes (Annex 2, paragraph 7)

Such payments must relate solely to losses in respect of income derived from agriculture and must not be related to the type or volume of production undertaken by the producer, or to the prices, (domestic or international) applying to such production, or to the factors of production employed. Losses must exceed 30 per cent of gross income on the basis of a recent three year average and compensation may not exceed 70 per cent of loss incurred in year of eligibility. Such payments plus any concurrent natural disaster relief payments should not exceed the producers total agricultural income loss in any year.

(iii) Payments for Relief from Natural Disasters (Annex 2, paragraph 8)

Production losses must exceed 30 per cent of the average of production based on a recent three year average. Payments made following a formally recognized natural disaster are applicable only in respect of losses of income, livestock, land or other production factors. Payments should not compensate for more than the total cost of replacement, including same condition with respect to concurrent payments as under income insurance and safety net programmes.

(iv) Structural Adjustment Assistance (Annex 2, paragraphs 9 to 11)

Conditions with respect to three categories of such assistance: (i) producer retirement programmes (total and permanent retirement of recipients from marketable agricultural production); (ii) resource retirement programmes (payment conditions on retirement of land from marketable agricultural production for a minimum of three years and, in the case of livestock, on slaughter or definitive permanent disposal); and (iii) investment aids designed to assist the financial or physical restructuring of a producer’s operations in response to objectively demonstrated structural disadvantages. Payments must be decoupled and limited to the amount required to compensate for the structural disadvantage.
(v) Payments under Environmental Programmes (Annex 2, paragraph 12)

Eligibility for such payments has to be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfilment of specific conditions under the government programme, including conditions related to production methods or inputs. The amount of payment must be limited to the extra costs or loss of income involved in complying with the government programme. Provision is also made under the "General Services" category ((i) above) in respect of research in connection with environmental programmes and infrastructural works associated with such programmes.

(vi) Payments under Regional Assistance Programmes (Annex 2, paragraph 13)

Eligibility for such payments have to be limited to producers in disadvantaged regions. Each such region must be a clearly designated contiguous geographical area with a definable economic and administrative identity, and classified as disadvantaged on the basis of neutral and objective criteria, clearly spelt out in law or regulation and indicating that the region's difficulties arise out of more than temporary circumstances. Payments must be decoupled, generally available to, and limited to, all producers within the eligible region, degressive under certain conditions relating to factors of production, and limited to the extra costs or loss of income involved in undertaking agricultural production in the prescribed region.

(vii) Other Direct Payments (Annex 2, paragraph 5)

Provision is also made for the exemption from reduction in respect of any existing or new type of direct payment other than those specifically covered by paragraphs 6 to 13 of Annex 2. The main requirement is that such payments must comply with the basic "decoupled income support" conditions.

5.2. Green Box — General Aspects

Green Box measures which are in conformity with the basic and policy-specific criteria are deemed to be non or minimally trade distorting. They are not, as are other exempt measures, otherwise subject to reduction but exempt from reduction as a matter of convention or for general policy reasons.

The complexity of the Green Box exemptions is more often a reflection of: (i) the breadth of the particular subject matter (government services); (ii) the nature of the beast, which in some areas is comparable to any standard insurance policy (income insurance and natural disasters); and (iii) the fact that, architecturally, anything that was in the Green Box would in principle be both exempt and non-actionable, with the consequence that from a drafting point of view the line between the two had to be very carefully delineated.

In any event, despite this real or apparent complexity, the main lines of the Green Box are reasonably straightforward: (a) the standard services which most governments provide to the agriculture sector and which have little if any trade distorting effects are covered; (b) the criteria for decoupled payments, which govern more than just the "decoupled income" support category, needed to strike a reasonable balance between the need for flexibility (given the wide range of circumstances in which such measures could apply in the future) and the need to ensure minimal trade distortion or scope for deviation in a situation where some if not most of direct payments, unless tightly circumscribed, are prone to being distortive; and (c) the basic criteria set out in paragraph 1 of Annex 2 of the Agreement are designed to serve as a normative or generally applicable benchmark to assist in determining, where necessary, the status of particular measures that are claimed to be a Green but whose status may be contested.

5.3. Green Box — Implementation Aspects

The fact that countries have listed measures in their Supporting Tables as being exempt under the Green Box does not necessarily mean that the measures concerned are ipso facto Green. Their Green status can be contested in a number of ways, including in countervailing duty proceedings. As the implementation process proceeds, there could well be increasing pressure on countries as regards the conformity of their Green Box measures (and other exempt measures)
with the relevant criteria and requirements, both bilaterally and collectively through the Committee on Agriculture's notification and review procedures. There is therefore a general interest, as well as a continuous obligation under the Agreement, to ensure that measures claimed as Green are and remain Green.

The obligation to ensure that measures claimed as Green remain Green is contained in Article 7 of the Agreement (text reproduced below). The onus of demonstrating that a measure claimed to be exempt (whether on the basis of Green Box criteria or other criteria — S&D and Blue Box) ultimately would lie with the Member maintaining the measure in the event that it is challenged. Where such a challenge is successful and the measure is not brought into conformity with the relevant Green Box criteria (or with the S&D or Blue Box criteria) the consequences are as described in Article 7:2 of the Agreement. The text of Article 7 is as follows:

“General Disciplines on Domestic Support

1. Each Member shall ensure that any domestic support measures in favour of agricultural producers which are not subject to reduction commitments because they qualify under the criteria set out in Annex 2 to this Agreement are maintained in conformity therewith.

2. (a) Any domestic support measure in favour of agricultural producers, including any modification to such measure, and any measure that is subsequently introduced that cannot be shown to satisfy the criteria in Annex 2 to this Agreement or to be exempt from reduction by reason of any other provision of this Agreement shall be included in the Member’s calculation of its Current Total AMS.

(b) Where no Total AMS commitment exists in Part IV of a Member’s Schedule, the Member shall not provide support to agricultural producers in excess of the relevant de minimis level set out in paragraph 4 of Article 6.

Thus for a Member with Scheduled domestic support reduction commitments, the Amber support attributable to an impugned Green measure would have to be included in its Current Total AMS calculation for the year concerned. For Members which do not have scheduled domestic support reduction commitments, this Amber support would have to be accommodated within the appropriate (product specific or non-product specific) de minimis levels.

From the end of the first year of implementation onwards all WTO Members will be required to notify their Green Box measures annually, along with any measures claimed as exempt under the S&D and Blue Boxes as appropriate (Supporting Tables DS:1 to DS:3 in the Notification Requirements established by the Committee on Agriculture — G/AG/2). With respect to each exempt measure Members are required to provide a description of the measure “with reference to” the relevant criteria. In practice this will involve not only a description of the measure itself but also a description of how the measure squares with the relevant criteria.

In addition it may be noted that, under Article 18:3 of the Agreement, any new or modified support measure for which exemption from reduction is claimed (under the Green, S&D or Blue Boxes) has to be notified promptly. Article 18:3 provides as follows:

“3. In addition to the notifications to be submitted under paragraph 2, any new domestic support measure, or modification of an existing measure, for which exemption from reduction is claimed shall be notified promptly. This notification shall contain details of the new or modified measure and its conformity with the agreed criteria as set out either in Article 6 or in Annex 2.”

5.4. Actionability of Green Box Measures

For the purposes of the “Peace Clause” or Due Restraint Provisions of Article 13 of the Agreement on Agriculture, Green Box measures that are fully in conformity with the basic and measure-specific criteria of Annex 2 of the Agreement are:

(i) non-actionable for the purposes of countervailing duties;
(ii) exempt from serious prejudice actions under the WTO Agreement on Subsidies; and
(iii) exempt from actions based on non-violation nullification and impairment of the benefits tariff concessions. Article 13 as it relates to Green Box measures provides as follows:

“During the implementation period, notwithstanding the provisions of GATT 1994 and the
Agreement on Subsidies and Countervailing Measures (referred to in this Article as the "Subsidies Agreement"):)

(a) domestic support measures that conform fully to the provisions of Annex 2 to this Agreement shall be:

(i) non-actionable subsidies for purposes of countervailing duties;

(ii) exempt from actions based on Article XVI of GATT 1994 and Part III of the Subsidies Agreement; and

(iii) exempt from actions based on non-violation nullification or impairment of the benefits of tariff concessions accruing to another Member under Article II of GATT 1994, in the sense of paragraph 1(b) of Article XXIII of GATT 1994."

This non-actionability of the Green Box subsidies is one of the features which distinguishes these measures from exempt measures in the S&D and Blue Boxes. However, it has to be noted that the non-actionability of the Green Box measures is nonetheless contingent in the sense that the conformity of particular measures with the relevant criteria could be challenged as a preliminary matter in Dispute Settlement proceedings.

5.5. Special and Differential Treatment Box

Paragraph 2 of Article 6 of the Agreement recognizes, in accordance with the agreements reached in June 1989 in the context of the Ministerial Mid-Term Review of progress in the Uruguay Round Negotiations, that government measures of assistance, whether direct or indirect, to encourage agricultural and rural development are an integral part of the development programmes of developing countries. Three categories of measures are specified as being exempt from the domestic support reduction commitments that would otherwise be applicable to such measures:

(i) investment subsidies which are generally available to agriculture in developing country Members;

(ii) agricultural input subsidies generally available to low-income or resource-poor producers in developing country producers; and

(iii) domestic support to producers in developing country Members to encourage diversification from growing illicit narcotic crops.

When compared with the relevant provisions of the Green Box (Annex 2, paragraph 2(g) in the case of input subsidies, and paragraph 11 with regard to investment aids), it will be seen that these S&D exemptions, in conjunction with the Green Box, generally provide appreciable scope for enabling developing country Members to continue to promote the sound economic development of their agricultural sectors. In this regard it may be noted that of 95 developing country Marrakesh Schedules, 83 do not contain domestic support reduction commitments. In other words for the large majority of developing countries concerned, their domestic agricultural support is covered by one or other of the three Boxes under discussion and/or by the de minimis provisions of the Agreement.

These S&D Box measures are required to be notified annually, with the same requirement as for Green (and Blue) Box measures — as regards the description of individual exempt measures by reference to the relevant criteria. The actionability of these S&D measures is the same as for Blue Box measures and Amber support within de minimis levels (see section VI below).

5.6. Blue Box Measures

Article 6:5 of the Agreement provides that direct payments under "production-limiting" programmes shall not be subject to the commitment to reduce domestic support on condition that one or other of the following requirements are met: (i) such payments are based on fixed areas and yields; or (ii) such payments are made on 85 per cent or less of the base level of production; or (iii) livestock payments are made on a fixed number of head.

The criteria governing this exemption from reduction commitments differ from the Green Box criteria for direct payments (Annex 2, paragraphs 5 and 6(b) through (e)) in a number of ways, apart from the fact that the "basic" Green Box non-trade distortion criteria are not applicable. Some of the points that may be noted in this regard are: that the
payments can be product-specific; and that they can be related to current domestic or international prices for the products concerned. A feature of the Blue Box criteria is their relative imprecision with regard whether, for example, the "fixed" area and yields or "base level" of production once established must remain unchanged or whether it can be a movable feast. The same imprecision exists with respect to "the relevant base period" for decoupled income support.

Another matter that could attract attention from an implementation point of view is whether "production-limiting" constitutes an additional general condition or requirement for the exemption of such payments. In other words, is it a requirement that such production-limiting programmes should in practice operate to limit production? The not dissimilar concept of "governmental measures which operate to restrict production" was an integral element of GATT Article XI:2(c) and was subject of interpretation in a number of Panel cases. However, even if limitation of production were to be treated as a condition for exemption, such a concept is essentially relative and may therefore be difficult to make judgments about in the absence of some objective point of reference. Thus a programme which includes set aside conditions could generally be said to limit certain factors of production but not necessarily production or output as such.

In accordance with Article 6:5(b) of the Agreement, the full value of these partially decoupled Blue Box payments is excluded when calculating the Current Total AMS, which is used to measure compliance with the Scheduled Annual Commitment Level in any year of the implementation period. In this respect the treatment of Blue Box direct payments is nominally no different from that applicable to S&D measures or support under the de minimis level.

However, the value of these exempt S&D or de minimis covered measures was not included, or not required to be included, in the 1986–88 Base Total AMS and is therefore not reflected in the Annual Commitment Levels derived therefrom. Their exclusion in any year of the implementation period will therefore be neutral as regards the relationship between the Current Total AMS and the Annual Commitment Levels. On the other hand, where the Annual Commitment Levels reflect the value of base period non-exempt direct payments or market price support measures replaced by Blue Box measures, the subsequent deduction of the related Blue Box payments from the Current Total AMS will operate to alter this relationship. The result can be viewed as the creation of an "amber" support credit or of additional implementation flexibility. Much the same result occurs where any base period Amber measure is subsequently replaced by a minimally trade distorting Green Box measures, but this at least requires a positive policy change. Overall, from an economic point of view, as the implementation process proceeds and the current value of the Scheduled annual and final bound commitment levels shrinks, the AMS reduction commitments should operate to induce or encourage a further shift towards relatively less trade distorting Blue Box and minimally trade distorting Green Box measures.

Blue Box measures are required to be notified annually, including a description of each individual measure will reference to the relevant criteria, and Article 18:3 of the Agreement requires prompt notification of any new or modified Blue Box measures.

VI. Actionability of Domestic Support Measures other than Green Box Measures

The actionability of Green Box measures under the Subsidies Agreement is covered in section 5.4 above. The other categories of domestic support measures are considered together because that is how they are treated under the Peace Clause itself (Article 13(b) of the Agreement). Thus the same regime in terms of actionability under the Agreement on Subsidies applies to support measures covered by the S&D Box, by the Blue Box, by the de minimis commitments and under the reduction commitments, i.e., under the Scheduled Annual and Final Bound Commitment Levels.

Before going into the detail of this subject it should be noted that the actionability of agricultural domestic support measures is not confined to actionability in terms of the Agreement on Subsidies. On the contrary, any breach of the Scheduled or rule-based commitments would constitute a breach of substantive obligations under the Agreement on Agriculture in its own right and proceedings could be initiated on this basis under the Dispute Settlement Understanding. Indeed it would be a matter for reflection whether, once a breach of commitments under the Agreement on Agriculture had been established under the Dispute Settlement system (which would in any event be a pre-condition to actionability in terms of the Peace Clause), there would be much point in re-trying the same matter in terms of criteria or
obligations under another WTO Agreement, rather than pursuing implementation of the rulings and recommendations made concerning the breach of obligations under the Agreement on Agriculture.

Article 13 of the Agreement (the Due Restraint or Peace Clause) provides that during the "implementation period" as defined for the purposes of this Article (see Article 1(f) — nine years), and notwithstanding the provisions of the GATT 1994 and the Agreement on Subsidies, domestic support measures that conform fully to the provisions of Article 6 of this Agreement including direct payments that conform with the requirements of paragraph 5 thereof [Blue Box], as reflected in each Member's Schedule, as well as domestic support within de minimis levels and in conformity with paragraph 2 of Article 6 [S&D Box], shall be:

(i) exempt from the imposition of countervailing duties unless a determination of injury or threat thereof is made in accordance with Article VI of GATT 1994 and Part V of the Subsidies Agreement, and due restraint shall be shown in initiating any countervailing duty investigations;

(ii) exempt from actions based on paragraph 1 of Article XVI of GATT 1994 or Articles 5 and 6 of the Subsidies Agreement, provided that such measures do not grant support to a specific commodity in excess of that decided during the 1992 marketing year; and

(iii) exempt from actions based on non-violation nullification or impairment of the benefits of tariff concessions accruing to another Member under Article II of GATT 1994, in the sense of paragraph 1(b) of Article XXIII of GATT 1994, provided that such measures do not grant support to a specific commodity in excess of that decided during the 1992 marketing year.

The protection afforded by the Peace Clause against actions under the Agreement on Subsidies is clearly conditional on the domestic support measures referred to being full conformity with the relevant provisions of the Agreement on Agriculture. As indicated, in any WTO dispute settlement proceedings these conformity issues would, in most if not all of the cases envisaged in subparagraphs (ii) and (iii) above, have to be determined as preliminary but nonetheless substantive factual and legal issues.

Sub-paragraph (i) on countervailing duties (CVD) would not appear to protect imports benefiting from the domestic support measures in question from CVD actions, because such actionability is dependent, not on the conformity of the domestic support measures with the provisions of Article 6 of the Agreement on Agriculture, but only on: (i) the determination of injury being made in accordance with the normal GATT/WTO provisions in this regard; and (ii) on due restraint being shown in initiating any countervailing duty investigations. "Due Restraint" would appear to be a somewhat anomalous concept since it appears to imply a discretion on the part of governments or their agencies as regards the initiation of CVD investigations that may not exist in domestic legislation in cases once the petition to initiate such an investigation has been made in due and proper form. It may be that, in these circumstances, the due restraint requirement could be satisfied where, if only as a matter of precaution vis-à-vis this feature of the Peace Clause, the Member whose domestic CVD investigation procedures are likely to be activated so informs, and consults informally with, the other Member concerned. Be that as it may, the expression "due restraint" was not part of the GATT vocabulary and appears to have no counterpart in the domestic CVD context.

The exemptions from actionability under subparagraphs (ii) and (iii) of Article 13(b) are both conditional on the domestic support measures in question, not granting support to a specific commodity in excess of that decided during the 1992 marketing year. The reference here is not as such to the level of support in AMS terms. What could be determinative is whether the support or subsidies provided to a specific commodity during the implementation period is in excess of, or more than, what was decided or authorized (presumably in domestic legislation) in the 1992 marketing year. In the absence of authoritative guidance at this stage, any such interpretations are a matter for conjecture. The only anecdotal insight into the genesis of this particular proviso is that it was said to have been suggested, at the time it made its appearance in the Geneva negotiations, that it was in-
tended to offset the incentive to exploit the scope that was created to switch support to specific commodities as a result of the proposed AMS commitments having been changed from product specific to global or sector-wide commitments.

Finally, it may be noted that the exemption from actions based on non-violation nullification or impairment is related to non-violation actions in respect the effects of the domestic support measures or subsidies on the benefits of tariff concessions. This would therefore not appear to exclude the possibility of non-violation actions under Article XXVIII:1(b) of the GATT 1994 in respect of nullification or impairment of the benefits of tariff concessions arising from factors other than domestic support.
Export Subsidy Commitments

Paul Shanahan*

I. Introduction

The pre-WTO GATT framework of rules on subsidies which operated to increase (or maintain) exports of agricultural primary products was permissive. The main formal obligation was that such subsidies should not be used to acquire more than an "equitable share" of world export trade in particular agricultural primary products. Although effectively applied in one early Panel case, and despite nominal improvements introduced as a result of the Tokyo Round Code on Subsidies, the Article XVI rules as subsequently interpreted and applied became more of a licence to use export subsidies than an effective discipline.

In general terms the new framework of rules and commitments under the Uruguay Round Agreement on Agriculture takes the form of a prohibition which is subject to a number of exceptions. In such a situation, while the burden of proof may shift depending on the nature of the issue at stake, at the end of the day the onus of establishing that measures are in conformity with an exception to a prohibition lies with the party claiming the right to be entitled to have recourse to the exception. Accordingly, where the onus of proof lies under the new rules will be a consideration that will have an influence on how these rules should be interpreted and implemented.

In substance the position with regard to the use of export subsidies under the new framework may be stated, in summary form, as follows:

(i) that there is prohibition on the use of the export subsidies listed in Article 9:1 of the Agreement in excess of the budgetary outlay and quantity commitment levels specified in Section II, Part IV of a Member’s Schedule;

(ii) that there is a prohibition on the use of these export subsidies on, or a "zero commitment" with respect to, any agricultural product not specified in that Section of a Member’s Schedule; and

(iii) that other export subsidies (those not listed in Article 9:1) may not be used to circumvent commitments under the Agreement generally, including in particular the commitments described in (i) and (ii) above.

The following sections of this paper review: (a) the main elements of the new framework; (b) exceptions to Article 3:3 of the Agreement; (c) reduction commitments; (d) anti-circumvention; (e) actionability of export subsidies under the Due Restraint Clause; (f) notification requirements; and (g) export prohibitions and restrictions.

The foregoing topics are reviewed from the point of view of the basic concepts involved as well as in terms of the implementation aspects. This paper will of necessity involve an examination of a number of substantive implementation and legal issues in these areas. Any views expressed in this

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regard can amount to no more than a personal opinion, since only the WTO Members acting jointly can interpret the rules through the Dispute Settlement System or other relevant procedures.

II. Main elements of the new framework

2.1. Definition of export subsidies
The GATT Article XVI:3 definition related to the broad concept of subsidies, granted directly or indirectly, which operated to increase (or maintain) the export of any agricultural primary product. The Agreement on Agriculture (Article 1(e)) employs the concept of “subsidies contingent on export performance,” including the export subsidies listed in Article 9 of the Agreement on Agriculture. This is the same basic concept as is used in the WTO Agreement on Subsidies. Thus the Article 9:1 list of export subsidies that may only be used in conjunction with Scheduled reduction commitments constitutes a species of “subsidies contingent on export performance” that was tailored in the negotiations in order to explicitly capture a range of export subsidy practices that are prevalent in the agricultural sector.

The Article 9:1 list of export subsidies casts a wide net in that it covers a very substantial part of the universe of subsidies contingent on export performance. “Other” export subsidies are covered by Article 10 of the Agreement which states that export subsidies not listed in Article 9:1 shall not be applied in a manner which results in, or which threatens to lead to, circumvention of export subsidy commitments.

2.2. Article 3:1 — Incorporation of Commitments
Article 3:1 provides that the export subsidy commitments in Part IV of each Member’s Schedule constitute “commitments limiting subsidization” (an expression that was taken from Article XV:1) and makes these commitments an integral part of the GATT 1994. Although these new commitments therefore enjoy much the same status and protection as other commitments and concessions that are incorporated in this way, it does not follow that the export subsidy commitments can be modified or re-negotiated as is the case with tariff concessions under GATT Article XXVIII. One of the main reasons why this is considered to be the case is that the export subsidy commitments are rule-related (exceptions to a prohibition) and not “contractual” as is the case with tariff concessions. Another consideration is that paragraph 6 of the 1994 Marrakesh Protocol, which annexed the Uruguay Round Schedules to the GATT 1994, specifically stated that the new concessions on non-tariff measures were re-negotiable under Article XXVIII of the GATT 1994 but made no such provision with respect to the commitments limiting subsidization in Part IV of Schedules, and would thus imply that such commitments cannot be renegotiated in this way.

2.3. Article 3:3 — General Prohibition with Regard to the Use of Export Subsidies on Agricultural Products not Subject to Reduction Commitments
The text of this Article provides as follows:

"3. Subject to the provisions of paragraphs 2(b) and 4 of Article 9, a Member shall not provide export subsidies listed in paragraph 1 of Article 9 in respect of the agricultural products or groups of products specified in Section II of Part IV of its Schedule in excess of the budgetary outlay and quantity commitment levels specified therein and shall not provide such subsidies in respect of any agricultural product not specified in that Section of its Schedule."

It is clear from the terms of this Article that, from the implementation point of view, it is the description of agricultural products in Section II of Part IV of Schedules which will determine on which products Members have the right to use export subsidies. Bearing in mind the general points made above, it could well be that in any Dispute Settlement proceedings a stricter rather than a broader interpretation could be applied where there is any doubt about the scope of the particular product descriptions (normally at the HS six-digit level) which appear in the Schedules.

For example, if the product subject to the particular reduction commitment is described as “wheat,” then wheat exports may be subsidized within the relevant budgetary outlay and quantity limits but not, for example, another grain or flour. In other words, what appears to matter is the particular product description used in the Schedule, nothing else.

If the product description in the Schedule specifies processed products as such, as is the case in a limited number of Schedules, then exports of these products may be subsi-
dized within the relevant limits. However, where the prod-
uct described, for example, is "sugar" or "flour," it does not
follow that a Member also has the right to use export subsi-
dies, under the reduction commitments on "sugar" or "flour,"
to subsidize confectionery products or biscuits: in other
words to subsidize exports of "sugar" or "flour" in some other
form. Apart from the fact that this would represent a departure
from the description in the Schedule, this form of export
subsidization is covered, exclusively it is suggested, under
the specific commitments and rules relating to "Incor-
porated products" (see section IV below).

2.4. Article 3:3 — Agricultural Products not
Specified in Section II, Part IV of Schedules
It is clear from the terms of Article 3:3 itself that the Ar-
ticle 9:1 export subsidies may not be used in respect of
products not specified as being subject to reduction com-
mitments in Section II, Part IV of Schedules. As mentioned
in paragraph 3, such non-specified agricultural products
are regarded as being subject to a zero commitment with
respect to Article 9:1 export subsidies. The products thus
affected include all agricultural products as defined in An-
nex 2 of the Agreement on Agriculture minus the products,
if any, specified in Section II, Part IV of each Member's
Schedule. In most cases the range of agricultural products
not eligible for export subsidies is rather extensive (as to
the exceptions mentioned in Article 3:3 — see below). Of
the 120 WTO Members twenty-three have Scheduled ex-
port subsidy reduction commitments. The other ninety-
seven WTO Members are thus precluded from using ex-
port subsidies other than in terms of the exception under
Article 9:4 as appropriate.

III. Article 3:3 of the Agreement on
Agriculture — Exceptions

The Article 3:3 prohibition is qualified by two specific pro-
visions. The first (Article 9:2(b)) relates to downstream flex-
ibility in the implementation of export subsidy commitments
and is discussed below. The second (Article 9:4) relates to
the temporary exception, in favour of developing country
Members, with regard to certain marketing-cost-reduction
and transportation subsidies.

Article 9:4 and the provisions of Article 9:1 referred to
therein are in the following terms:

**Article 9:4**

"4. During the implementation period, developing
country Members shall not be required to un-
take commitments in respect of the export subsi-
dies listed in subparagraphs (d) and (e) of para-
graph 1 above, provided that these are not applied
in a manner that would circumvent reduction com-
mitments."

**Article 9:1(d) and (e)**

"(d) the provision of subsidies to reduce the costs
of marketing exports of agricultural products
(other than widely available export promotion and advis-
ory services) including handling, upgrading
and other processing costs, and the costs of inter-
national transport and freight;

(e) internal transport and freight charges on export
shipments, provided or mandated by governments,
on terms more favourable than for domestic ship-
ments;"

Several points may be noted about Article 9:4 from an
implementation point of view. First of all, the exception is
limited to the implementation period which, as defined in
Article 1(f) of the Agreement, is the six-year period com-
mencing in 1995. Secondly, the reference in Article 9:4 to
developing country Members not being "required to un-
take commitments in respect of the export subsidies
listed in subparagraphs (d) and (e)" could suggest that the
exception refers to measures which were already in exist-
ence during the 1986–1990 base period, and that Article 9:4
does not therefore provide a licence for introducing new
export subsidies of the type referred to in subparagraphs 9:1(d) and (e). On the other hand the only explicit condition is that such export subsidies should "not be applied in a manner that would circumvent reduction commitments." This condition would seem to be rather obtuse, since a Member which has reduction commitments on a product or products is entitled to use any of the subsi-
dies listed in Article 9:1(a) to (e). Thirdly, for the reasons,
inter alia, already outlined exceptions are likely to be con-
strued strictly. This could mean, for example, that the term
"marketing" in subparagraph (d) would be interpreted nar-
rowly and in line with the particular type of activities spe-
specifically referred to in that subparagraph. The terms of subparagraph (e), which relate to certain internal transport subsidies, are more precise and do not call for particular comment.

IV. Reduction Commitments

Article 9:2(a) of the Agreement describes the specific obligations with respect to the budgetary outlay and quantity reduction commitments. In the case of budgetary outlays the annual commitment level refers to the maximum level of expenditure that may actually be incurred in any particular year. In the case of the export quantity reduction commitments, the commitment relates to the maximum quantity in respect of which the export subsidies listed in Article 9:1 may be granted in any particular implementation year. It should be noted that the annual commitments on budgetary outlays and the commitments on quantities are separate and distinct obligations. The fulfilment of one does not remedy a breach of the other.

The reduction commitments in respect of incorporated products (Article 11 of the Agreement) are something of a special case, in that such subsidization is subject to budgetary outlay reduction commitments only and to special rules. These commitments are, like other export subsidy reduction commitments, subject to Article 3:3. Accordingly any agricultural product that is not specified, in Section II of Part IV of a Schedule, as being covered by such incorporated product commitments, may not be subsidized in this particular manner. Moreover, the per-unit subsidy that may be paid on incorporated "agricultural primary products" may not exceed the per unit export subsidy that would be payable on exports of the primary product as such (Article 11). The distinctive treatment of this particular type of export subsidization may be taken as confirming that such subsidization may only be undertaken within the scope of these incorporated product commitments. In this regard it may be noted that only four WTO Schedules contain incorporated product reduction commitments.

Article 3:3 of the Agreement is also qualified by the provisions of Article 9:2(b) relating to "downstream flexibility" in the implementation of the annual budgetary outlay and quantity reduction commitments. The provisions of Article 9:2(b) may only be resorted to during the second through fifth years of the implementation period. The effect of the provisions of subparagraphs (i) and (ii) of this Article is that the amounts by which actual outlays or quantities, on a cumulative basis, fall short of the corresponding annual commitment levels, also on a cumulative basis, may be carried forward within the limits specified in Article 9:2(b). However, this flexibility runs out by the end of the fifth year. In and by the end of the final year of the implementation period, outlays and quantities must not be more than 64 and 79 per cent respectively of the relevant 1986–1990 base period levels (Note: not the more recent 1991–1992 period allowed in certain cases to determine the starting point for the reductions).

In this regard it may be noted, from the implementation point of view, that there is in principle nothing which prevents a Member exporting products subject to reduction commitments without export subsidies. Various arrangements for doing this have been raised informally. However, in all such cases there is a very strict requirement under the Agreement to show, where such arrangements are contested, that such exports do not benefit from export subsidies of any kind.

V. Article 10 — Prevention of Circumvention of Export Subsidy Commitments

5.1. Background

Article 10:1 provides as follows:

"1. Export subsidies not listed in paragraph 1 of Article 9 shall not be applied in a manner which results in, or which threatens to lead to, circumvention of export subsidy commitments; nor shall non-commercial transactions be used to circumvent such commitments."

Article 10:1 is a general provision which applies both to the Scheduled reduction commitments, as well as to the other commitments concerning the use of export subsidies under the Agreement.

The Article 10:1 provisions apply to export subsidies other than those listed in Article 9:1. How these provisions are applied is likely to depend in the first instance on whether the product in question is subject to a Scheduled reduction
commitment. In such a case, since any of the subsidies listed in Article 9:1 may be used within the annual limits specified in the Schedule (but subject to the qualifications mentioned in the case of subsidies on incorporated products), the main question would be whether these "other" export subsidies have been used to subsidize exports in excess of the relevant annual quantity commitment level. This situation is covered in subparagraph 3 of Article 10:

"3. Any Member which claims that any quantity exported in excess of a reduction commitment level is not subsidized must establish that no export subsidy, whether listed in Article 9 or not, has been granted in respect of the quantity of exports in question."

Where the product is not subject to a reduction commitment in the Schedule of the Member concerned, the initial inquiry would probably be whether the measure in question is covered by the Article 9:1 listing. If so it would be directly prohibited by Article 3. Where it is not so covered, the question would then be whether the measure in question operates to grant a subsidy "contingent on export performance" in the sense of Article 1(e) of the Agreement. In such a case the question of "contingency on export performance" could be determined on the basis of general principles, including those contained in Article 3 of the Agreement on Subsidies. Article 3 of the Agreement on Subsidies is introduced by the phrase, "Except as provided in the Agreement on Agriculture, the following subsidies, within the meaning of Article 1, shall be prohibited." However, since there is no apparent conflict between the provisions of the Agreement with respect to the matters as such, it would seem to be a reasonable course of action to call these provisions in aid, at least as a means of guidance, where there is any doubt from an implementation point of view regarding the status of particular measures under Article 10:1 of the Agreement on Agriculture. However, this is an open question in the meantime and it should also be noted that, in practice, with or without such guidance, there will always be cases (particularly in the export monopoly context) where it would be difficult to reach conclusions about the status under Article 10:1 of particular measures. In any event, if the measure in question is an "other export subsidy" its use would be prohibited under Article 10:1 in the absence of a reduction commitment on the product concerned.

The position with respect to these non-specified products being prohibited under the anti-circumvention provisions of Article 10:1 has also been confirmed in the accession context. Under the notification requirements established by the Committee on Agriculture under Article 18:2 of the Agreement, Members which do not have Scheduled reduction commitments and which are not using export subsidies under the exception in favour of developing country Members (Article 9:4), are required to make an annual notification confirming that no export subsidies exist.

5.2. Subsidized Credits and Related Facilities
Such measures are covered by the anti-circumvention provisions of Article 10:1 of the Agreement until such time as an agreement modifying the application of this provision has been agreed by all WTO Members. In other words, Article 10:2 is not according to its own terms expressed as a formal derogation from the Article 10:1 general circumvention provisions. In practice Article 10:2 would appear to be no more than an "agreement to agree" at a later stage. Work on an understanding is currently underway on this subject within the OECD. As a general comment it will be important to have specific as opposed to general disciplines in this area (as has been the case for some time for industrial products) because, as implementation of the export subsidy reduction commitments proceeds, pressures could increase to have recourse to such forms of export assistance on a more extensive basis.

5.3. International Food Aid
International food aid transactions are not as such treated as an exception but more on a sui generis basis. Thus no specific reference is made to food aid under Article 3:3 of the Agreement and an elliptical or indirect reference is included in Article 10:1 ("non commercial transactions") to ensure that food aid transactions are not used to circumvent export subsidy commitments. Article 10:4 of the Agreement establishes a number of specific obligations applicable to food aid. In the case of subparagraphs (a) and (b) of Article 10:4 these obligations are designed to reinforce existing commitments
or procedural requirements in other international bodies which have specific responsibility for food aid or surplus disposal matters.

From the implementation point of view, the main points to be borne in mind are: (i) that international food aid must not be tied, directly or indirectly, to commercial transactions; (ii) that there is an obligation under the Agreement to ensure that international food aid transactions are carried out in accordance with the relevant FAO/CSD procedures; and (iii) that only those international food aid transactions which are in conformity with Article IV of the Food Aid Convention would be regarded as “international food aid” for the purposes of the Agreement on Agriculture. Article IV of the Food Aid Convention (“Terms of Food Aid Contributions”) provides that food aid may be supplied on any of the following terms: (i) as gifts; (ii) as gifts or grants of cash to be used to purchase food aid for the recipient country; (iii) as sales of grain for the currency of the recipient country which is not transferable and is not convertible into currency or goods and services for use by the donor members; and (iv) as sales of the food aid product on credit, with payment to be made in reasonable annual amounts over periods of 20 years or more and with interest at rates which are below commercial rates prevailing in world markets. Transactions that are not in conformity with these terms would have to be accommodated within commitment levels. In fact almost all international food aid is currently in the form of gifts.

VI. Actionability of Export Subsidies under the Due Restraint or “Peace Clause”

Article 13(c)(i) of the Agreement on Agriculture in effect provides that imported products, in respect of which export subsidies have been granted, are countervailable in accordance with the provisions that WTO Members are required to observe under Part V of the Agreement on Subsidies and Countervailing Measures. The requirement with respect to “due restraint” in respect of countervailing duty cases involving export subsidies which “conform fully” to the provisions of Part V of the Agreement on Agriculture, is much the same as that which is applicable in the case of the domestic support measures referred to in Article 13(b).

In summary, the requirement would be to fully comply with the provisions of the Agreement on Subsidies and Countervailing Measures as they relate to the “initiation” of countervailing duty investigations (see Articles 10 and 11, as well as Part V generally of that Agreement). In addition, although this would not be a requirement as such but more of a precaution given the inherent imprecision of the “due restraint” concept, it may be appropriate for the Member whose domestic CVD investigation procedures are likely to be activated, to so inform, and possibly also consult with, the other Member concerned.

Under Article 13(c)(ii) export subsidies that conform fully to the provisions of Part V of the Agreement on Agriculture are exempt from actions based on Article XVI of the GATT 1994 or Article 3 (prohibition of export subsidies) and Articles 5 and 6 (serious prejudice) of the Agreement on Subsidies. It may be noted that under this provision of the Peace Clause there is no linkage, as a condition of non-actionability under the Agreement on Subsidies, with regard to the amount or degree of domestic support which is granted to specific commodities relative to what was decided in the 1992 marketing year. Such a requirement was presumably not required because the export subsidy reduction commitments are product-specific.

VII. Notification Requirements

Under the notification requirements adopted by the WTO Committee on Agriculture as part of the basis for its review of the implementation of these and other commitments (document G/AG/2), Members with Scheduled export subsidy reduction commitments are required, following the end of each year of implementation, to provide what is colloquially referred to as “full picture” notifications. For each product or group of products which is subject to specific reduction commitments, the requirement is to notify the outlays and subsidized quantities (as appropriate) plus the volume of international food aid in the implementation year concerned. In addition data on a comparable basis relating to the total volume of exports of the products or groups of products concerned is required to be notified. This latter requirement also applies to those Members which do not have export subsidy reduction commitments but which are listed under the Committee’s notification
procedures as "significant exporters" of the products or
groups of products concerned.

Members which do not have scheduled export subsidy
reduction commitments are required to make an annual
notification, following the end of the year in question, con-
fiming that no export subsidies exist. In the case of the
export subsidies referred to in Article 9:4 of the Agreement
(the temporary exception reviewed), the requirement is to
notify details of these product specific export subsidies
(type of measure and quantity of subsidized exports) on
an annual basis.

These notifications serve as a basis for the Committee's
review of the implementation of commitments. It may be
noted that, under the Committee's review process, Members
are entitled to raise any matter relevant to the implementa-
tion of commitments at any stage and that this right is fre-
quently exercised, including in the case of export subsidy
commitments.

VIII. Export Prohibitions and Restrictions

Export prohibitions and restrictions are to some extent the
reverse side of the export subsidy coin, although the general
issue involved in the negotiation also related to importers' concerns with regard to food security aspects.

The basic requirements set out in Article 12 of the Agree-
ment, are that a Member proposing to institute export prohi-
bitions or restrictions (quantitative export restrictions not
export taxes) on foodstuffs must: (i) give due consideration
to the effects of such measures on importing Members' food
security; (ii) notify the Committee regarding the details of the
proposed measure as for in advance as possible; and (iii) con-
sult, upon request, with any other Member having a substan-
tial interest as an importer with respect to any matter related
to the measure in question. These requirements do not apply
to developing country Members other than those which are
net exporters of the specific foodstuff concerned.
Market Access

Paul Shanahan*

I. Introduction

Among the most important results of the Uruguay Round is that trade in agriculture under the WTO is now subject to a tariffs only regime and that legally binding commitments have been undertaken on market access which, taken together and given effective implementation, will substantially improve conditions of competition and opportunities for trade.

The primary purpose of this paper is to review the access commitments are being implemented in stages and are of course protected by the general WTO rules on trade in goods — mainly the GATT 1994 and the Agreement on Agriculture.

It is important to note that the Uruguay Round negotiating modalities are, from the point of view of implementation, largely a thing of the past. What matters now is what the rules say and what is in the legal Schedules of WTO Members.

II. The Legal Framework and Related Rule-Based Commitments

2.1. Background

Tariff concessions on agricultural products as such have always been subject to the same general rules as for other products. The main rules in this area are set out in Article II of what is now referred to as the GATT 1994 in order to distinguish it from the 1947 General Agreement on Tariffs and Trade. Where the differences arose were in connection with

*WTO Geneva. The views expressed in this paper are those of the author and do not necessarily reflect those of the WTO.
some of the GATT 1947 rules establishing general norms regarding government interventions in trade, in particular with regard to the general prohibition on quantitative restrictions and other non-tariff border measures.

Thus the pre-WTO legal framework (GATT Article XI:2(c)) permitted the use of non-tariff border measures on agricultural imports. The conditions under which such measures could be applied were, however, rather tough. They included effective restriction of domestic production, minimum access for imports and very tight limits on the extent to which imports of processed as opposed to primary products could also be restricted. Needless to say these conditions were not particularly popular with domestic producers or policy makers in some countries since their objectives in many cases were to subsidize and promote domestic output and to minimize imports of competing products. The old GATT did not prevent countries from using income and price support measures or other domestic subsidies. The only formal obligation was to consult on request and eventually to "discuss the possibility of limiting the subsidization." In their wisdom, however, the early GATT Contracting Parties counterbalanced this situation through a ruling that was designed to protect the value of tariff concessions affected by such subsidization. This ruling provided that, so far as domestic subsidies are concerned, a contracting party which has negotiated a concession under Article II may be assumed, for the purpose of Article XXIII (dispute settlement), to have a reasonable expectation, failing evidence to the contrary, that the value of the concession will not be nullified or impaired by the contracting party which granted the concession, by the subsequent introduction or increase of a domestic subsidy on the product concerned.

Various methods, some legal others in the grey area, were used to ensure that sensitive domestic product sectors were effectively isolated from world markets. These ranged from waivers, grandfather clauses and protocols of accession to measures not explicitly provided for in the General Agreement such as variable levies and voluntary restraint agreements. State trading import monopolies could also be used to isolate markets and over strict sanitary and phytosanitary measures to quarantine them.

In the run up to and during the course of the Uruguay Round a series of Article XI dispute settlement cases were initiated which demonstrated that many of the contested non-tariff access measures, and by implication a wide range of similar measures maintained by other countries, could not be justified under Article XI:2(c). As a result of reasoning developed in the context of the preparatory work for the Uruguay Round the variable levy itself, considered as a variable minimum import price arrangement, was also no longer immune from substantive challenge.

The options for the countries maintaining non-tariff border measures were not particularly brilliant. In essence these were either to bring the offending measures and the related domestic policies into conformity with the tough Article XI:2(c) conditions, or to eliminate the offending measures and fall back on tariffs. One of the problems was that in many cases these tariffs had been, often at some stage in the distant unsuspecting past, bound at relatively low levels. Re-negotiating and raising these tariffs would have involved compensation to affected parties and the coinage for this sort of operation, in terms of tariff reductions on other sensitive agricultural products, was in decidedly short supply. A rather desperate option was to brave the often very real possibility of retaliatory action by the complaining party or parties.

In fact another option was to emerge in July 1988 as a result of GATT Article XI related bilateral consultations and was to become a practical model for tariffication and the elimination of non-tariff measures. It involved the setting of an expanding low rate tariff quota that was to be eventually superseded by a reduced and reducing out-of-quota tariff plus a temporary volume-based special safeguard.

However, the idea of tariffication, as a multilateral approach for regularizing a vast array of questionable non-tariff border measures and as a means of generating additional trade liberalization, took a while to catch on. In fact tariffication as such, particularly comprehensive tariffication, was one of the least predictable outcomes of the Uruguay Round and it took some time before the inherent flexibility of such an orthodox approach and its negotiability gained wider acceptance. Minimum access on the other hand had been on stage before the Round got under way and conceptually was adaptable to a variety of possible market access scenarios, including a reformed and reinforced Article XI:2(c) approach.

The outcome of the Uruguay Round market access negotiations, involving as it did the conversion or replacement of non-tariff border measures by ordinary customs duties,
had to be consolidated through a new rule that would ensure: (i) that there was no back tracking; and (ii) that non-tariff border measures, whether or not specifically converted in the negotiations, were effectively prohibited. This was achieved through what is now Article 4 of the Agreement on Agriculture (discussed below). Article XI:2(c), which permitted non-tariff restrictions on both agriculture and fisheries products, remains on the books. However, this provision of the GATT is now inoperative so far as agricultural products are concerned because it is overridden by Article 21 of the Agreement on Agriculture. This Article provides as follows:

"The provisions of the GATT 1994 and of other Multilateral Trade Agreements in Annex 1A to the WTO Agreement shall apply subject to the provisions of this Agreement."

2.2. Article 4 of the Agreement on Agriculture

This Article and the footnote thereto provide as follows:

"1. Market access concessions contained in Schedules relate to bindings and reductions of tariffs, and to other market access commitments as specified therein.

2. Members shall not maintain, resort to, or revert to any measures of the kind which have been required to be converted into ordinary customs duties, except as otherwise provided for in Article 5 and Annex 5."

Paragraph 1 of this Article is commented on elsewhere in this paper in relation to the specific market access commitments. Paragraph 2 of Article 4 extends and reinforces the prohibition on non-tariff border measures in Article XI of the GATT 1994 but it does this in its own right. In other words one does not have to refer to Article XI:1 in order to decide whether a particular measure is prohibited. In effect Article 4:2 simply prohibits border measures other than ordinary customs duties and removes any scope for doubt as to the status in this regard of the specific measures mentioned: namely, variable import levies, minimum import prices, discretionary import licensing, non-tariff border measures maintained through state-trading enterprises, voluntary export restraints and similar measures other than ordinary customs duties. Whether a particular measure is caught by this provision will involve questions of fact and interpretation that, in contested cases, would have to be settled through the Dispute Settlement System or in some other appropriate manner. Secondly, as mentioned, Article 4:2 makes the agricultural exceptions under GATT Article XI:2(c) redundant. Thirdly, it removes any legal cover that might exist for measures maintained under waivers or other country specific derogations under the GATT 1947, such as the GATT agricultural waiver granted to the United States in 1955.

There are three exceptions to the Article 4:2 prohibition. The first relates to the Special Treatment or deferred tariffication provisions of Annex 5 to the Agreement on Agriculture. Only four countries managed to take advantage of this Annex (Japan, the Republic of Korea and the Philippines on rice and Israel on sheepmeat and certain dairy products) and, in any event, it is no longer possible, given the terms of Annex 5, for other countries including acceding countries to have access to its provisions. The second exception is the special safeguard clause, which is also and principally an exception to Article II:1(b) relating to tariff bindings. The third exception is of a more general nature. In fact it is in practice more an affirmation that the non-agriculture-specific or generally applicable exceptions under the GATT and the other WTO Multilateral Trade Agreements also apply to agricultural products as they do to other traded products. Such measures include, for example, balance-of-payments measures, anti-dumping and countervailing duties, general safeguard action (Article XIX) and measures under general GATT exceptions (Article XX).

Article 4:2 has already become a fertile ground for informal discussion and some of the examples raised may be of broader interest. Three preliminary points are worth bearing in mind. Firstly, Article 4:2 casts a very wide net. Secondly, by virtue of Article 21 of the Agreement on Agriculture, Article 4:2 would in principle override the provisions of other relevant WTO Multilateral Trade Agreements on Goods that might otherwise legitimise or purport to exclusively govern a particular category of non-tariff border measures. And, thirdly, that the onus of proof in cases involving general prohibitions may also be relevant.
One example concerns the situation where the applied tariff is varied according to the price of imports but within the legal limits established in the Schedule of the country concerned. In such a case there is obviously no breach of the scheduled tariff binding under GATT Article II:1(b) and the country concerned could abandon the scheme and simply apply the higher bound rate to all imports. From the point of view of Article 4:2, which applies independently of whether the tariff on the particular product is bound, some of the questions would be: Is the measure a variable levy? Does it operate as a minimum import price arrangement (fixed or variable)? Or is the measure one that falls into the residual category of “similar border measures other than ordinary customs duties?”

Another example concerns a situation where the issuance of a licence to import under a tariff quota or under the general tariff is conditional on the importer purchasing a certain quantity of the same or of a competing domestically produced product. From the Article 4:2 viewpoint it may be that this situation is covered by the prohibition as it relates to discretionary import licensing but here again the residual category may also be relevant. There may also be cases where such measures are claimed to be covered by the temporary exception under the WTO Agreement on Trade-Related Investment Measures.

Non-tariff measures maintained by state trading enterprises are another example that may be worth discussing. In this case there are specific provisions covering state trading enterprises in Article XVII of the GATT 1994. Are these provisions exclusive? If not, would the refusal by a state trading enterprise, which has control over imports, to allow private traders to import on the basis of contracts concluded with external suppliers, constitute a non-tariff measure for the purposes of Article 4:2?

It should be noted that in the above examples, other GATT provisions may also be relevant, such as Article 1 (MFN) in the first example and Article III:5 (National Treatment — mixing regulations) in the second.

<table>
<thead>
<tr>
<th>Table 1. Pre- and Post-Uruguay Round Simple Average Tariffs</th>
</tr>
</thead>
<tbody>
<tr>
<td>All agricultural products</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>Bangladesh</td>
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<tr>
<td>Canada</td>
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<tr>
<td>Chile</td>
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<tr>
<td>Hong Kong</td>
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<td>Indonesia</td>
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<td>India</td>
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<tr>
<td>Japan</td>
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<tr>
<td>Korea, Rep.</td>
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<td>Malaysia</td>
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<tr>
<td>Maldives</td>
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<tr>
<td>Mexico</td>
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<td>New Zealand</td>
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<td>Pakistan</td>
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<td>Philippines</td>
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<td>Singapore</td>
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<tr>
<td>Sri Lanka</td>
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<tr>
<td>Thailand</td>
</tr>
<tr>
<td>United States</td>
</tr>
</tbody>
</table>

Note: (a) Proportion of tariff lines that are not included in the average because the duties concerned are specific and ad valorem equivalents that are not available. Many of these duties resulted from the tariffication process and are considerably higher than the average levels shown in columns 1 & 2.
### Table 2. Incidence of Special Safeguards and Tariff and other Quota Commitments

<table>
<thead>
<tr>
<th>Selected WTO Member</th>
<th>Incidence of Special Safeguard (percentage of all agricultural tariff lines)</th>
<th>Tariff and other Quota Commitments (Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Canada</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Chile</td>
<td>-</td>
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<tr>
<td>Hong Kong</td>
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<tr>
<td>India</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Japan</td>
<td>14</td>
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<td>Maldives</td>
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<td>-</td>
</tr>
<tr>
<td>Mexico</td>
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</tr>
<tr>
<td>New Zealand</td>
<td>0.4</td>
<td>3</td>
</tr>
<tr>
<td>Pakistan</td>
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<td>-</td>
</tr>
<tr>
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<td>Thailand</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>United States</td>
<td>10</td>
<td>40</td>
</tr>
</tbody>
</table>

III. Scheduled Market Access Commitments

3.1. Introduction

Table 1 provides a summary comparison of the Pre- and Post-Uruguay Round simple average tariffs. It should be noted that the average reduction indicated is influenced by the extent to which the total number of tariff lines involved is covered.

The incidence of the special safeguard (the percentage of total agricultural tariff lines in respect of which the right to use the special safeguard has been reserved, see section 3.3) is shown in the Table 2, as well as details regarding the number of tariff and other quotas:

Analysis of the Uruguay Round tariff reductions according to stage of processing is also of particular interest. This is because world agricultural trade in high value and processed agricultural products has been expanding rapidly over the last decade and the share of these products in world trade has been increasing (from 33 to 46 per cent according to a recent study) whereas the share of the traditional bulk commodities either stagnated or declined. Many of the econometric and other analyses of the outcome of the Uruguay Round agricultural negotiations tended to focus on these bulk (mostly “tariffied”) commodities and thus present a limited view of the possible impacts.

3.2. The Legal Framework as it relates to Scheduled Market Access Commitments

Market access commitments in the form of tariff reductions, tariff quotas and other commitments have been the stock in trade of the GATT multilateral trading system since its inception. Thus there is a well established legal and procedural infrastructure for ensuring the stability and protecting the value of agricultural and other tariff concessions, through bindings under the GATT 1994.

“Binding” simply means that the tariff on a product cannot exceed the level specified in the legal
Schedule of a Member. These legal tariff bindings are a crucial element in creating stable and predictable conditions of competition. On the basis of a representative sample of forty market access Schedules (IDB sample: fourteen developed and twenty-six developing countries) only about one third of agricultural tariff lines were bound prior to the Uruguay Round. Under the WTO virtually all agricultural tariff lines are now bound. The situation in which many agricultural tariffs were unbound and could therefore be raised at will to highly restrictive levels is now a thing of the past.

Article II:1(b) of the GATT 1994, which provides as follows, constitutes the main legal basis for the protection of tariff bindings and other scheduled market access commitments:

"The products described in Part I of the Schedule relating to any contracting party, which are the products of territories of other contracting parties, shall, on their importation into the territory to which the Schedule relates, and subject to the terms, conditions or qualifications set forth in that Schedule, be exempt from ordinary customs duties in excess of those set forth and provided for therein. Such products shall also be exempt from all other duties or charges of any kind imposed on or in connection with importation in excess of those imposed on the date of this Agreement or those directly and mandatorily required to be imposed thereafter by legislation in force in the importing territory on that date."

3.3. The Special Safeguard

Where non-tariff border measures affecting a particular product were tariffied and the right to resort to the special agricultural safeguard (Article 5 of the Agreement on Agriculture) has been formally reserved by a Member in its Schedule in relation to the agricultural product concerned, an additional duty in excess of the rate bound under Article II:1(b) of the GATT 1994 may be applied. On the basis of the IDB sample only about 15 per cent of all agricultural lines are designated as being subject to the special safeguard. The products concerned are those that were tariffied, although it may be noted that not all the products which were tariffied are subject to the special safeguard.

The special safeguard, which may not be used in conjunction with the generally applicable GATT safeguard provisions (Article XIX) and which may not be applied to imports under current and minimum access tariff quotas, can operate on either a price or volume triggered basis (but not both at the same time).

The price-based safeguard may be triggered where the gap between the actual import price of a consignment falls below a trigger or threshold level which generally corresponds to the 1986–1988 external reference price. The additional duty partially compensates the difference between the current import price and the trigger price. The amount of the additional duty increases progressively as the price gap widens. Members in applying the price-based safeguard for the first time are required to notify the trigger price and its calculation to the Committee on Agriculture. The trigger price once notified is in effect fixed for the duration of the implementation period and may not be modified. Details of the manner in which the price-based safeguard operates are set out in Annex F in the Background Material. It may be noted that, as most trigger prices are based on relatively low 1986–1988 base period prices, there will be many cases where, given prevailing higher world prices, the special price-based safeguard is likely to remain inoperative.

The volume-based special safeguard allows an additional duty, corresponding to not more than one third of the applicable out of quota tariff, to be imposed in response to import surges. This additional duty may only maintained until the end of the year in which it has been imposed.

The standard trigger level for triggering the volume-based special safeguard is that the volume of current imports should have exceeded 125 per cent of the average of imports of the product concerned over the three preceding years.

The volume-based special safeguard may also be applied on a basis which takes account of the degree of import penetration and of any absolute volume changes in domestic consumption of the product concerned in the most recent period for which data are available compared to the preceding year.

Where import penetration (imports as a percentage of domestic consumption averaged over the three preceding years) is less than or equal to 10 per cent the standard 125 per cent volume trigger applies. Where the average im-
Markets Access

port penetration is between (+) 10 and 30 per cent, the trig-
ger corresponds to 110 per cent of the average volume of
imports in the three preceding years, plus or minus any
change in the volume of domestic consumption. Where
import penetration is greater than 30 per cent, the trigger
responds to 105 per cent of the average quantity of imports during the
three preceding years.

The notification requirement in the case of the volume-
base special safeguard involves notifying such action for the
first time in any year in respect of each product affected. In
addition to this a notification is required following the end
each implementation year, providing details of special
safeguard actions during that year for both types of special
safeguard. It may be noted that the special safeguard would
case to be usable if, as a result of the further negotiations
scheduled to begin before the end of 1999, “reform process”
is not continued.

3.4 Violation and Non-Violation Remedies

The special agricultural safeguard apart, the basic GATT
legal and procedural infrastructure relating to tariff con-
cessions applies to the agricultural tariff commitments.
In the event of a breach of the rules relating to tariffs and
tariff concessions (MFN treatment, breach of bindings)
recourse can be had to the provisions of the GATT 1994
relating to the “failure of another Member to carry out
its obligations” under that Agreement (Article XXIII:1(a)).
But a breach of obligations is not the only situation giving
rise to a right to seek redress under the dispute settle-
ment procedures. Tariff concessions are essentially con-
tractual in nature (they are re-negotiable under certain
conditions under Article XXVIII of the GATT 1994) and
the value that was bargained for when they were negoti-
ated can be undermined (“nullified or impaired”) by the
way in which concessions are implemented or by other
factors, without any breach of obligations being involved
(Article XXIII:1(b) — so called “non-violation” cases). In
other words the contractual concession may be breached
or impaired in any number of ways and the party claim-
ing relief, although not entitled to compensation or spe-
cific performance, may nevertheless be authorized to
withdraw equivalent concessions in the absence of a mu-
tually acceptable solution. This is something which needs
to be borne in mind in particular in the context of the
implementation of tariff quotas.

IV. Tariff Quota Administration

Tariff quotas are a species of tariffs. They are basically a modu-
ated or qualified tariff concession in the sense referred in
Article II:1(b) (see text of Article II:1(b), above). The fact that
the out-of-quota tariff may be highly restrictive or even pro-
hibitive does not de jure turn a tariff into a non-tariff barrier.
A tariff is a tariff however restrictive it may be. This is recog-
nized implicitly in Article XI:1 and explicitly in Article XXVIII
bis of the GATT 1994 (which refers to negotiations directed
to “the reduction of such high tariffs as discourage the im-
portation of even minimum quantities”). By the same token
the access opportunities represented by lower rate tariff quo-
tas are highly sought after. The manner in which the agricul-
tural tariff quotas resulting from the tariffication process, as
well as from the Uruguay Round agricultural negotiations gen-
erally, are implemented has therefore attracted a great deal of
attention and in some cases debate.

Tariff quotas can be administered in a variety of ways
and, provided importing members do not discriminate be-
tween sources of imports, they enjoy a wide measure of dis-
cretion with regard to administration. There are, however,
some important caveats.

First of all, an importing Member may allocate a tariff
quota amongst supplying countries. In so doing the Mem-
ber concerned is obliged to respect the provisions of
Article XIII of the GATT 1994 relating to the non-discrimi-
atory administration of quantitative restrictions. The gen-
eral rule is that “in applying import restrictions to any prod-
uct, Members shall aim at a distribution of trade in such
product approaching as closely as possible the shares which
the various Members might be expected to obtain in the ab-
sence of such restriction...” Given its hypothetical charac-
ter this provision is obviously more of a general guideline.
In practice the importing Member may settle the allocation
by agreement or negotiation with other Members having a
substantial interest in supplying the product concerned. Al-
ternatively, where the former method is not reasonably prac-
ticable, the importing Member may allocate the tariff quota

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among supplying countries on the basis of their share of imports during a representative period. In either case Article XIII establishes a number of transparency requirements.

In a number of cases the tariff quota allocation is specified in Schedules, in which case it may be assumed that parties with a substantial interest were involved either in the negotiations concerned or in the subsequent multilateral verification process that led to the acceptance of the Schedules and their inclusion in the 1994 Marrakesh Protocol. In general, conditions included in Schedules are subject to the rules and in this respect Article 4:1 of the Agreement on Agriculture, as well as Article XIII of the GATT 1994, would be relevant.

Secondly, tariff quotas may be administered on a “first come first served” basis. Once the in-quota quantity has been exhausted the higher out-of-quota takes effect.

Thirdly, tariff quotas may be administered through import licensing but not through “discretionary import licensing” since this is contrary to Article 4:2 of the Agreement on Agriculture. The question of “how” import licenses are allocated has already raised issues in at least one situation. This is where the government auctions the tariff quota import licenses, or the right in some other form to import under the tariff quota. Although there are reasonably clear advantages from a competition or equity point of view in using auction methods (provided the auctions are conducted fairly and at reasonable intervals), there is a case for saying that such procedures are contrary to Article II:1(b) because the premium paid by the successful bidder represents an additional charge in excess of the bound levels provided for in that Article. In other words: (i) the auction premium falls into the category of “charges of any kind imposed on or in connection with importation” in excess of those imposable under the second sentence of Article II:1(b); and (ii) the auction premium is not a fee or charge covered by Article VIII on “fees and formalities” because it is not “limited in amount to the approximate cost of the service provided.” The contrary view essentially is: (i) that the auction premium is not a “charge” on or in connection with importation as such; (ii) that the premium does not affect the “competitive relationship” between imports and domestic products by affording indirect protection to domestic products; and (iii) that the premium is part of a purely domestic contractual arrangement which if anything is within the ambit of Article III (National Treatment) rather than Article II.

The “to whom” aspect of the allocation of tariff quota licenses may also give rise to complications; for example, where an organization, association or agency involved in the production or marketing of the competing domestic product is granted the tariff quota licenses or the exclusive right to import under the tariff quota. Such entities may have an interest in minimizing imports under the tariff quota and may act accordingly. This could well involve a situation where a (non violation) nullification and impairment complaint could be sustained. But as with all such cases this would very much depend on the particular facts and circumstances involved.

Another question is whether allocation of the tariff quota volume to a state-sanctioned import monopoly, for example a state-trading enterprise or a marketing board, is a legal means of implementing the tariff-quotas established under the WTO. While there can be little doubt that neither the GATT 1994 nor the Agreement on Agriculture prohibit state-trading enterprises per se, Article II and Article XVII of GATT 1994 establish standards to be respected by state-trading enterprises. Accordingly, such enterprises or boards have to act in a manner consistent with the general principles of the GATT, including non-discriminatory treatment. Any formal or effective import monopoly must not operate “so as to afford protection on the average in excess of the amount of protection provided for in [the] Schedule” (Article II:4 of GATT 1994). Moreover, in line with Article XVII, state-trading enterprises must make any purchases solely in accordance with commercial considerations, including price, quality, availability, marketability, transportation and other conditions of purchase, and shall afford the enterprises of the other WTO Members adequate opportunity, in accordance with customary business practice, to compete for participation in such purchases. GATT panels have found that the obligation of a monopoly importing a product for which a concession had been granted “to import and offer for sale such quantities of the product as will be sufficient to satisfy the full domestic demand of the imported product” (Article 31:5 of the Havana Charter) is part of GATT law. The domestic price charged by the state-sanctioned import monopoly for the imported product is not to exceed the landed costs (regard being had to average landed costs and selling prices over recent periods) plus the bound import duty (and/or, if that is the case, the mark-up bound in the Schedule of the relevant
WTO Member); any transportation, distribution and other expenses incident to the purchase, sale or further processing; an average profit margin which would be obtained under normal conditions of competition, i.e. in the absence of the monopoly; and any internal taxes conforming to the provisions of Article III of GATT 1994. There are, of course, technical difficulties in applying this concept in practice, particularly where markets are characterized by regional and product differentiation. Moreover, all this is relevant, of course, only under the assumption that the footnote to Article 4:2 of the Agreement on Agriculture does not outlaw a statutory import monopoly (as opposed to state-trading enterprises that have only more limited trade privileges) on the grounds that these could be considered to be “similar border measures” in the sense of the footnote.

There are other examples of situations where the manner in which tariff quotas are administered and allocated may give rise to implementation problems, such as access to MFN tariff quotas by preferential suppliers under regional trade agreements. Granting tariff quota access to non-WTO countries is also a potential issue. It is possible that in due course some of these issues will be resolved or clarified either through agreed guidelines for example, or through the formal WTO procedures as appropriate.

Finally in this general context, any matter relating to the implementation of the tariff and other market access commitments can be raised in the Committee on Agriculture. In the case of tariff concessions as such there is not, nor is there any practical need, for specific notification requirements. In the case of tariff quotas, the importing Members concerned are required to notify details of how their tariff quotas are administered, as well as any subsequent changes in this regard.

The object of these tariff quota administration notifications is to provide a basis for reviewing whether the “market access opportunities” negotiated through these tariff quotas are being effectively made available to exporters. In addition the quantity of imports under each tariff quota is required to be notified annually to the Committee, and the Committee’s Working Procedures make explicit provision for access to information regarding to status of imports under tariff quotas during the course of the year.

Finally it should be noted that, with one exception, the right to take action under the Dispute Settlement procedures to ensure that obligations in respect of market access concessions are respected, is not affected by the provisions of the Due Restraint or “Peace Clause” (Article 13 of the Agreement on Agriculture). The exception relates to non-violation nullification or impairment actions in respect of the effect of subsidies on tariff concessions. However, the Article 13 limitation on actions of this sort is conditional on domestic support for the specific commodity concerned not being in excess of that decided during the 1992 marketing year.
Implementation: The Multilateral Review Process and Dispute Settlement

Paul Shanahan*

I. Introduction

What distinguishes the Uruguay Round outcome on agriculture from the results of previous GATT negotiations on agriculture is that all WTO Members have commitments on agriculture and that these commitments and their implementation have important implications for the way in which trade and domestic agricultural policies are conducted. This is all part of the process of integrating agriculture as a whole into the multilateral trading system within a framework which effectively provides for extending the range and depth of the commitments through further negotiations.

The establishment of the WTO Committee on Agriculture to systematically review, or keep a “collective eye” on, the implementation of the Uruguay Round commitments on agriculture was inspired by various considerations, including the innovative and relatively complex nature of the new commitments limiting subsidization. In general there is a common interest amongst all WTO Members in ensuring that commitments entered into in all areas covered by the WTO are respected. On the whole this is a self-reinforcing process, since each Member wants to ensure that it gets what it paid for and knows that to achieve this it too has to make good on its own promises and commitments. In agriculture the situation is not basically different but as anyone familiar with the domestic policy process will confirm, it is something of a minor revolution in some cases for government officials to have to conduct business with domestic interest groups on the basis that under the new international rules and commitments this or that can no longer be done, that some things now have to be done in some other way or within externally fixed constraints. The creation of a multilateral review process usefully strengthens the hands of government officials at the domestic level because the way in which the new rules and commitments are being implemented is exposed to relatively rapid critical scrutiny by their peers in the Committee on Agriculture and ultimately to formal adjudication under the improved WTO dispute settlement procedures.

The following sections of this paper briefly outline the operation of the multilateral review process and the WTO dispute settlement system. Any views expressed are made on

*WTO, Geneva. The views expressed in this paper are those of the author and do not necessarily reflect those of the WTO.
a personal basis and are not attributable to WTO Members or to the Secretariat.

II. The Multilateral Review Process

The purpose of this process is to review progress in the implementation of commitments negotiated under the Uruguay Round reform programme. The commitments that are within the scope of this review process include both the commitments specified in the individual country Schedules, on market access, export subsidies and domestic support, as well as the related rule-based commitments. All Members of the WTO are members of the Committee on Agriculture which conducts the review process.

The review process is undertaken on the basis of notifications submitted by Members in line with the notification requirements established by the Committee. Any Member may bring to the attention of the Committee any measure which it considers ought to have been notified by another Member under these requirements. However, the review process is not limited to matters which are before the Committee in the form of periodic or ad hoc notifications. Under Article 18:6 of the Agreement on Agriculture the review process provides an opportunity for Members to raise “any matter” relevant to the implementation of commitments under the Uruguay Round reform programme as set out in the Agreement.

The following summarizes the main notification requirements under the Agreement on Agriculture.

Market Access Commitments: Members with tariff or other quota commitments are required to notify in detail the arrangements under which these commitments are administered. This is a one-off requirement but any subsequent changes in administration have to be notified to the Committee. “Quota-fill,” the actual volume of imports under these tariff and other quota commitments, has to be notified on an annual basis. In addition, in terms of the Committee’s Working Procedures, Members are able to seek and obtain information during the course of an implementation year on the functioning of a specific tariff quota, including the quantity of imports effected or authorized under that quota. The notification requirements in respect of the special safeguard provisions include an annual requirement regarding the use (or non-use, as the case may be) of these provisions in any year and certain ad hoc requirements.

Export Subsidies: Members with reduction commitments in their Schedules are required annually to notify not only subsidized export volumes and related budgetary outlays but also the total volume of exports of the products subject to reduction commitments, plus any food aid transactions. These so-called “full picture” notifications are designed to provide a basis for reviewing compliance with both the reduction commitments and the anti-circumvention provisions of the Agreement. Members which do not have export subsidy reduction commitments in their Schedules are required to provide an annual notification confirming that export subsidies have not been used or, in the case of developing country Members using exempt export subsidies, an annual notification providing details of the products and export volumes concerned. Those Members which do not have export subsidy commitments in their Schedules but which are listed by the Committee as significant exporters (more than 5 per cent share of total world exports) are also required to notify their total exports on an annual basis. For instance, in South Asia, this includes Pakistan with respect to rice and cotton.

Domestic Support: Members with domestic support reduction commitments in their Schedules are required to calculate and notify their “Current Total Aggregate Measurement of Support” for each year of the implementation period. Members which do not have such commitments in their Schedules would generally only have to submit an annual notification providing details of support under the Green, Special and Differential Treatment and Blue Box exemptions, as appropriate. For Members which do not have Scheduled domestic support reduction commitments but whose domestic support in any implementation year is not fully covered by these exemptions, there is an annual requirement to demonstrate that any such support is nevertheless within the relevant de minimis levels. However, the Committee may, at the request of a developing country Member, set this requirement aside. Least developed Members would in practice only be required to notify their exempt domestic support every second year.

Export Prohibitions and Restrictions: Members instituting prohibitions or quantitative restrictions on exports of foodstuffs are required to provide advance detailed notifications to the Committee. However, this requirement only applies to developing country Members which are net exporters of foodstuffs.
All notifications are subject to review by the Committee. Under the Committee's Working Procedures, Members that wish to raise matters concerning particular notifications are expected to give notice of the precise points they propose to raise in advance of the meeting at which the notification is up for substantive review. Notifications in respect of which points have not been raised in this way, may or may not be subject to comments or questions at the meeting concerned. Any notification, whether or not it has been through the gauntlet at a meeting of the Committee can always be reverted to by another Member. It may be noted that the fact that a matter as notified has been reviewed by the Committee is without prejudice to rights and obligations in relation thereto under the WTO.

By April 1996, there had been five meetings of the Committee. The first meeting in March 1995 reviewed five notifications (four on the administration of tariff quotas and one on trigger prices under the special safeguard). Similarly, at its meeting in March 1996, fifty-two notifications were subject to substantive or preliminary review by the Committee (sixteen on tariff quota administration, nine on tariff quota-fill, nine in the context of the special safeguard, two on domestic support, fifteen on export subsidies and one on export restrictions).

As noted above, under Article 18:6 of the Agreement, the review process provides an opportunity for raising "any matter" (independently of whether or not it is the subject of a notification) that is relevant to the implementation of commitments under the reform programme. This can be done at any regular meeting of the Committee (advance notice is often given but is not a pre-requisite), through the Chairperson under written procedures in the interval between regular meetings of the Committee, or, under certain conditions, at a special meeting of the Committee convened for the purpose where the matter is of significant importance or urgency. In practice the provisions of Article 18:6 have been extensively resorted to at regular meetings of the Committee. Some examples of the sort of issues raised under Article 18:6 include: auctioning tariff quota licences and other issues relating to the administration of tariff quotas; compliance by one Member with its export subsidy reduction commitments; the use in a specific case of export subsidies under the exemption in favour of developing country Members; the introduction by one Member of new domestic support measures to replace export subsidies; and issues relating to non-tariff import restrictions.

In all this it should be borne in mind that thousands of tariff concessions as well as other commitments are being implemented and that only a very small proportion of these are a source of friction between Members. In most cases, before a matter is raised in the Committee it will have already been the subject of informal bilateral discussions between the Members concerned. Most of the matters raised in the review process are satisfactorily resolved, either bilaterally or through the explanations, further information or undertakings provided in the Committee. In a number of cases the follow-up has been for the Chairman to undertake informal consultations with the parties concerned with respect both to specific as well as more generic issues. This informal consultation process is a regular feature of the modus operandi of the Committee. The Working Procedures of the Committee also enable Members to call on the Chairman to help resolve issues between them if the parties concerned so decide. Informal consultations within the framework of the Committee's procedures are, however, without prejudice to the right of Members to have recourse at any stage to the formal WTO dispute settlement procedures.

The overseeing function of the Committee also extends to all other provisions of the Agreement on Agriculture. This includes, for example, the monitoring, as appropriate, of the Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least Developed and Net Food-Importing Developing Countries. It also includes overseeing the provision that negotiations aimed at pushing further ahead with the multilateral reform of trade-related agricultural policies will be initiated right before the turn to the next millennium. It should also be noted that the Committee is not an agricultural ghetto. The other WTO multilateral trade Agreements on Goods are applicable to agriculture (subject to Articles 13 and 21 of the Agreement on Agriculture) and agricultural issues can and are frequently taken up under these other agreements: for example a range of routine matters relating to agricultural tariffs, like other tariffs, are generally dealt with in the Committee on Market Access and the provisions of other WTO Agreements are frequently cited in dispute settlement proceedings.
III. Dispute Settlement

The following are the main steps or phases in the dispute settlement process:

(a) The complainant requests formal consultations. The respondent must reply to this request within ten days and enter into consultations in good faith within thirty days of the request with a view to reaching a mutually satisfactory solution. Sixty days are allowed for organizing and holding these consultations, which are confidential and without prejudice to the rights of Members in any further proceedings.

(b) If no mutually satisfactory solution is arrived at within the sixty day period the complainant may request the Dispute Settlement Body (DSB) to establish a panel. A panel will be established at the latest at the DSB meeting following that at which the request first appears on the DSB agenda (unless the DSB decides by consensus not to establish a panel). The composition of the panel (normally 3 well-qualified individuals) and its terms of reference have to be settled within a further period of thirty days.

(c) The job of the panel is to examine objectively the matter in dispute and the submissions of the parties in relation thereto in the light of the relevant legal provisions and to make such findings as will assist the DSB in making recommendations or in giving rulings. Before the report of the panel is finalized the parties to the dispute have an opportunity to comment on the proposed report ("interim review stage") and have the right to request a further meeting of the panel with the parties. Under the pre-WTO dispute settlement procedures the parties had an opportunity to comment on the factual part of a panel report but not on the proposed report as a whole. As a general rule the period from the date that the composition and terms of reference have been agreed upon until the date the final report is issued, is not to exceed six months. In cases involving urgency this time period is three months. But in either case it is recognized that, within strict limits, additional time may be required.

(d) Subject to an appeal being made to the newly created Appellate Body, the report of a panel will be adopted by the DSB within sixty days after circulation of the report to the Members unless there is a consensus not to adopt the report. Under the pre-WTO procedures panel reports were not adopted unless there was a consensus to do so.

(e) The establishment of a right of appeal and a permanent Appellate Body is a fundamental improvement in the dispute settlement system. Where there is an appeal, the Appellate Body may uphold, modify or reverse the legal findings and conclusions of the panel. The Appellate Body's report has to be adopted by the DSB and accepted unconditionally by the parties, unless the DSB decides by consensus not to adopt the Appellate Body's report. As a general rule the time period for this appeal process, from the date of appeal to adoption of the report, is ninety days.

(f) Following adoption by the DSB of the panel or Appellate Body report, the respondent has a period of thirty days within which to inform the DSB of its intentions with respect to implementation of the recommendations and rulings. If immediate compliance is not practicable the respondent is entitled to a "reasonable period of time" within which to do so. The reasonable period of time can be determined in a number of ways, including through binding arbitration, but in any event the question has to be settled within ninety days of the adoption by the DSB of the panel or Appellate Body report. The DSB keeps implementation under surveillance and the respondent is required to submit regular reports to the DSB on the status of implementation rulings and recommendations.

(g) Where the respondent fails within the reasonable period of time to bring the measure found to be inconsistent with its obligations into conformity therewith, or otherwise fails to comply with the DSB's recommendations or rulings, the complainant can request the respondent to enter into negotiations with a view to developing mutually acceptable compensation.
(h) If no agreement on compensation is reached within twenty days of the expiring of the reasonable period of time, the complainant is entitled to request the DSB to authorize retaliatory measures against the respondent in the same sector, in another “goods” sector, or under the agreements on services or intellectual property. The complainant’s request will be authorized within thirty days of the expiry of the reasonable period of time unless the DSB decides by consensus to reject the request. The respondent can object to the level of retaliation requested but any such objection has to be disposed of in accordance with the relevant procedures within sixty days of the expiry of the reasonable period of time. It is to be noted that both compensation and suspension of concessions or obligations are temporary measures which have to be withdrawn once the DSB rulings and recommendations have been complied with by the respondent.

An efficient dispute settlement system is a central element in providing security and predictability to the multilateral trading system and in preserving the balance of rights and obligations, as well as the value of concessions. Under the WTO, as was also the case under the GATT 1947, one of the main objectives is to secure positive solutions to disputes. Many if not most disputes are settled without recourse to dispute settlement panels or are settled out of court after formal proceedings have been initiated. One of the important features of the new procedures is that explicit provision is made for settling disputes through resort (by mutual consent) to arbitration, as well as through good offices, conciliation and mediation.
Domestic Taxes and Administrative and Technical Barriers to Trade on Goods and Services

Thomas Friedheim*

I. Overview

The WTO rules governing domestic taxes as well as administrative and technical barriers to trade on goods are contained in the General Agreement on Tariffs and Trade, in the multilateral trade agreements annexed to the WTO Agreement and, of course, in almost 50 years of GATT’s legal practice. By necessity, this paper will therefore have to cover a fairly wide range of legal instruments and it will even so, have to be selective.

The plan of this paper is as follows. First, the various border taxes and charges which are anticipated in the GATT will be reviewed. This will lead the reader from Article II on “schedules of concessions” to Article VIII on “fees and formalities connected with importation and exportation.” Article VIII touches on import licensing, which, being a potential administrative impediment to trade, takes one to the WTO Agreement on Import Licensing Procedures. The foregoing rules are applicable before the goods have entered customs. Once the goods have been cleared through customs, the national treatment obligation “kicks in.” The next step is therefore to review the provisions of Article III of the General Agreement entitled “national treatment on internal taxation and regulation,” which is followed by a review of Article X on the “publication and administration of trade regulations.” This paper then enters the sphere of technical barriers to trade and presents a summary of the rules and disciplines under the WTO Agreement on Technical Barriers to Trade. Finally, this paper provides a brief overview of the provisions for national treatment and domestic regulations as they relate to trade in services.

II. Domestic Taxes and Administrative Barriers to Trade on Goods

2.1. Other Duties and Charges under GATT Article II:1(b)

Article II:1(b) of the GATT contains the fundamental obligation that WTO Members must not exceed the ceilings set by their tariff concessions (tariff bindings) as indicated in their Schedules*. Likewise, products which are subject to a tariff binding are “exempt from all other duties and charges of any kind imposed on or in connection with importation

*WTO, Geneva. The views expressed in this paper are those of the author and do not necessarily reflect those of the WTO.
in excess of those imposed" on the date when the conces-

sion was first made. This provision recognizes that a tariff is merely one kind of import tax and what matters to the exporter is the overall level of border taxation. A tariff binding would be meaningless if other charges on imports could be varied at will. The General Agreement therefore imposes a standstill on 'other duties and charges' on bound items. 'Other duties and charges' (ODC's) within the meaning of Article II:1(b) are strictly those charges that discriminate against imports, in other words they do not include charges on imports which are applied to equalize internal taxes levied consistently with the national treatment provisions of Article III of the GATT (see below under “Internal Taxation”). ‘Other duties and charges’ as they appear in country Schedules include stamp taxes, special customs taxes, revenue taxes, landing taxes, economic development taxes, special retribution taxes, commodity taxes, fiscal taxes, standard import taxes, maritime freight taxes and import surcharges.

Since in many cases ‘other duties and charges’ were not previously indicated in country Schedules, there was a perceived lack of transparency with regard to the existence, type and level of any bound ODC’s. As the result of the Uruguay Round, an Understanding on the Interpretation of Article II:1(b) of the GATT has been reached to improve transparency with respect to the application of ‘other duties and charges’. WTO Members were required to indicate in their Uruguay Round Schedules any ODC existing on 15 April 1994. It will be open to WTO Members, during a specified period of time, to challenge the consistency of the recorded ODC levels with previously bound levels (paragraph 4 of the Understanding). All Members retain, of course, the right to challenge, at any time, the consistency of any ‘other duty or charge’ with other GATT obligations. The applicable bound ODC’s of the South Asian WTO Members are set out in Table 1.

The bound levels of ODC’s cover neither anti-dumping nor countervailing duties nor fees or other charges commensurate with the cost of services rendered referred to in Article II:2 of the GATT. WTO Members are therefore free to levy, over and above the ceiling level for ODC’s, fees or ‘other charges’ on services rendered. The rules with regard to such fees and ‘other charges’ are elaborated in GATT Article VIII on “fees and formalities connected with importation and exportation.”

2.2. Fees and Formalities under GATT Article VIII

The provisions of Article II:2(c) of the GATT are complemented by Article VIII which allows WTO Members to charge fees or ‘other charges’ commensurate with the cost of services rendered. While Article II of the GATT applies only to bound items for the purpose of importation, the provisions of Article VIII cover imports as well as exports, and whether or not there exists a tariff binding.

Article VIII:1(a) prohibits such charges (i.e. fees or ‘other charges’) unless they satisfy three criteria: (i) the charge must be limited to the approximate cost of services rendered; (ii) it must not represent an indirect protection to domestic production, and (iii) it must not represent a taxation for fiscal purposes (see panel report on “United States — Customs User Fee.” BISD Supplement No.35).

The provisions of Article VIII cover, inter alia, inspection services, quarantine, sanitation and fumigation as well as licensing. Licensing procedures are elaborated in the WTO Agreement on Import Licensing Procedures.

2.3. WTO Agreement on Import Licensing Procedures

The WTO Agreement on Import Licensing Procedures (the “Import Licensing Agreement”) establishes rules for the purposes of reducing the scope for discrimination by administrative discretion in licensing procedures, of ensuring that licensing procedures themselves do not restrict import flows, and of generating as much transparency and automaticity under the procedures as possible.

The Import Licensing Agreement distinguishes between automatic and non-automatic import licensing. Under automatic licensing procedures, approval of an import...
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Licence application is "freely granted," the intention being that the granting of such licenses be genuinely automatic, unrestricted, non-discriminatory and prompt. Automatic licensing procedures often serve the purpose of statistical data collection and such exercise should clearly not serve as a disguised measure to restrict imports. A provision for payment of a security, bond or deposit, would be in conformity with the rules for automatic licensing, provided it has no restrictive effects on imports. The Agreement establishes three criteria for the administration of automatic licensing procedures: (i) anybody fulfilling the legal requirements as an importer can apply for and obtain licences; (ii) licence applications are to be accepted by the competent authorities on any working day prior to customs clearance; and (iii) licences are to be issued within ten working days. To the extent that these standards are met, automatic licensing procedures are deemed not to have trade-restrictive effects (Article 2.2).

Non-automatic licensing is defined negatively as any import licensing procedures which are not automatic. Specific rules apply in this case to ensure that licensing procedures do not have effects which are additionally restrictive over and above those restrictions which the licensing system administers and that there is transparency in the measures adopted. The legal text also contains the exhortation that "non-automatic licensing procedures shall correspond in scope and duration to the measure they are used to implement, and shall be no more administratively burdensome than absolutely necessary to administer the measure." It remains to be seen what the standard of proof is, in case of a trade dispute, for a licensing system to be more burdensome than absolutely necessary.

There are a number of specific rules in the Import Licensing Agreement which are applicable to the administration of non-automatic licensing procedures and the allocation of licences. The principal procedural requirements appear to be:

(i) the procedures must be transparent and "all relevant information," including quota allocations to countries, must be provided to governments traders in a timely manner (i.e. a reaffirmation of the principles of Art. X of the GATT, elaborated below);

(ii) eligibility for quota allocations via import licences should be non-discriminatory; any potential importer refused a licence has the right to appeal or review of the decision in accordance with national legislation;

(iii) the validity period of licences must not be limited so as to restrict imports;

(iv) no measures must be taken in order to inhibit the full utilization of quotas;

(v) import licences should be issued so that imports can take place in economic quantities;

(vi) while import licence allocations should consider past import performance of the applicant, due consideration should be given to new importers, especially from developing and least-developed countries;

(vii) in the case of global (MFN) quotas, importers are free to choose the country of origin (i.e. a reaffirmation of Art. I of the GATT); in the event of quotas being allocated among countries, the licences can be country-specific but this must be made clearly stipulated on the import licence (the rules governing the country allocations are set out in Art. XIII of the GATT).

In certain cases, the application of non-automatic licensing procedures may raise questions in relation to the disciplines of the Agreement on Agriculture. Article 4.2 of the Agreement on Agriculture explicitly prohibits non-tariff measures, including discretionary import licensing. In the event of a dispute, it is unlikely that a panel would view the two concepts as to be coterminous since such interpretation would render the provisions of the Import Licensing Agreement with regard to non-automatic licensing ineffective. The provision of the Agreement on Agriculture is therefore more likely to serve as an additional discipline for restrictive licensing practices not captured by the Import Licensing Agreement.

The Import Licensing Agreement identifies a separate procedure with regard to the allocation of foreign exchange which could otherwise be used in a manner analogous to import licensing: "The foreign exchange necessary to pay for licensed imports shall be made available to licence holders on the same basis as to importers of goods not requiring import licenses" (Article 1.9). This requirement is obviously targeted at those countries which effectively ration foreign exchange.

It may be noted that there are differing views on whether the provisions of the Import Licensing Agreement
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apply to import licensing under a tariff quota regime as distinct from quotas. Some favour the legal argument that an import licence is not “a prior condition for importation” (Article 1:1 of the Import Licensing Agreement) because there is no need for such licences for imports that flow over the out-of-quota tariff. In practice, however, most WTO Members which use import licences to administer tariff quotas in agriculture follow the procedures of the Import Licensing Agreement.

2.4. National Treatment on Internal Taxation and Regulation under GATT Article III

Introduction. This section draws extensively on legal interpretations by dispute settlement panels during the era of the “old” GATT (referred to as the GATT 1947) which has been superseded by the GATT 1994. It should be borne in mind that the legal interpretations offered here have been culled for the purposes of this paper and that future dispute settlement panels may, in light of the circumstances and issues at stake, revisit these interpretations.

What is National Treatment? Once imported goods have been cleared through customs, the national treatment obligations become operative. National treatment is one of the cardinal tenets of the WTO. The national treatment principle in Article III of the GATT requires governments to extend at least as favourable treatment to imported products as to ‘like’ products of domestic origin. In other words, Article III prohibits the use of domestic measures which discriminate in favour of domestic products (discrimination in favour of foreign products is not prohibited). It has been observed in the 1960s: “Because the national treatment obligation affects internal government action so directly, it becomes more quickly embroiled in domestic politics than any other GATT obligation and it may be one that is often breached. Discrimination in favour of local products sometimes seems to be one of the basic human urges.” In fact, by far the most trade disputes brought to the GATT were related to Article III violations and, not surprisingly, the first two WTO panels involved in core issues application of the national treatment provisions (United States — Standards for Reformulated and Conventional Gasoline and Japan — Taxes on Alcoholic Beverages).

One of the primary purposes of Article III is to complement the most-favoured-nation clause of Article I of the General Agreement and to protect the benefits accruing from tariff concessions under GATT Article II. How could one otherwise expect WTO members to negotiate tariff concessions without any assurance that their efforts cannot be frustrated through discriminatory measures once the products have been cleared through customs, although it may be noted that the national treatment obligations are applicable whether or not the product concerned is subject to a tariff binding. By virtue of Article III:8(b) of the GATT, government procurement is exempt from national treatment obligations. Signatories of the plurilateral WTO Agreement on Government Procurement have undertaken to apply national treatment also in the area of government procurement though not all government procurement is covered.

Two categories of application of national treatment obligation can be distinguished: (i) internal taxation and (ii) government regulation.

Internal Taxation. The national treatment obligations with respect to internal taxation are set out, in general terms, in paragraph 1 of Article III which states:

“The Members recognize that internal taxes and other internal charges, ... should not be applied to imported or domestic products so as to afford protection to domestic production.”

This general principle is complemented by the specific requirements in paragraph 2 of Article III which reads as follows:

“The products of the territory of any Member imported into the territory of any other Member shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products. Moreover, no Member shall otherwise apply internal taxes or other internal charges to imported or domestic products in a manner contrary to the principles set forth in paragraph 1.”

Internal taxes and “other internal charges.” The first issue to be addressed is, what are internal taxes within the meaning of Article III? According to GATT practice, an internal tax is one which applies to both imported products and to ‘like’ domestic products, including cases where the
tax on the imported product is collected or enforced at the
time or point of importation. In contrast, any tax which is
collected as a condition to entry of the goods into the
importing country and applies exclusively to imported prod-
ucts without being related in any way to similar charges col-
lected internally on 'like' domestic products, falls outside the
scope of Article III. The same distinction applies to 'other
internal charges'.

Trade disputes brought to the GATT and deliberations
by the GATT Contracting Parties on border tax adjustment
have clarified the scope of what could be considered an in-
ternal tax. It has since been accepted that excise duties, sales
taxes, value-added taxes, turnover taxes, luxury taxes, and
other taxes directly levied on products are governed by Ar-
ticle III and cannot be applied to discriminate against im-
ported products. On the other hand, (corporate) income
taxes, social security charges, etc. are not eligible for border
tax adjustment under the terms of Article III since they are
not levied on products as such.

Trade effects. One GATT panel has made the point that
Article III guarantees equality of competitive conditions and
is not concerned with trade effects (see the so-called Sup-
erfund panel “United States — Taxes on petroleum and
certain imported substances.” BISD Supplement No. 34).
Subsequent GATT practice has been strict in this regard, and
any claim that there is a certain ‘de minimis’ level of tax dis-
crimination has consistently been rejected.

Internal taxes, or internal regulations, which expose
imported products to a risk of discrimination have been
found by GATT panels to constitute, by itself, a form of
discrimination. It would therefore be incompatible with na-
tional treatment obligations if an internal tax regulation is
capable of giving rise to discrimination against imported
products even though this may not happen in each indi-
vidual case (see panel report on “European Economic Com-
unity — Payments and subsidies paid to processors and
producers of oilseeds and related animal-feed proteins.”
BISD Supplement No. 37). GATT practice has evolved to
distinguish between national treatment obligations under
mandatory and discretionary legislation. Mandatory leg-
islation in the area of internal taxation and regulation which
requires the executive authority to act inconsistently with
national treatment obligations has been found to vio-
late Article III, whether or not the legislation which man-
dates inconsistent actions is actually enforced. This is based
on the rationale of Article III which “serves not only to pro-
tect current trade but also to create the predictability
needed to plan future trade.” On the other hand, discre-
tionary legislation which gives the executive authority the
possibility to act inconsistently with Article III, has not been
found to violate national treatment obligations. For ex-
ample, internal tax legislation would not be presumed to
be inconsistent with national treatment obligations, even
if such legislation allows for discriminatory tax on im-
ported products but where in practice such internal tax is
levied consistently with Article III.

Treatment of 'like' products. Article III:2 requires
governments to treat imported products at least as
favourably as 'like' domestic products in the area of inter-
taxation. The issue of 'likeness' is a delicate one because
the fact or conclusion that products are 'like' has legal con-
sequences in the GATT. What is at stake, potentially, has
been stated by a panel as follows: "... the treatment of im-
ported and domestic products as like products under
Article II may have significant implications for the scope
of obligations under the General Agreement and for the
regulatory autonomy of contracting parties with respect to
internal tax laws and regulations: once products are design-
nated as like products, a regulatory product differentia-
tion, e.g. for standardization or environmental purposes, be-
comes inconsistent with Article III even if the regulation
is not "applied ... so as to afford protection to domestic pro-
cuction." In the view of the Panel, therefore, it is impera-
tive that the like product determination in the context of
Article III be made in such a way that it not unnecessarily
infringes upon the regulatory authority and domestic pol-
policy options of contracting parties" (see panel report on
"United States — Measures affecting alcoholic and malt
beverages," BISD/39S). It should be noted that, although
the term 'like' products appears elsewhere in the GATT, for
example in Article XI, it has always been interpreted inde-
pendently.

The GATT Contracting Parties have never developed
a general definition of the term 'like' products under Ar-
ticle III. The issue has therefore been considered on a case-
by-case basis. Basically, there appear to be two approaches
in GATT case law to determine 'likeness'. One approach
defines 'likeness' by taking into account the product's end-
uses, tariff classification, and other product properties.
The other approach seems to say that likeness is defined
by reference to Article III:1 (so as to afford protection) independently of physical characteristics, consumer preferences and so on.

**Directly competitive or substitutable products.** The obligation to offer non-discriminatory tax treatment in terms of Article III applies not only to 'like' products but also to "directly competitive or substitutable products" by virtue of the second sentence of Article III:2. From an economic point of view, the concept of directly competitive or substitutable products is certainly a more familiar and practical concept than the concept of 'like' products. In effect, the national treatment obligations are extended to cases where, for example, a country levies a high internal tax on imported natural rubber where it has no or little domestic production in order to afford indirect protection to the production of synthetic rubber.

**Methods of taxation.** Article III does not prescribe the use of any specific method or system of taxation. There may be legitimate reasons for differences in the system of taxing imported and domestic products, provided the difference does not have any discriminatory effect on imported products. In the case of a trade dispute brought to the WTO, the onus of proof would then, however, shift to the party applying such differential treatment. It would be incumbent on the defending party to demonstrate that such differential treatment does provide, or is necessary to provide, equality of competitive opportunities. As a general principle, the claim that an internal tax constitutes merely border tax adjustment is only defensible to the extent that it is applied consistently with paragraph 2 of Article III.

**Tax remission.** If tax treatment is to be non-discriminatory, it follows that any tax remission on products, tax rebates or similar schemes, such as the extension of credit, must not result in internal taxes levied on imported products in excess of those applied to 'like' products of domestic origin. The national treatment obligations in paragraphs 1 to 7 of Article III therefore constitute a prohibition of certain import-substitution subsidies. The question arises, as to how producer subsidies are to be treated. Here, paragraph 8(b) of Article III makes it clear that: "the provisions of this Article shall not prevent the payment of subsidies exclusively to domestic producers, including payments to domestic producers derived from the proceeds of internal taxes or charges applied consistently with the provisions of this Article and subsidies affected through governmental purchases of domestic products" (emphasis added). Article III:8(b) therefore exempts producer subsidies from national treatment obligations, even if the outlays of which are collected from both imported and 'like' domestic products. A GATT panel has ruled that the provision that the subsidies must be exclusively for domestic producers means that subsidies which are only indirectly paid to producers, e.g. via processors, cannot safely be assumed to be exclusively for domestic producers. As far as agriculture is concerned, domestic subsidies envisaged in Article III:8(b) are now subject to the disciplines of the WTO Agreement on Agriculture and the WTO Agreement on Subsidies and Countervailing Measures.

**Internal Regulations.** The general legal framework of the General Agreement governing governmental regulations is set out in paragraph 4 of Article III which states:

> "The products of the territory of any Member imported into the territory of any other Member shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use. The provisions of this paragraph shall not prevent the application of differential internal transportation charges which are based exclusively on the economic operation of the means of transport and not on the nationality of the product."

Some of the legal interpretations of Article III relating to internal taxation are equally applicable to internal regulations, including the points made with regard to trade effects and 'likeness'.

**Products.** The national treatment obligation of Article III constitutes, as far as paragraphs 1 to 7 of Article III are concerned, product-based rules, in the sense that they cover only measures which affect products as such. This issue came to the fore in the so-called Tuna-Dolphin Panel of 1991 (United States — Restriction on Imports of Tuna). The panel had to examine a prohibition on imports of tuna and tuna products from Mexico imposed by the United States under the Marine Mammal Protection Act (MMPA). The United States argued that the import prohibition was an internal regulation enforced at the time or point of importation consistent with Article III:4 and the interpretative note to
Article III. The prohibition served merely to enforce the regulations under the MMPA which “require US fishermen and other fishermen within the jurisdiction of the United States to use certain fishing techniques to reduce the taking of dolphins incidental to the harvesting of fish.” It might be noted that the issue of whether or not processes and production methods are within the scope of Article III lurks in the background of this trade dispute. The panel stated that the MMPA did not regulate tuna products as such, and in particular did not regulate the sale of tuna or tuna products; regulations governing the taking of dolphins incidental to the taking of tuna could not possibly affect tuna as a product. Article III:4 therefore obliges the United States to accord treatment to Mexican tuna no less favourable than that accorded to United States tuna, whether or not the incidental taking of dolphins by Mexican vessels corresponds to that of United States vessels. The panel pointed out the issue under consideration required consistency with the GATT practice in the area of border tax adjustment, in which only taxes directly levied on products are eligible for tax adjustment. The panel report has never been adopted by the GATT Contracting Parties.

Balancing more favourable with less favourable treatment. The national treatment obligations of Article III require “treatment of imported products no less favourable than that accorded to the most-favoured domestic products.” This would mean, for example, in cases where regional or local authorities within the territory of WTO Members apply differential regulatory or tax treatment, that the central government must provide imported products the most favourable conditions applicable to ‘like’ domestic products, regardless of their domestic origin. The requirement in Article III:4 to provide treatment no less favourable than that accorded to ‘like’ products of national origin has been interpreted as to be applicable to each individual case of imported products. Several panels have “rejected any notion of balancing more favourable treatment of some imported products against less favourable treatment of other imported products.” Panels have argued that “if this notion were accepted, it would entitle a contracting party to derogate from the no less favourable treatment obligation in one case, or indeed in respect of one contracting party, on the ground that it accords more favourable treatment in some other case, or to another contracting party. Such an interpretation would lead to great uncertainty about the conditions of competition between imported and domestic products and thus defeat the purposes of Article III” (GATT Analytical Index, p.169).

It may be necessary to apply formally legal different requirements (regulations) to foreign products than to ‘like’ domestic products, in cases for example where it cannot otherwise be ensured that imported products benefit from treatment which is “no less favourable than that accorded to like products of national origin.”

Mixing regulations. Internal quantitative regulations, more commonly known as mixing regulations or local content requirements, represent a special case of internal regulations. To illustrate, a regulation which requires that a certain percentage of a product of domestic origin be used in the production of another product (e.g., that 25 percent of domestic wheat be used in making flour) would violate the national treatment obligation under paragraph 5 of Article III because such local content scheme discriminates against foreign product.

The Uruguay Round Agreement on Trade-Related Investment Measures (in short TRIMS) adds further disciplines to the national treatment obligations which may, in particular, affect mixing regulations. The TRIMS Agreement requires, subject to certain conditions, WTO Members to phase out certain investment-related commercial policies which are inconsistent with the national treatment principle in Article III:4 or which violate Article XI:1 of the General Agreement (elimination of quantitative restrictions). TRIMS which are explicitly identified (in the Illustrative List annexed to the TRIMS Agreement) as being deemed inconsistent with the Agreement include local content requirements as well as trade-balancing requirements.

By way of conclusion in relation to national treatment obligations, it may be noted that the purpose of Article III is not tax harmonization or harmonization of regulations among WTO Members. One panel noted “that the General Agreement reserved each contracting party a large degree of freedom to decide autonomously on the objective, level, principles and methods of its internal taxation of goods” (see panel report on “Japan — Customs duties, taxes and labelling practices on imported wines and alcoholic beverages.” BISD Supplement No. 34). Nothing in Article III therefore prevents governments from using their fiscal and regulatory powers for purposes other than those which afford protection to domestic production.
2.5. Publication and Administration of Trade Regulations under GATT Article X

Article X of the General Agreement contains obligations relating to publication and procedures in applying trade regulations. The principal elements include the obligation: (i) to "publish promptly" trade regulations "in such a manner as to enable governments and traders to become acquainted with them"; (ii) to refrain from enforcing trade measures "before such measure has been officially published." (iii) to administer trade regulations in a "uniform, impartial and reasonable manner." and (iv) to establish procedures for the purpose of "prompt review and correction of administrative action relating to customs matters."

The provisions of Article X have frequently been invoked in GATT dispute settlement panels although the claim was usually made as a subsidiary argument to alleged violations of other GATT obligations, such as a violation of the MFN principle. In such cases, panels have often, for reasons of judicial economy, side-stepped the claims related to Article X. Nonetheless, it has been clarified in panel proceedings, for instance, that Article X prohibits publication of retroactive quotas. Article X (as well as Article I) does not permit the application of one set of regulations and procedures with respect to some WTO Members and a different set with respect to others since this would be counter to the rule of uniform, impartial and reasonable administration of trade regulations.

III. Technical Barriers to Trade

3.1. Introduction

One of the results of the Tokyo Round (1973–1979) was the Tokyo Round Agreement on Technical Barriers to Trade, which is more commonly known as the GATT Standards Code. The Standards Code presented the first successful attempt to establish specific disciplines for the use of technical barriers to trade which complemented the general obligations contained in the GATT. The Standards Code was a plurilateral agreement which was binding only on those Contracting Parties which had accepted the code. In 1995, the last year of operation, the Standards Code had 47 signatories (including the European Communities and its member States). As a result of the Uruguay Round, the new Agreement on Technical Barriers to Trade (TBT Agreement) was "multilateralized" to all Members of the WTO and it is now an integral part of the WTO Agreement. The TBT Agreement will therefore be subject to the mechanisms of the WTO dispute settlement system, whereas the Standards Code had dispute settlement procedures separate from the General Agreement.

The disciplines of the TBT Agreement cover industrial products as well as agricultural products, while services are outside the scope of the Agreement. Furthermore, the TBT Agreement does not apply to laws, regulations and procedures regarding government procurement. The Uruguay Round resulted in the negotiation of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) which covers measures which previously had been to a large extent within the scope of the GATT Standards Code.

The TBT Agreement covers technical regulations, standards and conformity assessment procedures. For each category of measure, the TBT Agreement establishes disciplines and obligations based on the main principles of the Agreement. These key principles are:

(i) non-discrimination;
(ii) avoidance of unnecessary obstacles to international trade;
(iii) harmonization;
(iv) transparency.

3.2. Technical Regulations

Definition and scope. A technical regulation in terms of the TBT Agreement is a "document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method" (Annex 1 to the TBT Agreement).

The TBT Agreement extends the scope of obligations, which under Article III according to GATT case law was confined to products, to processes and production methods. The wording in the definition above "or their related processes and production methods" suggests that the processes and production methods, which are subject to the technical regulation, must be related to the products as such. It would therefore appear that a process and production method, by itself, is not governed by the provisions of the TBT Agree-
ment. In the case of the Tuna—Dolphin Panel of 1991 referred to above, the panellists noted that "regulations governing the taking of dolphins incidental to the taking of tuna could not possibly affect tuna as a product." This argument, though made in a different context, may serve as one possible interpretation of the relationship between processes and production methods and products in the TBT Agreement.

**Non-discrimination.** The principal obligations under the TBT Agreement include most-favoured-nation and national treatment. Article 2.1 states with respect to technical regulations that "... products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country." This provision merely replicates the national treatment obligation under Article III:4 of the GATT as well as, in substance, the most-favoured nation clause under Article I:1 of the General Agreement. To the extent that technical regulations are discriminatory, they are therefore in violation of the TBT Agreement.

**Avoidance of unnecessary obstacles to trade.** Building on the national treatment obligation of the GATT, the TBT Agreement establishes "new" (in a multilateral context) and higher standards than the General Agreement. It was already mentioned that the national treatment Article of the GATT is silent on the trade effects of internal regulations. Article III:1 of the GATT provides that internal regulations "should not be applied to imported or domestic production so as to afford protection to domestic production." The focus of this provision is on the conditions of competition between foreign and domestic products, in particular the protective effect of internal regulations, whatever the degree of trade restrictiveness. The preamble of the TBT Agreement now declares, and this is one of the key objectives of the Agreement, that WTO Members wish to ensure that technical regulations, standards and conformity assessment procedures do not create unnecessary obstacles to international trade. In short, even non-discriminatory measures within the scope of the TBT Agreement cannot be more trade-restrictive than necessary.

At the same time, it is recognized in the preamble that the objective to avoid unnecessary barriers should not prevent countries "... from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of this Agreement." This is, in essence, a re-statement of some of the rights and obligations under Article XX of the GATT, in particular the chapeau and paragraphs (b), (d) and (g) thereof.

In short, the preamble sets out the dialectic of the TBT Agreement: it pits the necessary against the unnecessary obstacles to international trade. The synthesis is to be found in Article 2.2 which states: "Members shall ensure that technical regulations are not prepared, adopted or applied with a view to, or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, *inter alia*: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, *inter alia*: available scientific and technical information, related processing technology or intended end-uses of products."

**The not-more-than-trade-restrictive-than-necessary clause.** The above provision aims at the heart of what may be at issue in a trade dispute, i.e. whether or not the technical regulation concerned is more trade-restrictive than necessary. This would appear to be the case:

(a) if "the circumstances or objectives giving rise to their adoption no longer exist" (Article 2.3); or
(b) if "the changed circumstances or objectives can be addressed in a less trade-restrictive manner" (Article 2.3); or
(c) if the effects on trade are disproportionate to the risks that a failure to achieve the legitimate objective would create (by implication of Article 2.2); or
(d) if the objective itself is not legitimate under the terms of the Agreement (by implication of Article 2.2).

In other words, there may be technical regulations which are questionable because there ceases to exist a reasonable justification for them (case (a)). There may be
technical regulations which are questionable because they could well be replaced through alternative and less trade-restrictive regulations which achieve the same objective, which itself is not in question (case (b)). There may be technical regulations which are challenged because they appear to be out of proportion in light of the risks involved (case (c)); and finally there may be technical regulations where the legitimacy of the objective itself is contested (case (d)). These considerations would apply to regulations already in effect as well as to 'new' regulations, whether or not they are in the stage of being drafted or adopted but not yet in force.

In Article 2.2 reference is made to the risks of non-fulfilment of a legitimate objective (case (c)). The provisions for risk assessment in the TBT Agreement arguably leave WTO Members a considerable degree of discretion in evaluating hazards of products and related processes and production methods. However, any discretion is conditioned by the requirement (softened by an escape clause) to adopt international standards for technical regulations, whenever they exist (see below under "Harmonization").

As regards case (d) relating to the legitimacy of objectives, the TBT Agreement recognizes in the preamble that there are legitimate objectives for countries to establish technical barriers to trade and it is a priori accepted that this may cause obstacles to international trade. Legitimate policy objectives include the protection of human safety and human health, and protection of the environment. Members benefit from protection against any unreasonable challenge in the WTO whenever the technical regulations in question serve any of the "legitimate" objectives and are in accordance with relevant international standards, as stated in the second sentence of Article 2.5: "Whenever a technical regulation is prepared, adopted or applied for one of the legitimate objectives and are in accordance with relevant international standards, it shall be rebuttably presumed not to create an unnecessary obstacle to international trade" (emphasis added). Thus, if an international standard for a technical regulation exists and a country does not use it, it would appear that the onus of proof would be, in case of a trade dispute brought to the WTO, on the defending party to provide evidence that its own technical regulation is not unduly trade-restrictive. This can, it would appear, be inferred from the second sentence of Article 2.5 quoted above.

The list of "legitimate" objectives is non-exhaustive and countries are therefore free to formulate their own policy objectives and to tailor technical regulations accordingly (e.g. for the protection of endangered species). The experience under the GATT Standards Code as well as the TBT Agreement has shown that a significant share of country notifications had the stated objectives of harmonization and of lowering or removing trade barriers, objectives which are clearly supportive of the Agreement. An even larger proportion of notifications had the stated rationale of being a "quality requirement" (i.e. some minimum quality or performance requirement).

It may be noted that the SPS Agreement covers some of the same objectives which are deemed legitimate under the TBT Agreement, namely the protection of human health or safety as well as the protection of animal or plant life or health. However, the TBT Agreement is explicit in stating (Article 1.5) that the SPS Agreement prevails with respect to any measure which is applied (Annex A of the SPS Agreement):

(i) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;

(ii) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;

(iii) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or

(iv) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Annex 4 to this paper illustrates the "demarcation line" between the SPS Agreement and the TBT Agreement. The diagram shows that any technical regulation, standard or conformity assessment procedures whose objective is the protection of animal, plant or human health or life from food-borne risks or animal and plant carried diseases are SPS measures and therefore outside the scope of the TBT Agreement. The TBT Agreement thus covers all technical regulations which are not explicitly covered by the SPS Agreement,
including most quality, labelling, packaging and product content regulations.

**Harmonization.** One of the principal objectives of the TBT Agreement is international harmonization of technical regulations, standards and conformity assessment procedures among WTO Members. While harmonization is encouraged and the adoption of international standards for technical regulations confers added legal security against multilateral challenge in the WTO, countries enjoy a certain degree of freedom to deviate, as stated in Article 2.5: "Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems."

**Equivalence.** As a second-best solution to harmonization, the TBT Agreement promotes the concept of equivalence. WTO Members are encouraged to give positive consideration to accepting other Members’ technical regulations as equivalent, provided they are satisfied that these adequately fulfill the policy objectives of their own regulations (Article 2.7). It remains to be seen whether or not in practice recognition of equivalence creates any problem in terms of the application of the most-favoured-nation principle since the importing country is vested with some discretion to differentiate among other Members’ regulations.

### 3.3. Standards

The essence of a standard is that its compliance is voluntary. The TBT Agreement defines a standard as a “document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method” (Annex 1 to the TBT Agreement).

Even though standards are voluntary, because of their potential to create unnecessary obstacles to international trade, the TBT Agreement requires that standardizing bodies ensure MFN and national treatment of imported products. These obligations are contained in the Code of Good Practice for the Preparation, Adoption and Application of Standards which is annexed to the TBT Agreement. The Code of Good Practice requires central government standardizing bodies to accept and comply with the Code’s provisions but the Code is also open for acceptance for subsidiary governmental standardizing bodies (i.e. at the regional and local level) as well as private standardizing bodies.

### 3.4. Conformity assessment procedures

Conformity assessment procedures are procedures which require to demonstrate that relevant requirements in technical regulations or standards are fulfilled. Clearly, to demonstrate conformity with a technical regulation or standard may sometimes pose at least as formidable a market access hurdle as to meet the technical regulation or standard as such. Conformity assessment procedures include procedures for sampling, testing, and inspection; evaluation, verification and assurance of conformity; registration, accreditation and approval.

The legal obligations with respect to conformity assessment procedures are cast in somewhat different terms than those for technical regulations and standards. This is due to the fact that technical regulations and standards are administrative hurdles which may be set at a more or less demanding level, whereas conformity assessment is a practical matter more akin to having the opportunity of jumping over the hurdles. The MFN and national treatment provisions therefore focus on the right to non-discriminatory access for the purpose of demonstrating conformity with technical regulations and standards, as laid down in Article 5.1.1: “...Conformity assessment procedures are prepared, adopted and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation; access entails suppliers’ right to an assessment of conformity under the rules of the procedure, including, when foreseen by this procedure, the possibility to have conformity assessment activities undertaken at the site of facilities and to receive the mark of the system.”

The obligations of the TBT Agreement for the purpose of avoiding unnecessary obstacles to international trade rest
on notions of risk, integrity and the principle of equivalence. Article 5.1.2 requires that “conformity assessment procedures are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. This means, inter alia, that conformity assessment procedures shall not be more strict or be applied more strictly than is necessary to give the importing Member adequate confidence that products conform with the applicable technical regulations or standards, taking account of the risks non-conformity would create.”

The TBT Agreement applies the concept of equivalence to both conformity assessment as well as technical regulations; standards recognition of equivalence has not been elaborated in the Agreement. Members are encouraged to recognize the equivalence of conformity assessment results (e.g. foreign test data) of other Members, even if the procedures differ from their own, and to conclude mutual recognition agreements.

3.5. Other Obligations
In many countries, activities related to technical regulations, standards and conformity assessment are carried out mainly by the central government but in some there is considerable involvement of local governmental bodies, non-governmental bodies or regional bodies in the process. In those cases, the central governments have the obligation to take “such reasonable measures as may be available to them” to ensure the compliance of sub-federal level bodies and non-governmental bodies with the relevant provisions of the Agreement on the preparation, adoption and application of technical regulations and conformity assessment procedures. Similarly, under the Code of Good Practice, Members are required to take such reasonable measures as may be available to them to ensure that local government as well as non-governmental standardizing bodies as well as regional standardizing bodies in which they are members accept and comply with the Code. However, Members' obligations with respect to compliance with the Code apply irrespective of whether or not a standardizing body has accepted the Code.

The “reasonable-measure clause” originates from the Article XXIV:12 of General Agreement which establishes the level of obligations of WTO Members with federal constitutions. The obligation that each WTO Member “shall take such reasonable measures as may be available to it to ensure observance of the provisions [of the General Agreement] by the regional and local governments and authorities within its territories” has consistently been interpreted by panels in a restrictive manner so as to avoid undue imbalances with regard to rights and obligations between, on the one hand, States with unitary constitutions, and, on the other hand, those States which have federal constitutions. This clause has been strengthened by the Uruguay Round Understanding on the Interpretation of Article XXIV of the GATT 1994 which states that “the provisions relating to compensation and suspension or concessions or other obligations apply in cases where it has not been possible to secure such observance.”

The transparency provisions of the TBT Agreement are viewed as a catalyst to build confidence among trading partners and as a vehicle to prevent misunderstandings and ultimately trade disputes from occurring. Considerable importance is therefore attached in the Agreement to ensuring that advance knowledge of technical regulations, standards, and conformity assessment procedures is available to all WTO Members. The Agreement establishes two transparency obligations: a passive approach of setting up enquiry points, and an active approach of submitting notifications to the WTO Committee on Technical Barriers to Trade.

Each WTO Member is required to ensure that a national enquiry point exists which is able to answer all reasonable enquiries from other Members regarding its draft or adopted technical regulations, standards as well conformity assessment procedures, and also to provide relevant documentation (Article 10).

There are four types of notification requirements contained in the TBT Agreement:

(i) A one-off notification and notifications of any changes, as appropriate, by the central governments relating to measures in existence or taken to ensure the implementation and administration of the Agreement, following its entry in force (Article 15.2).

(ii) Notification of technical regulations and conformity assessment procedures proposed or adopted, as appropriate, by the central government (Articles 2.9, 2.10, 3.2, 5.6, 5.7 and 7.2). In addition, the central government is obliged to notify technical regu-
lations and conformity assessment procedures prepared by local governments on the level directly below that of the central government. Notifications are only required for 'new' technical regulations and conformity assessment procedures, not for those in effect at the time of entry into force of the WTO Agreement.

Notification is mandatory:

- whenever a relevant international standard, or guideline or recommendation issued by an international standardizing body does not exist, or the technical content of the proposed or adopted technical regulation is not in accordance with the technical content of the relevant international standards or guidelines;
- and if the technical regulation may have a significant trade effect on other Members.

(iii) Notification of bilateral and plurilateral agreements concluded by the central government and relating to technical regulations, standards and conformity assessment procedures (Article 10.7).

(iv) Notification by the standardizing body, under the Code of Practice for the Preparation, Adoption and Application of Standards (paragraphs C and J of Annex 3).

IV. Administrative and Technical Barriers to Trade on Services

The General Agreement on Trade in Services (GATS) consists of the framework agreement (i.e. the Articles of the Agreement and its Annexes), and the Schedules of specific commitments and the lists of exemptions from MFN treatment submitted by Members.

The national treatment obligation under Article XVII of the GATS is to accord to the services and service suppliers of any other Member treatment no less favourable than is accorded to domestic services and service suppliers. National treatment under the GATS is a negotiated commitment and hence any Member maintaining any limitations on national treatment, i.e. any measures which result in less-favourable treatment of foreign services or service suppliers, had to indicate these limitations in its Schedule. It should be noted that the way in which the GATS is structured, as far as the national treatment obligations are concerned, is the inverse to the structure of the General Agreement on Tariffs and Trade where the national treatment obligation applies "across the board." except where a provision for exemption has been made (e.g. government procurement under GATT Article III:8(a)).

It is only by reference to a country's GATS Schedule and, where relevant, its MFN exemption list, that it can be seen to which service sectors and under what condition the basic obligations of the GATS, including national treatment, apply within that country's jurisdiction. The Schedules are complex documents in which each Member identifies, first, the service sectors to which it will apply the national treatment and market access obligations of the GATS and, second, any exception from those obligations it wishes to maintain. The commitments and limitations are in every case entered into Schedules with respect to each of the four modes of supply which constitute trade in services (Article I of the GATS): these modes are cross-border supply, consumption abroad, commercial presence, and presence of natural persons. In short, a specific commitment in a services Schedule is an undertaking to provide market access and national treatment for the service activity in question on the terms and conditions specified in the Schedule.

The service industries are characterized by a relatively high degree of government regulation, for the reason that it would not be acceptable for governments, from the public interest point of view, to allow unqualified doctors to practice or to entrust unregulated banks with customers' money.

The GATS recognizes that national regulatory authorities, which often comprise both government and professional bodies with delegated powers, have the right to regulate the provision of legal or other professional services so as to achieve a legitimate policy objective (preamble of the GATS). While the GATS does not so far contain any multilateral disciplines on domestic regulations and these have not been part of the GATS process of scheduling, a work programme on any necessary disciplines has been foreseen in Article VI of the GATS.

It is against this background that Ministers have endorsed, at the time of signing the Final Act of the Uruguay Round of Multilateral Trade Negotiations in April 1994, a "Decision on Professional Services." The Decision calls for the establishment of a Working Party on Professional Services to examine and to recommend any multi-
lateral disciplines that may need to be developed to ensure that measures relating to qualification requirements and procedures, technical standards and licensing requirements do not constitute unnecessary barriers to trade. WTO Members are in agreement that such disciplines should be: (i) based on objective and transparent criteria such as competence and the ability to supply the service; (ii) not more burdensome than necessary to ensure the quality of service; and (iii) in the case of licensing procedures, not in themselves a restriction on the supply of the service. These principles constitute core elements of other WTO Agreements, notably the TBT Agreement and the Import Licensing Agreement. One of the central tasks of the GATS Working Party will be to elaborate these principles. The Working Party is first focusing on the accountancy sector and, in due course, will turn its attention to legal services as these are high on the priority list of many participating governments.
Impact of WTO on Codex Alimentarius and its Implications for the South Asia Region

Richard J. Dawson*

I. Introduction

The annual value of world trade in food for human consumption is in the order of US$300 billion (for about 460 million tons of foodstuffs). This already enormous global trade is expanding every year, thanks to rapidly growing consumer demand; developments in food science and technology, and in transport; and the need of countries to earn foreign exchange. Food strikingly illustrates the interdependence of the present day world economy. It is interesting to note that it is predicted that the countries of Asia will lead the world in the trade of food for the next 20 years or so. In view of this, the countries of Asia have a lot of work to do to ensure the quality and safety of food produced.

A world-wide recognition of the importance of international trade, the need for facilitation of such trade, while at the same time ensuring the quality and safety of food for the world consumer, led to the establishment of the Joint FAO/WHO Food Standards Programme and of the FAO/WHO Codex Alimentarius Commission in 1962.

Codex Alimentarius is Latin and interprets, literally, as “food code.” The Codex Alimentarius is a collection of internationally adopted food standards presented in a uniform manner. The standards aim at global protection of consumers’ health and economic interests, and ensuring fair practices in the trade in food. These international food standards, herein after referred to as Codex standards, have been systematically developed under the auspices of, and adopted by, the Codex Alimentarius Commission.

The Codex Alimentarius or as known in most government and trading circles as just plain “CODEX” includes provisions related to the hygiene and nutritional quality of food (including microbiological standards when considered both necessary and feasible), provisions for food additives, pesticide residues, contaminants, labelling and presentation, and methods of analysis and sampling.

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II. The Codex Alimentarius Commission

The Codex Alimentarius Commission is a subsidiary body of the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO). It was established in 1962 as a result of the joint efforts of these two international agencies. The work of the Codex Alimentarius Commission is serviced by a Secretariat located in FAO Headquarters in Rome, the Joint FAO/WHO Food Standards Programme. This joint programme is administered by FAO. The Commission is an inter-governmental body with membership open to the governments of all nations who are Member Nations, or Associate Members, of FAO and/or WHO. There are currently 156 countries that are Codex members which now provides coverage for 98 percent of the world’s population. No charges or assessments are made to countries who are members. The current budget for a biennium for the joint programme is about US$5.8 million, shared by FAO and WHO with FAO providing 82 percent and WHO 18 percent. In addition, the countries that host the various Committee meeting of Codex invest approximately an additional US$5.0 million bi-annually in holding the meetings. Five professionals service the work of Codex.

III. The reason for a Codex Alimentarius

The principal role of the Codex Alimentarius Commission is to develop food standards that can be recommended to governments for adoption. The Commission works to internationally harmonize and coordinate all food standards work, whether undertaken by governmental or non-governmental organizations. Its global charter is the protection of the health of consumers and the ensuring of fair practices in the food trade. Coverage extends to all the principal foods, whether processed, semi-processed or raw, in the form that they reach the consumer. These range from meat, fruit and vegetables and fish, all the way to such entities as edible ices, juices and bottled water.

The Codex Alimentarius facilitates trade; it does not restrict it or interpose unnecessary or artificial barriers. The international food standards of the Codex Alimentarius are developed so that governments can accept that products complying with those standards can move in international trade without jeopardizing the health or interests of consumers. In addition, industry can trade in foods that comply with Codex standards confident in the knowledge that they are dealing in products that are internationally accepted as safe.

IV. The way the Codex Alimentarius Commission operates

The Codex Alimentarius Commission operates in accordance with a detailed set of established rules of procedure. These are published, along with related texts, the membership of the Commission and the names and addresses of national Codex Contact Points in the Procedural Manual of Codex.

The principal developmental work of the Commission is undertaken by its various committees and other subsidiary bodies. There are currently 25 subsidiary bodies, as well as five committees based on geographic regions. All of these bodies, like the Commission, are intergovernmental in nature.

The work of the Codex Alimentarius is divided between two basic types of committees. The first type comprises those committees dealing with specific foods or classes of foods and are called Commodity committees. These commodity committees work vertically in the commodities allotted to them. An example of such Commodity Committees are those dealing with foods of animal origin such as the Codex Committee on Fats and Oils, the Codex Committee on Meat Hygiene, the Codex Committee on Processed Meat and Poultry Products and the Codex Committee on Milk and Milk Products. Those are commonly referred to as Vertical Committees.

There are also other Codex committees that deal with a specific subject area of concern on a generic basis across all foods and all commodity committees. These are referred to as Horizontal Committees and include such subject areas including food additives, pesticide residues, labelling, inspection and certification systems, and analysis and sampling. As stated these so called general subject matter committees work horizontally with all commodity committees.

The third type of Codex committee deals with matters that are of regional interest. These so called Regional Committees, numbering five in all, are based in Africa, Asia, Europe, Latin America and the Caribbean, and North America and the South-West Pacific.

Overall coordination of Codex work is shared between an Executive Committee and the Commission itself. There
is a Chairman and three Vice-Chairmen of the Commission who are elected for a two year period.

V. Codex and quality control

The entire work of Codex is related to quality control, albeit quality control restricted to consumer protection, health and trade. It is not within the mandate of Codex to establish quality standards in areas that are unrelated to its charter of protection of consumers' health and economic interests, and ensuring fair practices in the trade in food. This means, for example, that Codex standards have no direct role in such areas as environmental protection, animal welfare or the protection of endangered species unless such issues directly affect food quality or safety.

5.1. General approach to quality control by Codex

Inherent in the development of Codex standards is that they provide as much flexibility as possible, consistent with the objective of consumer protection. The reasons for this include the need to accommodate the different circumstances that prevail in different geographic areas, different countries and different industries, together with the need to avoid restricting technical innovation and efficiency in the food production industries. Codex standards have no role in either advantages or disadvantages developing country producers and processors in comparison to their developed country counterparts.

In the past, Codex standards in some instances concentrated upon end point inspection and tended to be restrictive of ways of meeting desired objectives. This has changed. The current approach is one of setting desired objectives, but of allowing scope for different approaches in achieving the desired end point. What is now much more important is the term “equivalency.” What is meant by the term equivalency is that the measures taken to examine issues need not be identical but rather that the results that are obtained are indeed identical and verifiable.

It is usual for food standards matters to be subject to official government controls, particularly for foods that move in international trade. The reason for this is that official government certification is normally required as a condition of importation into market countries. With the movement towards limiting the size and cost of government services, the trend towards full cost recovery from producers and industry for government services, and the emphasis on efficient production, increasingly government food control services are adopting the approach of industry quality control under official monitoring.

A key element in the development of Codex standards, recommended codes of practice and guidelines, is the use of the risk analysis approach. This approach, which is of particular relevance to matters pertaining to the protection of human health, has two elements, namely the assessment of risk, followed by the development of approaches to manage that risk. The Codex Executive Committee has recently directed all Codex Committees to describe the basis of the risk analysis methods that they use, and such description will be a fundamental part of all future standards.

Quality assurance systems have become a focal point for inclusion in the work of Codex. As an example, the Codex Alimentarius Commission has recently adopted guidelines for the application of the Hazard Analysis Critical Control Point (HACCP) system. In doing this, it recognized HACCP as being a tool to assess hazards and establish control systems that focus on preventive measures instead of relying primarily on end product testing. The value of HACCP is that it can be applied throughout the food chain from the primary producer to the final consumer. In addition to enhancing food safety, HACCP allows a better use of resources and a more timely response to problems. It also provides assistance in the inspection and certification service provided by regulatory authorities. The HACCP approach, along with the use of Good Manufacturing Practices (GMPs), is strongly recognized and recommended by Codex.

5.2. Primary influences on the approach of Codex

Though not the sole reason why the work of Codex is increasingly being based on formal risk assessment and quality control systems such as HACCP, major impetus has come from recent agreements on international trade. These agreements, specifically the World Trade Organization (WTO), the MERCOSUR Agreement and the North American Free Trade Agreement (NAFTA), are designed to minimize restrictions to trade. These agreements address technical barriers to trade, including measures necessary to protect human health, and certainly related to the trade of food.

Measures necessary to protect human health, which is one of the fundamental reasons for the existence of Codex
IMPLICATIONS OF THE URUGUAY ROUND AGREEMENT FOR SOUTH ASIA: THE CASE OF AGRICULTURE

standards, are addressed in the agreed WTO “Sanitary and Phytosanitary Measures Agreement” (or SPS) text. This agreement places an obligation on nations that are contracting parties under the WTO to ensure that SPS measures have a scientific justification, do not arbitrarily or unjustifiably discriminate between nations, are not applied in a manner that would constitute a disguised restriction on trade, are not more restrictive to trade than is necessary to provide the chosen appropriate level of protection, and are established and maintained in an open and “transparent” manner. A further provision includes the presumption that any nation that is a contracting party to the WTO is complying with its obligations under the SPS text when its national measures conform to the standards established by an appropriate international standard setting organization. Codex standards, codes of practice and guidelines dealing with food additives and contaminants, pesticide residues, residues of veterinary drugs, and hygiene measures are very relevant to the evaluation of national measures under the SPS text. In fact, the WTO text provides that “to harmonize sanitary and phytosanitary measures on as wide a basis as possible, (nations) shall base their sanitary and phytosanitary measures on international standards, guidelines or recommendations, where they exist ....” Further, the WTO text requires countries “to play a full part in the Codex Alimentarius Commission ....” It is these developments within international trading arrangements that are currently influencing the Codex approach to quality control issues.

With the coming into force of the two Agreements (SPS and TBT) the governments are to a large measure, being compelled to act in a manner which would avoid creation of non-tariff barriers due to their own ideas of food safety. Countries are required to apply the same standards to imported food as they do to food produced domestically. Thus discrimination against imported foods is not permitted. This then is a big step forward towards the obligatory use of Codex international recommendations. Thus, while Codex recommendations may or may not be accepted as such, they have as a result of these Agreements assumed a completely new dimension as a “benchmark” or “yardstick” of national requirements. In the future, WTO members will be required to submit scientific justification for food import restrictions based on national regulations that are stricter than Codex standards.

5.3. The future for Codex

The future direction of Codex with respect to quality control will continue to be influenced by the need to satisfy the criteria established within the WTO SPS agreement, as well as with the revised WTO Agreement on Technical Barriers to Trade (TBT). In addition to the requirement that measures based on the protection of human health be scientifically justified, be no more restrictive than necessary and be developed in a transparent manner, there can be expected to be a clear identification of those measures that are necessary to protect human health from those measures that are based on other criteria, such as non protective quality measures. Further, it can be anticipated that where measures are included that are non protective quality standards, they will be clearly identified as being of an advisory, non mandatory, nature. So that Codex standards remain validly based on current scientific knowledge, there will be an increased emphasis on their frequent review to ensure they do not become dated.

VI. How can Codex help?

As has already been discussed, Codex was originally set up for two main purposes — to protect the consumer and to facilitate trade. The standards, codes of practice and other guidelines that have so far been put together by Codex have been designed to protect the health of the consumer, and also to make the trade of foods much easier. This includes both domestic trade and also international and inter-regional trade. If a country or a food processor follows the recommendations of Codex in preparing or processing food, or in the inspection and control of food, it should result in the assurance that such foods are safe and labelled properly and thus it results in the protection of the consumer. Would it not be wonderful if when you went shopping that you knew that the products which you intended to purchase were indeed safe and contained no harmful substances; that the label was truthful and thus the ingredients declared to be in the product were indeed present. Codex standards and codes of practice can do this for you.

Codex provides the reassurance to anyone anywhere that foods produced according to its codes of hygienic practice and complying with its standards are safe and nutritious and offer adequate health protection. The Director-General of the World Health Organization has in fact stated that
Impact of WTO on Codex Alimentarius and its Implications for the South Asia Region

“Stricter standards (other than Codex) do not necessarily offer better health protection and may be used as non-tariff trade barriers.”

Codex also provides guidance to the food industry, not just to the consumer. Industry, if planning to ship to another country must prepare their food products so that they do not violate the rules and regulations of the importing country. Codex helps in this effort. If the harmonization of the food standards and codes of practice of Codex can be accomplished throughout the world then it will certainly make the life of the food producer much easier. For that matter, the lives of the food control officials will also be made much easier. In some way, the completed Uruguay Round discussions that led to the Agreements in these areas have done just this. The Sanitary/Phytosanitary Measures Agreement and the revised Technical Barriers to Trade Agreement, which have already been mentioned provide that food standards should rely on Codex as the basis for trade and safety matters. Neither Agreement makes reference to regional standards.

Codex standards are developed by consensus and on the best scientific and technical advice available. Codex is the only international forum able to bring together everyone — scientists, technical experts, government regulators, consumer activists and industry representatives. The standards produced are one reason that international trade has grown so dramatically in recent decades.

In the work of Codex considerations are given to governments, industry and the consumer. Although Codex is an inter-governmental organization and the heads of country delegations are therefore government representatives, Codex encourages the involvement of industry and consumers. Many delegations to the various meetings of Codex include representatives from the various food industry complexes as well as from consumer organizations. Codex has recognized that it is not desirable to formulate standards in a vacuum and has thus urged governments to include consumers and industry.

Codex recognizes the financial constraints that are currently being placed on countries and that it is not mandatory for countries to be present at each of the meetings to have an impact on the outcome of the discussions. Provisions have been made under the Rules of Procedure for Codex for written comments to be made by member countries on each issue and for such comments to be reviewed at the appropriate meeting. In addition, those comments received from countries are in turn sent to all of the Codex member countries for their perusal. It is therefore very important that each country review the issues and comment be made as deemed necessary.

It should also be noted Codex Committees is currently carrying out very important work that one of the that will have a strong influence on matters related to the trade of food. This is the work that is being done by the Codex Committee on Food Import/Export Inspection and Certification Systems and which is hosted by Australia. This Committee is looking at what measures are necessary to improve the certification process for foods, including the aspects of inspection and laboratory techniques. What will be very important for countries in this process is the aspect of “equivalence.” It is hoped that all the member countries of Codex will play an important part in this process.

In view of what has been discussed, I commend most of the member countries of Asia, and including those of the South Asia Region for their desire to work towards improving the quality and safety of food and those efforts directed towards harmonization of food standards. This is certainly good news. However, with the SPS and TBT Agreements becoming a reality there remains a lot of work that must still be done by many countries. Certainly the work to strengthen export control systems for food must receive a very high priority. National systems of control also must be improved and transparency ensured. These are very legitimate concerns facing all countries. It is a fact that some countries of the South Asia Region are indeed not yet capable of ensuring that food products produced within their borders meet the established Codex standards, or were produced according to the codes of practice or guidelines of Codex. Where at all possible, Codex and FAO stand ready to help.

VII. Conclusion

The food standards that comprise the Codex Alimentarius have been established to ensure that there are internationally accepted food quality standards to protect the health and economic interests of consumers, as well as to ensure the fair practices in the trade of food. The standards are based on scientific principles, and incorporate the principles of risk analysis and process control. They are designed to permit
flexibility in the method of achieving the specified quality standard, so that procedures and approaches may be adopted that are appropriate to a range of production and processing methods.

The concluded Uruguay Round of Multilateral Trade Negotiations that has led to the establishment of the World Trade Organization (WTO), has endorsed the SPS Measures Agreement and the TBT Agreement which encourages the use of Codex standards and recognizes that protective measures designed to protect human life and health are justified. The efforts of countries to improve the quality and safety of their food supplies and to harmonize food standards and codes of practice are being watched very closely by many people and many governments, along with WTO, FAO and WHO. Codex and FAO are willing to help where possible in this very good effort. Certainly there is the ever pressing need to provide the assurances to our populations that the food which they have available to eat is safe, nutritious and of good quality. Codex can help in providing these assurances.
Implications of the Uruguay Round for Selected Agricultural Commodities
The Impact of the Uruguay Round Agreement on Agriculture on the World Rice Economy and South Asia

Chan Ling Yap*

I. Introduction

This paper focuses on the implications of the Agreement on Agriculture reached at the Uruguay Round for the rice economy, and reviews their impact on world rice production, trade, consumption and international prices. In assessing the impact of the Round, the paper assumes that there will be full compliance with the agreements reached. Some alternative scenarios are also examined.

II. The main provisions of the Agreement relevant to rice

2.1. Domestic support

Domestic support provisions are divided into those that are subject to reduction commitments and those that are exempt from such reductions. For domestic support subject to reduction commitments, developing countries are required to reduce their “aggregate support” by 13.33 percent by year 2004; the least developed countries are not to exceed the annual aggregate support level established in the base period 1986–88. These reductions in domestic support are not product specific. Because of this, and given the importance of rice as a staple food and the political significance of the crop, it is most likely that many countries would opt to meet their commitments to reduce domestic support by cutting back on those for other crops. Moreover, as the bulk of the world output of rice is produced in developing countries where many policies are exempt from reduction commitments and where reductions in domestic support, when required, are significantly smaller and spread over a longer period of time, any decrease in support would be small and more likely be brought about by factors exogenous to the Round.

2.2. Market access

Under market access, the URA provides for the tariffication of all non-tariff measures. This involves abolishing non-tariff barriers, such as quotas, variable levies,

* Senior Commodity Specialist, Rice, and Secretary, Intergovernmental Group on Rice, Food and Agriculture Organization of the United Nations.
Table I. Tariff schedules for milled rice imports in selected countries*

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<th>Countries</th>
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<td>115.00</td>
<td>0.00</td>
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<tr>
<td>Madagascar</td>
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<td>280.00</td>
<td>0.00</td>
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<td>Mexico</td>
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<td>0.00</td>
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<tr>
<td>Myanmar</td>
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<td>0.00</td>
</tr>
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<td>Sri Lanka</td>
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<td>Thailand</td>
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<td>0.00</td>
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<td>Tunisia</td>
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<td>Turkey</td>
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<td>50.00</td>
<td>0.00</td>
</tr>
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<td>Uruguay</td>
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<td>Venezuela</td>
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<tr>
<td>Zambia</td>
<td>0.00</td>
<td>125.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*This excludes in-quota tariffs.

1US$ equivalent at the 1987-89 exchange rate, which is the base year for the projections.
minimum import prices, discretionary licensing, state trading measures, voluntary restraint agreements and similar border measures, and their conversion into equivalent tariffs (ad valorem or specific). The resulting tariffs, together with existing custom duties shall be reduced over ten years in the case of developing countries commencing in 1995. The reductions, spread over all commodities, average 24 percent for developing countries, with a minimum rate of reduction of 10 percent for each tariff line for them. The tariff reduction is to be undertaken in equal annual instalments. For those developing countries that previously had unbound tariffs they were allowed to offer ceiling bindings on their products, and, in consequence, no reductions in tariffs are required. In fact, many developing countries have taken advantage of these provisions (Table 1).

Where there are no significant imports of rice, minimum access opportunities have been established, representing, in the first year of the implementation period, not less than 3 percent of corresponding domestic consumption in the base period 1986–88; they should expand to reach 5 percent of the base by the end of the implementation period (Table 2). Developed countries not wishing to introduce immediate tariffication, have agreed to grant minimum access of 4 percent of domestic consumption, rising to 8 percent by year 2000. This applies in particular to Japan. Special clauses are applied to allow such members to introduce tariffication at some future point with some reduction in the minimum access provision. Developing countries wishing to defer tariffication have agreed to market access of 1 percent rising to 4 percent after ten years. This applies in particular to the Republic of Korea. In addition to Japan and the Republic of Korea, only a limited number of countries have minimum access compliance for rice (see Table 2), and in most instances, these minimum access provisions are accompanied by high “in-quota tariffs.” For those countries that have converted their non-tariff barriers to tariffs, a special safeguard clause exists, allowing the imposition of additional duties when there are either “import surges” or drastic falls in import prices. Other than this, countries that have converted their non-tariff barriers to tariffs may not subsequently re-introduce these barriers.

### Table 2. Minimum access compliance for rice in selected countries

<table>
<thead>
<tr>
<th>Countries</th>
<th>Quota (metric tons)</th>
<th>In-Quota tariff (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Final*</td>
</tr>
<tr>
<td>Colombia</td>
<td>53,279</td>
<td>88,799</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>5,440</td>
<td>9,067</td>
</tr>
<tr>
<td>Hungary</td>
<td>19,100</td>
<td>19,400</td>
</tr>
<tr>
<td>Indonesia</td>
<td>70,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Japan</td>
<td>379,000</td>
<td>758,000</td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>51,307</td>
<td>205,228</td>
</tr>
<tr>
<td>Morocco</td>
<td>7,200</td>
<td>7,200</td>
</tr>
<tr>
<td>Philippines</td>
<td>59,730</td>
<td>238,940</td>
</tr>
<tr>
<td>Poland</td>
<td>120,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>237,863</td>
<td>249,757</td>
</tr>
<tr>
<td>Venezuela</td>
<td>30,197</td>
<td>30,197</td>
</tr>
</tbody>
</table>

*The “final year” refers to 2000 for developed countries (Hungary, Poland and Japan in this table) and 2004 for developing countries.

This refers to the sum of the current access quota (13,681 tons) and minimum access quota (initial volume of 39,598 tons) rising to 75,118 tons by 2004.

Applies to minimum access quota. The rate applied to the current access quota is 189%.

An import mark-up of 292 yen/kilo (US$ 2860/ton; at 1994 exchange rate) may be collected by the government from sale of rice in Japan.

Subject to additional mark-up on sales to the domestic market.

### 2.3. Export competition

On export competition, countries are required to establish ceilings on the quantity of subsidized rice exports and on their budgetary outlays for such subsidies. For developing countries, a reduction of 24 percent in the budgetary outlay and 14 percent in the quantity of subsidized exports by year 2004 is applied. As in the case of minimum access, the number of countries with commitments to reduce export subsidies on rice is small (see Table 3a and 3b). In most of these countries, the reduction in export subsidies is by equal proportion from the base year (1986–90). In the case of the United States, the provision to start its reduction commitment in rice export subsidies from a different base-period (1991–92) has allowed for export subsidies on rice during the interim period of implementation of the Round’s Agreement to be higher than in the base year 1986–90. Indeed, in the United States only in year 2000 will its export subsidies be smaller than in 1986–90.
III. Implications for the world rice economy

To assess the impact of the Round, FAO's base projections for rice (which were the projections of supply and demand for rice to 2000 made before the Round was concluded) using FAO's World Food Model were revised. Changes in tariffs, market access and export subsidies emanating from the Agreement as well as the United Nations revised projections on population and income were incorporated into the model. Their effects were then calculated taking into account the interactions with other food commodities. The results of these revisions set out in the following, showed that the Agreement will have a greater proportionate impact on global trade in rice and international rice prices, than on its production and consumption.

3.1. Production

Global output of rice is projected to grow at 1.8 percent per annum to reach 404 million tons in 2000, a rate of growth and a level of production which is only marginally different from the base-line projections before the outcome of the Round was known and its implications assessed (Table 4). The future expansion in rice production will continue to hinge on improvements in yields and advances in plant technology. The area under rice is projected to increase only slightly, and mainly in Africa where land is more widely available and where larger tracts of current upland and swamp-land could be brought under cultivation. In the Far East and Near East, possibilities for increasing the area under rice are minimal. In Latin America the rate of expansion in the area planted to rice is expected to slow-down as the high costs of producing rice in the region would limit increases in plantings. In the United States, the only country in North America that grows rice, an increase in total output of paddy is likely to occur, but it would be from improvements in yields due to advances in plant technology. No increase in rice area is projected, assuming a continuation of the United States' Area Reduction Programme for rice.
While at the global level production is not expected to change notably due to the Uruguay Round, moderate changes would occur in some countries. Production of rice in some developing Far Eastern countries would rise marginally more as a result of the Round, but output in developed countries, especially Japan and the EC would be significantly smaller. For example, Japan's opening of its market will stimulate exporting countries to raise production to meet the additional demand generated by Japan's commitment to buy rice in the international market, but Japan's own production may decline. These changes, however, will be a result of modifications in trade policies rather than of any sizeable alterations in the level of production support. As mentioned, under the Round, the commitment to reduce domestic support in agriculture is not product-specific and large reductions in rice production support are not envisaged. This is already illustrated by some of the policy measures adopted for rice in 1995. The basic thrust of the United States policy, including the level of the loan rate in support of rice production in 1995, remains virtually the same as in previous years. The programme of rice support in Thailand also remains largely unaltered.

### Table 4. Production of rice, past and projected (percent per annum)*

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>Developed</th>
<th>Developing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978-1988 (Past)</td>
<td>2.6</td>
<td>0.5</td>
<td>2.8</td>
</tr>
<tr>
<td>1988-2000 (Base)</td>
<td>1.8</td>
<td>0.7</td>
<td>1.9</td>
</tr>
<tr>
<td>1988-2000 (UR)</td>
<td>1.8</td>
<td>0.2</td>
<td>1.9</td>
</tr>
</tbody>
</table>


### Table 5. Consumption of rice, past and projected (percent per annum)*

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>Developed</th>
<th>Developing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978-1988 (Past)</td>
<td>2.6</td>
<td>0.7</td>
<td>2.8</td>
</tr>
<tr>
<td>1988-2000 (Base)</td>
<td>1.8</td>
<td>0.9</td>
<td>1.9</td>
</tr>
<tr>
<td>1988-2000 (UR)</td>
<td>1.8</td>
<td>0.9</td>
<td>1.9</td>
</tr>
</tbody>
</table>


### 3.2. Demand

The impact of the Round on rice demand is expected to be even less pronounced than on output. Between 1988 and 2000, world demand for milled rice is projected to increase at 1.8 percent annually to reach 402 million tons in 2000, a rate of growth and a level of consumption similar to that projected before the effects of the Round were considered (Table 5). Per caput food consumption of rice during the period is likely to grow at a negligible rate, globally gaining just one kilogram for the entire decade to reach 58 kilograms. In the EC and Japan, consumption of rice is not likely to change significantly, the reduction in domestic output being off-set by increased imports of rice. The higher imports would be brought about by a reduction in import tariffs in the case of the EC and greater market access in the case of Japan. Moreover, consumer prices for rice in most countries are likely to be affected little by the introduction of market access. In Japan, for example, the import mark-up of 292 yen per kilo of rice (≈ US$ 2860/ton at 1994 exchange rate) is expected to keep consumer prices high. Overall, therefore, the shift from the use of non-tariff barriers to the adoption of tariffs — in many cases at very high level — is not likely to result in lower consumer prices for rice.

### 3.3. Trade

The effect of the Agreement on trade, by contrast, would be substantially larger than for production and consumption, both in terms of its impact on the volume of transactions and on prices. In consequence, the value of trade is also
Table 6. Rice imports, past and projected rate of growth (percent per annum) *

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>1988-2000 (Base)</td>
<td>3.2</td>
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<td>1988-2000 (UR)</td>
<td>3.8</td>
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<table>
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</tr>
</thead>
<tbody>
<tr>
<td>1978-1988 (Past)</td>
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<td>1988-2000 (Base)</td>
<td>2.3</td>
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<td>1988-2000 (UR)</td>
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<tr>
<td>1988-2000 (UR)</td>
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</table>


Table 7. Rice exports, past and projected rate of growth (percent per annum) *

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<tr>
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<tbody>
<tr>
<td>1978-1988 (Past)</td>
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<td>1988-2000 (UR)</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1978-1988 (Past)</td>
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<tr>
<td>1988-2000 (Base)</td>
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<td>1988-2000 (UR)</td>
<td>-0.3</td>
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<table>
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<tbody>
<tr>
<td>1978-1988 (Past)</td>
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<td>3.6</td>
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<tr>
<td>1988-2000 (UR)</td>
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</table>


The impact of the Round on world imports, although substantial, is expected to be highly localised. The imports of Africa, the Near East and Latin America and the Caribbean are not expected to change significantly because of the Round. Imports into Africa are forecast to rise by 3.3 percent to 3.8 million tons, which would be 1.2 million tons more than in 1988, but only marginally higher than at present. Although output of rice in Africa is projected to increase at 4 percent per annum, demand for rice would rise at an almost equal pace. As a result, it is likely to continue to rely on imports to the tune of 3.6 million tons annually to meet over 30 percent of its total demand. Imports into the Near East, projected to rise at 4.8 percent per annum, would reach 4.3 million tons — a market size exceeding that of Africa. The Near East's relatively rapid growth as a major importing region would result partly from the demand of its immigrant Asian work force and the limited possibilities it has of raising production to keep pace with consumption growth. For Latin America and the Caribbean, imports would increase to account for nearly 10 percent (1.9 million tons) of the world market.

In the Far East, however, the Round is expected to make a bigger impact. Imports into the developing countries of that region could expand at a much faster rate, reaching 3.8 million tons, and reversing the negative growth rate of the previous decade. This projected faster rate of increase implies that the Republic of Korea, Indonesia and Thailand buy the entire amount of rice stipulated under the minimum access provisions. By 2000, the Republic of Korea, which has opted to defer tariffication, would be importing about 2 percent of its domestic consumption requirements in the base year. Thailand has agreed to allow rice imports totalling 245,000 tons for year 2000, subject to a 30 percent import duty. Indonesia has also agreed to allow a minimum access of 70,000 tons of rice subject to a 90 percent import duty (see Table 2). Whether these tariffs will be low enough to allow the volume of imports indicated is uncertain. Moreover, in the case of Indonesia, the minimum access provision will be applied only when domestic market price exceeds the world price by 90 percent. Hence, amongst the Far Eastern importing countries, the biggest concession comes from Japan which is expected to import 758,000 tons of rice by 2000.

The imports of the European Community are also expected to be affected substantially by the Uruguay Round. Al-
though total gross imports into the EC may not change very much, the large reduction in its tariff on rice imports from third countries by year 2000, and more important, the “ceiling duty-paid import price” established for rice, would enable third country exporters to raise their market share in the EC trade. This would displace intra-regional EC rice imports, and consequently, reduce EC’s gross exports. The net result could be that rice production in the EC is discouraged. ¹

However, an important point to note is that since the Agreement reached at the GATT, several changes have occurred that are likely to moderate third country exporters’ competitiveness in the EC market. One, is the recent admission of Austria, Finland and Sweden to the EC. Previously the import tariffs of these three countries were very low. In entering into the EC, their import tariffs on rice would be substantially higher even with the agreed reduction of 36 percent over the 6 year period to 2000. Secondly, in early June 1995, two important revisions have been introduced into the rules on rice imports which would come into effect on 1 July 1995. The first of these is the introduction of a reference price system for fixing import duties. The reference price will be used to estimate the duty to be applied on rice imported into the EC rather than the “declared import price.” This is to prevent traders from inflating the import price to levels exceeding the “ceiling duty paid import price” to avoid duty. ² More important for third country exporters, is that the import duties will now be calculated on the basis of import prices for bulk rice shipments. Prior to the June ruling, such a distinction was not made, which, with the “ceiling duty-paid import price,” would have encouraged third country exporters to mill and package rice for export into the EC because the higher costs they incur (reflected in higher import prices) would be off-set by the reduced import duty that would have to be paid. This would obviously have adverse implications for the milling sector within the EC as well as on the type of rice it would import from abroad.

Figure 1. Possible implications of the GATT Agreement for EEC’s rice imports (Year 2000)

If the reference price exceeds the ceiling price “a”, the rice entering into EC at that point pays no import duty.

price “a” = ceiling import duty paid price for husked rice ¹

+ 264 ECU ³

“Intervention buying in price” for Indica paddy rice

If the reference price is between “a” and “b”, then the rice entering into EC at that point pays a reduced import duty.

price “b” ³

If the reference price is below “b,” rice entering into EC at that point pays the full import duty of 264 ECU per ton.

¹ Ceiling import duty paid price will be 80 percent above the “intervention buying in price” for Indica paddy rice.

² This is the maximum import duty per ton which will be applied on husked rice by year 2000. This will be applied if the reference price is at point “b” or less. In 1995, the rate applied was 388 ECU per ton.

³ Derived by deducting 264 ECU from ceiling price “a.”
The second revision is that a special duty on Basmati rice will be established. The normal duty for imports of husked Basmati rice from India will be reduced by 250 ECUs a ton from the normal agreed duty, while husked Basmati from Pakistan will be reduced by 50 ECUs a ton. This preferential rate would encourage greater imports of husked Basmati but not milled Basmati, which was the case prior to the June decision. This modification also reduces the otherwise adverse implications on the EC rice industry, especially UK millers which import the bulk of the Basmati rice for processing within the EC (see Figure 1).

The overall results of the Uruguay Round projections illustrate that, with the exception of the EC, most of the main effects of the Round on rice imports stem from the establishment of minimum access in selected countries. Reductions in import tariffs scheduled for 1995–2000, by contrast, are likely to have only a minimal impact. This is because in replacing non-tariff barriers with import tariffs, most countries have fixed very high import duties. As a result, although tariff reductions will be implemented by year 2000, which is the mid-point of the tariff reduction process for developing countries, the level of import duties in most of them remains very high. Moreover, many of them have opted for ceiling bindings and hence are not subject to reductions. In Africa, even by year 2004, the "bound rate of import duty" ranges from 30 percent in Congo to 310 percent in Cameroon. In the Near East and Latin America, the bound rate by year 2000 is similarly high; e.g. in Kuwait, it is 115 percent and in Brazil, it is 55 percent. Moreover, many Near East countries were not involved in the trade negotiations. For these countries, therefore, future levels of imports would hinge critically on domestic production and on consumption requirements. For many African countries, the influence of Structural Adjustment Programmes on production and trade in rice could be of greater importance.

Rice export trade in the year 2000 will undergo significant structural changes, especially in the Far East. Many of these changes are, however, not related to the Round. For example, Bangladesh, largely self-sufficient in rice in recent years, is expected to become a small exporter because of higher production. Indonesia, an occasional exporter in the past years, could be exporting small quantities more regularly. Viet Nam's exports are projected to reach 2.6 million tons, displacing the United States as the world's second largest exporter. Pakistan's exports would fluctuate around present day levels because competition for land-use by other crops would limit increases in its output of rice. China, an exporter in the base period would emerge as a substantial net importer as its exports are projected to decline significantly from present day levels. Exports from Myanmar are likely to increase significantly because of a likely larger output. For these countries, differences between the rates of growth projected before and after the Round are small.

However, some important changes especially in terms of the structure of a highly segmented market are likely to result. The highly localized effects of the Round on import demand are expected to generate a corresponding effect on exports. Thailand, currently the world's largest rice exporter, is projected to maintain its dominance in the world market with export volumes projected to reach 6.8 million tons; but at least some 0.5 million tons of the projected trade appear to be linked to the opening of the market for rice in the Far East. While China's total export volumes are little affected by the Round, the direction of its future export trade may change. With domestic prices for rice likely to escalate over the next few years, China, which exported mainly to Africa in the past, may concentrate principally on selling small quantities of Japonica rice to Japan where the high prices offered could prove sufficiently remunerative. In the past, China has faced problems in meeting Japan's requirements in terms of quality control, but steps are underway to improve rice milling quality and phytosanitary control measures. Among the Asian exporting countries, however, India may be the most affected by the Round. Over the next few years, India's exports are projected to expand substantially benefiting especially from the special reduced rate on Indian Basmati rice. Previously only about 10,000 tons of Basmati husked rice were allowed into the EC at a reduced levy, which was 75 percent of the levy applied to long grain imports from third countries. With the reduced duty (a reduction of 250 ECUs per ton of husked Basmati rice imports) now to be applied on husked Basmati rice imports from India, EC's imports of husked Basmati rice of Indian origin would most likely increase in the future. By contrast, the EC's gross exports are projected to fall, mainly because, as mentioned earlier, its export trade within the region is likely to be displaced by imports from third countries.

During the five year period 1995–2000, the relative competitiveness of the United States and the EC rice exports may change because of their different schedules of commitments for reducing export subsidies brought about by the use of different base years. In 1995–97, the quantity of rice sold with export subsidies from the United States could exceed that of
the EC, but in 1998–2000, a reversal is likely to occur with the EC being allowed a larger quantity of rice to be exported with export subsidy than the United States. In terms of budgetary outlay, however, the EC’s allowable export subsidies on rice exceed those of the United States, although the difference will be reduced gradually, from US$ 69.8 million (base year) and US$ 53.4 (1995) to US$ 44.7 million by year 2000. These changes may affect the United States and the EC’s export trade in Eastern Europe and the Near East, where both exporters have traditionally competed strongly. But more important, the possibility of a significantly larger United States rice export subsidy programme during 1995–99 than in the base year (1986–90), indicates that distortions in rice trade in the late 1990s could be more pronounced than in the late 1980s (Table 8).

3.4. International rice prices
The opening of the rice market following the Round and the stronger growth in import demand relative to export supplies are expected to boost international rice prices. In real terms, prices by 2000 are projected to increase by some 15 percent over the base period, compared to a 7 percent rise in the baseline projections without the Uruguay Round effects.

The world rice market in the next decade is likely to see a bigger demand for high quality rice as well as for medium qualities (10–20 percent brokens), contributing to the strengthening of the market prices for these types. Instead of buying almost exclusively high quality rice, the Near East could be importing more medium qualities, a tendency that has already emerged in some countries in the region. In Africa, a shift from lower quality rice to medium quality rice would probably occur. In Europe and North America, the increase in demand would be mainly for higher qualities. Both medium-grain (Japonica) and long-grain (Indica) rice are expected to fetch higher prices but their relative price gains would hinge on Japan’s rice import policy. Prior to the opening of Japan’s market for rice, there had been a sharp reduction in the international demand for medium-grains and a corresponding expansion in demand for Indica rice. With the opening of Japan’s market, international demand

| Table 8. Export subsidies in the US and the EC, 1995-2000 |
|-----------------|---|---|---|---|---|---|---|
| **Quantity (000 tons)** |     |     |     |     |     |     |     |
| US               | 48.8| 271.7| 225.0| 178.4| 131.8| 85.2| 38.6|
| EC               | 183.7| 177.3| 170.8| 164.4| 158.0| 151.6| 145.1|
| **Total budget outlay (mill. US$)** |     |     |     |     |     |     |     |
| US               | 3.7| 15.7| 13.0| 10.4| 7.7| 5.0| 2.4|
| EC               | 73.5| 69.1| 64.7| 60.3| 55.9| 51.5| 47.1|
| **Unit value (US$)** |     |     |     |     |     |     |     |
| US               | 75.8| 57.8| 57.8| 58.3| 58.4| 58.7| 62.2|
| EC               | 400.1| 389.7| 378.8| 366.8| 353.8| 339.7| 324.6|

1 The annual average 1994 exchange rate 1 ECU = 1.189 US$ was used to convert EC commitments in ECU to US$.

| Table 9. Projected value of rice trade (billion US$) |
|-----------------|---|---|---|---|---|---|---|
|                 | Base Year 1988 | Base Projections 2000 | UR Projections 2000 |
|                 | Import | Export | Import | Export | Import | Export |
| Developing      | 2.7 | 2.7 | 4.4 | 4.4 | 4.8 | 5.1 |
| Developed       | 0.9 | 1.2 | 1.2 | 1.2 | 1.6 | 1.3 |
| World           | 3.6 | 3.9 | 5.6 | 5.6 | 6.4 | 6.4 |

1 The estimates in the table have been rounded-up and hence the calculation of percent increase based on these figures will not correspond exactly to those mentioned in the text.
for medium-grains may recover, lending support to their prices. However, recent years have seen Japan buying Indica rice to meet its import requirements when unexpected domestic shortages occurred, as in 1993/94. This may be repeated in future to meet Japan’s market access commitments. Should the latter occur, the prices of medium-grain rice would rise more moderately.

3.5. Value of trade
The increase in international rice prices and volume of trade is likely to boost the value of global rice trade by year 2000 by 15 percent above what it would be without the Round and 80 percent higher than in the 1988. Most of the benefits would accrue to developing exporting countries, whose projected foreign exchange earnings in real terms would increase by 17 percent as a result of the Round, compared to a 6 percent rise for developed countries. By the same token, the import bill of developing importers would rise by 10 percent, compared to a projected 32 percent increase for developed countries.

3.6. Alternative scenarios
The projected outcome on production, consumption, trade and international rice prices outlined above, rests on the premise that countries with market access commitments will import the entire amount stipulated in their schedule. This, however, may not materialize fully. In the Far East where the effect of the Round on import demand is greatest, substantial differences exist in individual countries’ commitments to open up markets. Japan and the Republic of Korea are certainly expected to import the quantities stipulated in the Schedule (see Table 2), because both countries have opted to defer tariffication and imports will remain largely regulated by the government. Future import levels of other countries, with such market access provisions, however, are less definitive. In the case of Thailand, which has removed import prohibition and adopted full tariffication, the compliance means that the country would allow private traders to import a quota of rice into the country subject to a 30 percent import duty. Imports exceeding the quota are also allowed, but they will incur an import duty of 58 percent in 1995 falling to 52 percent in 2004. However, given the relatively low cost of rice in Thailand, dutypaid imported rice may not be sufficiently competitive to command a market there. As a result, the high level of tariffs could still pose a major constraint to imports and make it unlikely that Thailand would import the full quantity of rice shown in the schedule. If imports are made, they would most likely consist of relatively small quantities of “special” varieties. Several factors could alter this scenario, i.e. if the production of rice in Thailand were to fall drastically because of a change in policy, loss of farmland and farm labour or bad weather. In such situations, the market access provision would enable Thai traders to import from lower cost suppliers in neighbouring countries, such as Viet Nam and Myanmar, for re-processing and packaging and ultimately possibly re-export.

While the market access provided by the Republic of Korea and Japan is more definite than in the case of Thailand, even for these countries the future situation is not altogether predictable. The projections assume that rice imported by both countries would be consumed mainly as food, and that imports would displace domestic production. As a result, rice production in Japan is projected to fall by 1.3 percent annually compared to the smaller rate of decline projected before the Round was concluded. This assumption, however, may not be borne out fully. Japan could opt to buy lower qualities for industrial or even feed use; in this case, it would not be buying higher quality medium-grain rice but less expensive rice, and hence may maintain its domestic production of medium-grain rice. This would have implications for international rice prices as well as for exporters to Japan and their choice of rice to grow in the future.

On balance, the alternative possibilities discussed suggest that considerable uncertainties exist on the extent to which international trade will rise by year 2000 as a direct result of the outcome of the Round.

IV. Implications for South Asia
All the developments cited above would obviously affect South Asian countries’ rice culture. However, there are some other implications for South Asian countries that are worthy of stress. We have mentioned some of these, the most important being the boost to India’s exports and to a smaller degree also that of Pakistan. But what has not been discussed is the range of business opportunities that could be exploited by them as a result of the Round.

By concentrating increases in import demand in developed countries, the Round draws into sharper focus the need for developing countries to improve the quality of rice and
to fine tune the variety they produce to that demanded in the world rice market. These are important issues for developing exporters in South Asia as well as elsewhere.

Up until the recent years, the concern in countries, where rice is a staple food, has been to produce sufficient quantities. But if countries are to succeed in expanding their export share of developed countries' market, quality consideration is all important. And, here, I do not refer only to the proportion of brokens but eating quality.

Targeting the right market with the right variety of rice is important, as is improving the packaging and marketing of rice. Countries will need to coordinate their research, extension, marketing and distribution network and structure. For exporters in the future, this will open up a completely new venue of trade when previously sales of rice had been mainly on bulk basis.

For South Asian importing countries, although the Round is expected to have only a minimal impact on their production by year 2000, a more pronounced and positive effect could result over the longer run, i.e. beyond 2000. Sustained increases in rice prices should help reverse the decline in farm prices and curb the mass migration of rural labour which had constrained rice production in many countries in South Asia. For countries such as Bangladesh, already verging towards full self-sufficiency in a normal year, high farm prices could provide the needed boost to production to put it back on course to becoming an exporting country.

V. Conclusions

The Agreements reached at the Uruguay Round of Multilateral Trade Negotiations could have significant implications for world rice trade. By 2000, global rice trade may be boosted by some 6.8 million tons (50 percent) from the base period, while international rice prices in real terms may experience a 15 percent rise from 1988. At least 17 percent of the increase in the volume of trade and about 50 percent of the rise in prices may be attributed to the Round. The impact of the Round on production, by contrast, is not expected to be large in the next few years. This is because no major changes in the amount of domestic support to rice are expected to result from the Round at the global level. The political and economic importance of rice as well as its role as a staple food would help ensure continued support to its production.

Over the longer run, i.e. beyond 2000, however, the Round's effect on production may be more pronounced and spread over a larger number of countries. Sustained increases in international rice prices should help reverse the declining trend in paddy farm prices. This could curb the outward flow of rural labour and the shift out of rice production in some major producing and consuming countries. For some developing importers especially, the increase in international rice prices could provide eventually a fillip to investment in rice production, because domestically produced rice would be less costly, and hence more attractive for investors. For others, however, the ultimate influence on farm labour is the relative performance of farm incomes vis-à-vis incomes from other urban employment, including industries. In China the massive loss of rural labour to the industrial sector and the concomitant conversion of agricultural land to other uses is now a major concern. Nearly 3 million hectares of rice land have been lost in the past decade and the strain of having to depend on achieving ever-rising yields is becoming evident; in the past 5 years, rice production in China has largely stagnated culminating in a fall in 1994 and large imports of rice in 1994/95.

The Round has one other important effect. By concentrating future increases in import demand in developed countries, it draws into sharper focus the importance of improving rice quality, packaging, and marketing for improving sales in the future. This reinforces the need for exporters to invest in new technologies for milling, sorting, packaging as well as marketing, conditions which were seen as mandatory even without the Round. At present, most rice is sold in bulk and very few developing countries have the milling and packaging technology that could cater to the new demand. Moreover, research on rice varieties has tended to give priority to yields. But the priority given to yields may have to change; the choice of varieties to be grown would need to be based on consumers' preferences and the quality of the grain produced. In this, developed rice growing and exporting countries could play a crucial role because of their advanced technology and resources. Millers in developed countries, which in the past had imported mainly husked rice from third countries for milling and processing, may find it opportune to look further afield and investigate possibilities of joint ventures with developing countries.
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Annex Table 1. (Cont.) Rice, milled — Commodity Balances, 1987-89 Average, 2000 Baseline and 2000 Uruguay Round Scenarios

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Annex Table 2. Past and projected growth in the rice situation of major selected South Asian countries

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A New Era in World Sugar Trade: Implications for South Asian Countries

Brent Borrell*

I. Introduction

For four hundred years most national sugar industries stood behind high trade barriers and were highly regulated and controlled. Competitive markets played a small role only in the allocation of resources in these industries. As a result, efficient producing regions of the world were not able easily to compete with and displace less efficient regions, and sweetener producing resources were poorly allocated globally. Further, slow and distorted responses to the changes in the world market caused by interventions made the market highly volatile while strong political forces built up around retaining the protective structures, which sustained inefficient operations.

Typically, the distortion of the world market and its uncompetitive nature were put forward as reasons why producers in one country required continued protection from producers in other parts of the world. Moreover, the complexity of government intervention in national industries and markets hid massive inefficiencies in production from consumers and from governments who sustained such interventions. But all this is changing.

A major change which has occurred in the past decade and continues to gather momentum, is that governments around the world are now being made aware of the massive inefficiencies their interventions can cause — the costs are no longer so easily hidden. And, as some governments have started to move to reduce their interventions in the sugar market, arguments being put forward by protected producers about the distortion of the world market and the need for continued protection are becoming increasingly tenuous. As a result, government policies on sweeteners are under pressure to change and are changing — the Japanese have recently halved their tariff, the European Union will reduce its subsidized exports by the year 2001, the Australian sugar industry has been largely deregulated and support prices in the United States and the EU have been dropping in real terms for more than a decade.

The world sugar market is now undergoing more rapid change than ever before. A four hundred year period of highly distorted trade is ending. Over the next two decades

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it seems likely that these distortions will be progressively reduced bringing enormous changes to where sugar and other sweeteners are produced, how much is traded and at what price.

In this paper an evaluation of important national sugar policies and the world sugar market is made in light of the Uruguay Round to assess implications, opportunities and challenges for South Asian countries.

II. The Uruguay Round provides a good springboard for other reforms

Although the Uruguay Round will not have big immediate impacts on the world sugar market, it will leave a legacy which will help maintain pressure for policy reform. Although the commitments made appear to point the way to big reductions in sugar market protection, in reality many of these commitments are already being met. The minimum access provisions for sugar for instance are already being met by the United States, the European Union and Japan. On tariffication and reductions in tariffs, benchmark tariffs which are to be phased down were initially set so high that real reductions in protection will be a long time in coming. For instance, the US over-quota tariff will phase down to US$14.45c/lb by 2000, but even then will give nominal protection in excess of 100 percent and the EU variable levy which will be converted to a fixed levy will phase down to US21c/lb, but will still provide nominal protection of 175 percent. Nonetheless, possible small reductions in subsidized EU exports, a lowering of the Japanese tariff on sugar and modest increases in access to some countries resulting from these commitments, could slightly reduce surpluses of sweeteners in the world. Among the big players, the provisions on export subsidies affect the European Union mostly. It appears that EU subsidized exports will decline by 360 thousand tonnes from around 3.0 million tonnes now by the turn of the century. However, at best this suggests slow progress only.

What the Uruguay Round will deliver is guarantees on access, provisions which will curb further deterioration in corrupted trading practices and more transparent trade policy instruments. The benefits of transparent instruments are that they will be easier to monitor and to reform. In particular, tariffication has opened the way for removing quantitative restrictions on trade and for phased reductions in tariffs and therefore reductions in protection over the long term. Increased trade, investment and income arising from all UR commitments will cause an increase in demand for many products. In developing countries which now consume around two thirds of all sugar, sugar consumption will rise directly in line with higher rates of income growth arising from GATT changes.

The outcome of the recent Uruguay Round has showed that trade liberalization will not be achieved easily or solely through transparent multilateral initiatives. But the important thing seems to be that the pressures to seek more liberal trade will not go away. Governments will seek to achieve trade liberalization on many fronts. In many cases, unilateral, bilateral and regional changes rather than multilateral GATT changes will influence the direction of the world sugar market. And sugar is likely to be a major target for reform in many countries because levels of protection are high and interventions are not market friendly.

III. Why the pressures for more liberal trade will not go away

To maintain credibility governments must move toward trade liberalization. The internationalization of business, and the freer movement of capital, ideas and people globally are increasingly breaking down barriers between countries and putting governments in competition with each other. They must operate credible macroeconomic, trade and industry policies to attract the capital and ideas needed to sustain growth. Countries with protectionist minded governments and those which create uneven incentive structures for industry are likely to become less competitive on a closely monitored and scrutinized world stage. The great economic success of many outwardly oriented economies and the failure of inwardly oriented ones has demonstrated the advantages of export-led growth and the need for open trade. Credible governments around the world are seeking to open trade subject to the various political constraints they face, and they will do so by what ever unilateral, bilateral, regional and multilateral channels are open to them. Slowly but surely, barriers to trade are likely to continue to decline. And high barriers like those applied to sugar will draw increased attention.

In face of the sluggishness of multilateral means, bilateralism and the formation of regional trade blocs are being used effectively as ways of advancing trade liberalization and
integration with the rest of the world economy. The formation of trade blocs can help maintain momentum toward more open export-led growth and away from protectionism, provided new common barriers are not erected against third countries. The formation of trade blocs looks like being a feature of commerce and trade in the 1990s and beyond.

Some countries have also been very successful in implementing unilateral trade liberalization strategies — many countries of East Asia, New Zealand, Chile, Mexico and Australia are notable examples. The demonstration effect of their success is likely to help promote reforms elsewhere.

3.1. Regionalism will impose big pressures for reform in the United States and Mexico

As the Mexican–US sugar and high fructose corn syrup trade is opened up under NAFTA a number of pressures will develop which could lead to increasing production of sweeteners in North America. This will create strong political pressures for a reduction in support prices in both countries.

Under NAFTA, US high fructose corn syrup is allowed access to the Mexican market at progressively lower tariff rates which phase out after 15 years and which start at only 15 percent anyway. Under high support sugar prices in Mexico, US high fructose corn syrup is likely to displace sugar in soft drinks as it has done under similarly high protected prices in the United States. The Mexican soft drink market is a big one and currently scope exists for corn syrup to displace up to 2 million tonnes of sugar annually — half Mexico's total consumption. If this occurs total North American sweetener production could increase by around 12 percent. Although the United States imports around 1.6 million tonnes annually, most of this is now bound under GATT. Increased North American production of sweeteners cannot therefore be used to displace imports. Moreover, subsidized exports would contravene GATT. This leaves open only two forms of adjustment. Either production quotas would need to be implemented or the internal North American price would need to be adjusted downward to reduce production and increase absorption.

Although displaced Mexican sugar will not have open access to the United States market formally under NAFTA, were US corn syrup to displace around half Mexico's current sugar consumption and production, enormous political pressures would emerge for Mexican sugar to be given reciprocal access rights to the US market. And so the Mexican surplus production problem is likely to become a North American one.

Under US sugar policy, provision exists to impose sugar production quotas. However, already there has emerged considerable discontent over the allocation of such quotas. Growers in the Red River Valley, where nearly one third of all US sugar is produced, have made it known they would prefer to see the United States move toward having world prices rather than have quotas imposed. Further discontent arises from the fact that quotas currently do not apply to corn syrup producers. Under a North American quota system, quotas would also need to be imposed on Mexican producers. Given the many inefficiencies of quotas and the problems of finding a politically acceptable allocation of quotas, a more efficient solution to dealing with the North American surplus would be to lower the US loan rate or to leave price determination to the internal North American market.

The most likely outcome seems to be a lowering of the internal North American price and therefore a lowering of protection. Any extension of NAFTA to other countries of Latin America or even the Pacific (which is being talked about) could create increased pressures for lower prices in the United States and elsewhere. In this context, many countries of Latin America with an interest in linking into NAFTA are surplus producers of sugar and therefore have the potential to place downward pressure on any internal NAFTA sugar price.

3.2. CAP reforms and pressures of a single market are creating pressure for reform in the EU

Common Agricultural Policy reforms within the European Union in recent years have made sugar beet production more profitable than alternative crops. This has drawn a great deal of attention to the protection afforded the EU sugar industry. There are considerable pressures emerging to lower the intervention price on sugar and to rationalize the allocation of production quotas.

Among the pressures for change are:

- a highly critical internal report on the inefficiencies of the sugar policy by the EU Court of Auditors;
- the inequities of allowing the profits on sugar beet production to be maintained in face of lowered prices for other crops and concomitant falling values of agricultural lands elsewhere in the European Union;
- the increasing disquiet of sugar users of high and disparate consumer prices across the EU especially in
light of CAP reforms elsewhere and the completion of a single EU market;

- the growing encroachment of new sweeteners on the traditional sugar market and the bureaucratic difficulties in controlling them;

- the inconsistencies of a non-transferable country by country quota scheme in the single market; and

- the new budgetary and international pressures of an expanding sugar regime under an expanding European Union.

Other countries have been applying pressure to have the highly protective EU sugar policy reformed for nearly a decade now. In that time support prices slipped in real terms and growth in quota production qualifying for support prices was arrested. The emergence of internal pressures such as those arising from the findings of the Court of Auditors report, the increasing disquiet of the sugar users and the declines in protection to other farmers are likely to be more influential than the external pressures faced to date. Coupled with on-going external pressures including the possible challenge through the WTO of the legality of the preferences granted under Lome, it seems highly likely that the EU will have to eventually reform its sugar policy.

Lowering support prices is one obvious reform to bring sugar protection more in line with lower levels of support to the rest of agriculture, and to placate sugar users. Harmonizing prices across the EU and making production quotas transferable between countries and regions is another obvious reform. This would help to make the EU sugar policy consistent with the EU single market and would also help to meet sugar users’ concerns about disparate prices and unfair advantages. Moreover, transferable quotas would allow for the rationalization of production away from inefficient areas in the South toward the more efficient North. At the same time production may decline in total as more efficient producers of sugar in the North bought up the A and B quotas of less efficient producers in the South and substituted so called non-quota C sugar, produced without direct subsidy, for A and B sugar from the South. This way the buyers of quota would receive more for their C sugar than now, and would not need to produce additional sugar to gain the benefits of their new quota. Meanwhile production in the South would decline or cease. The reduction in production would help reduce subsidized EU exports and help the EU achieve its UR commitments.

3.3. Transparency of the costs of Brazil's ethanol programme will bring reform

Brazil operates a highly interventionist sugarcane policy to force two thirds of its sugarcane to be used to produce ethanol. It does this in response to political pressures to maintain the supply of ethanol fuel to Brazil’s large fleet of ethanol powered cars. But the policy appears to be costing Brazil billions of dollars a year, because the value of the imported oil fuels the ethanol replaces, is worth only about one third of what sugarcane would be worth if used to produce sugar.

The sugarcane sector receives prices below the value of sugarcane were it to be used for sugar production and exported. Certainly it is true that because Brazil has such vast amounts of sugarcane available to produce sugar for export, were it to export large amounts, it would lower the world price. Even so, Brazil would earn considerably more from its sugarcane than now.

There is an increasing awareness of the opportunity costs and out datedness of Brazil’s sugarcane sector policies. Brazil is an enormously efficient producer of sugarcane and sugar and it seems likely that, as the forgone opportunities it is imposing on its sugarcane sector become better understood, pressures will increase for the reform of the policy. Already the production and sale of ethanol-fuelled cars is declining sharply and in some cases cheap imported methanol is being used to substitute for ethanol to free up sugarcane for sugar production. As the costs of its policies have become better known more sugarcane is being directed toward sugar production. In the past four years Brazil has increased sugar production by 60 percent and increased sugar exports by 220 percent.

As the political might of ethanol-fuelled car owners declines and the interests of sugarcane producers become better expressed, progressively more sugarcane is likely to be used for sugar production and export.

Given Brazil’s potential to eventually supply nearly 20 percent of world sugar consumption, Brazil is likely to emerge as the major force in the world sugar market over the next two decades. It has the potential to greatly increase its market share and to lower the world price of sugar as well. As it does this it will increase the cost of protectionist sugar policies in other countries and place additional pressures on these countries to reform their policies. Further, were Brazil to become more responsive to the world sugar market, as surely it must, it is likely to help reduce the volatility of the market.
3.4. The loss of former Soviet Union preferences will force further reforms in Cuba
Cuba's loss of its lucrative bilateral trade deal with the former Soviet Union has already caused a major downscaling of production in Cuba. Cuba is no longer the largest exporter of sugar. Indeed, its exports have declined to around half of what they were in 1990. This is having a huge impact on the whole Cuban economy and creating strong pressures for reform of the entire economic and political system.

To reform, Cuba needs to become integrated with the world economy. Should this occur, Cuba is likely to develop many new business opportunities currently closed to it. Its dependence on sugar would diminish. Alternative uses for land would be opened up and it is doubtful that Cuba would ever return to using around 90 percent of its arable land for sugarcane production as it did in response to the lucrative bilateral deal it had with the former Soviet Union.

Cuba is unlikely to be offered lucrative bilateral deals by other trading partners. Even were it to become closely integrated with the US economy, the addition of Cuba's sugar production to the North American total would leave North America as a surplus sweetener producing region unable to sustain an internal sugar price much different from the world price.

Irrespective of whether Cuba reforms its economy, for the next two decades Cuba must adjust to producing sugar at the world price. This would appear to mean that its exports will stay within the 3 to 4 million tonne range rather than in the 7 to 8 million tonne range achieved previously.

3.5. Budgetary pressures will force reforms in the former Soviet Union
The countries of the Former Soviet Union (FSU) no longer have the economic wealth to be able to subsidize their sugar sectors as they have in the past. The Ukraine as the previous export region of the FSU must now export at the world price and Russia as the major import region is no longer subsidizing imports. The turmoil within the FSU countries makes it difficult to estimate how FSU producers and consumers will respond to world prices in the long term because much depends on changes occurring elsewhere in the economy. Such changes are affecting incomes and the demand for sugar as well the costs of inputs and the exchange rate. The economies of the FSU countries have been distorted for so long it is hard to know where their comparative advantages may lie. Certainly a weak currency is likely to favour agricultural production in countries with vast land resources. However, the extremely low sugarbeet yields and short growing seasons in many of these countries raise doubts about their competitiveness to produce sugar even with a weak currency.

3.6. China and Indonesia will come under the microscope
These countries protect their sugar producers from world prices. Nominal rates of protection appear to be roughly around 100 percent. They are opening up their economies to international trade and are under considerable pressure to continue to reduce trade barriers. However, they have also been slow to reform their agricultural sectors in general and their sugar sectors in particular. Nonetheless, they are also experiencing rapid increases in sugar consumption in line with strong income growth. In each, their sugar sectors do not appear to compete well with other crops and it seems unlikely that sugar production will keep pace with consumption. Increasingly these countries will come to rely on imports.

Indonesia is a member of GATT and China is hoping to become a member. Commitments arising from the Uruguay Round will amount to continued pressures on these countries to lower their levels of protection and to use more transparent forms of protection — that is tariffs. As imports to these countries increase in line with growing consumption, increased international and domestic attention will be focused on the import policies of these countries. This will add to the pressures for sugar trade policy reforms in these countries. These countries' place as members of APEC is also likely to bring their sugar policies under scrutiny. Moreover, as these countries reform other parts of their economies, the high levels of protection afforded to their sugar sectors will tend to stand out more and more. As it is disparities in levels of protection which are more economically destructive than absolute levels of protection across an economy, added pressures will emerge to cut sugar protection.

3.7. Beef, rice, sugar reforms: Japan is on track toward more market friendly policies
Japan has revealed itself to be serious about reforming many parts of its economy including agriculture. It has moved unilaterally to reform its beef, citrus and sugar sectors ahead of URA reforms and has agreed to open its rice market as part
of the outcome. Japan remains under much pressure from the United States to reform its economy on many fronts and to open up to international market forces. Sluggish growth and structural change within the economy are also helping to reveal that many restrictive practices are starting to severely constrain growth. Japan's period of rapid growth through technology transfer has passed, and realization of this is causing policy makers in Japan to consider a wide range of trade and institutional reforms which might help sustain growth.

Although the Japanese sugar sector was highly protected, the halving of its sugar tariff, as well as stimulating some increased consumption, should be seen as the start of a process of reform which will continue, leading ultimately to higher levels of sugar imports.

3.8. Deregulation in Australia is leading to new investment

After a decade of debate about freeing up resources in the Australian sugar industry, major steps in this direction have now been undertaken. The Australian sugar industry now receives virtually no protection and exports around 85 percent of its output to the world market at world market prices. Output has expanded by nearly a third in response to the freeing up of resources and Australia has revealed itself to be an extremely efficient producer of sugar. The freeing up of resources has allowed much greater economies of scale to be achieved in the capital intensive growing, harvesting and milling processes. Rationalization of many operations has also allowed increases in efficiency. Unit costs of production have declined and returns on investment have increased from much better utilization of capital. The higher returns on investment made possible within the deregulated environment have raised the prospects of developing entirely new sugar regions and mills. New investment embodying new (more efficient) technology (which has been on ice for a long time) will now be introduced to the industry raising its productivity even further. The industry still has scope to undertake other reforms and, as the payoffs from recent reforms are realized, the industry is likely to become increasingly enthusiastic to adopt further reforms. Australia has positioned itself well to produce sugar at very low cost for the world market. It can be expected to expand production constantly over the next decade and is likely to be the world's largest net exporter of sugar until such time as reforms in Brazil enable it to expand production.

3.9. The Thai industry will come under scrutiny

Like Australia, Thailand exports most of its sugar to the world market. However, unlike Australia, Thailand does so with cross-subsidies from the 25 percent of sugar sold to the domestic market at highly inflated levels. The protection derived from the domestic market sales is likely to be increasingly questioned as Thailand faces up to its URA commitments and faces the challenges of APEC and ASEAN's EFTA. Nonetheless, Thailand in the main appears to be an efficient sugar exporter with scope to increase productivity. Reforms in the rest of the economy have served the industry well in recent years. It has nearly doubled production in the past decade making it one of the four most important sugar exporters. Reductions in protection may help create pressures to adopt practices which enhance productivity and allow Thailand to go on expanding sugar exports, at least at a modest rate.

3.10. Reforms within the Philippine economy look set to force reforms in the sugar sector as well

High tariffs on sugar are under attack in the Philippines and several proposals have emerged for them to be phased down over the next decade. Sugar tariffs are among the highest tariffs in the country. Although this will greatly lower producer prices, the scope for productivity increases from changes in restrictive sugar market legislation are large. If adopted the Philippine sugar industry looks set to grow in line with the rapid growth in consumption occurring there, but it is unlikely to be a major exporter again.

3.11. Reduced EU and US support prices will force reforms in Mauritius, the Caribbean and Fiji

Preferential but restricted access to the lucrative EU and US sugar markets have made the sugar industries in Mauritius, the Caribbean, Fiji and the Philippines highly dependent on artificially high prices. In many cases the rents transferred within the artificially high prices have been used to sustain inefficiencies and have reduced pressures for adjustment. For instance, in Mauritius special conditions for workers, special land market regulations and other specific sugar industry regulations lock far too many resources into the sugar industry and stop it from adopting productivity improving measures.
As US and EU support prices decline so will the value of the preferences received by these countries. Moreover, under provisions set down for the World Trade Organization, these preferences look likely to be challenged as major barriers to trade and pressures will be created to abolish them. This will create strong pressures for the sugar industries in these countries to adopt more efficient policies which will open the way for productivity increases. Nonetheless, the sugar industries in these countries may downsize in response. In a country like Mauritius where so much of the existing arable land is used for sugarcane production and yet demand for land for other uses is increasing rapidly, it seems inevitable that the industry will shrink.

IV. World prices will reflect production costs in efficient exporting countries

As countries like Australia and Brazil take off the shackles (taxes) which have held back their sugar industries for so long, and as support is lowered in highly protected countries such as the European Community, the United States, Japan, China, and Indonesia, world sugar production is likely to shift increasingly toward the efficient exporting countries like Australia, Brazil and Thailand and may create increased opportunities for a handful of efficient African exporters — though it is not clear they will be well placed to take up these opportunities.

Brazil's potential to efficiently produce more sugar for the world market is enormous. Given existing supplies of sugarcane and the huge economic incentive Brazil has to switch sugarcane from ethanol to sugar, it has the capacity to easily increase world supplies of sugar by 10 to 15 percent and to increase the supply of traded sugar by nearly 50 percent. Brazil could set new benchmarking parameters for the world sugar market. Countries concerned about the efficiency of their own sugar producers and about investment in these sectors need to consider Brazil's potential as a highly efficient supplier of sugar.

As efficient producers such as Brazil, Australia and Thailand come to increasingly dominate the world sugar market, the low costs of production in these countries will increasingly come to influence the long run average world price. This is likely to be considerably lower than the US 18c/lb that it has averaged over the past four decades. More likely, it will be in the range of US 10c/lb to 13c/lb.

V. Implications for South Asian countries

5.1. National sugar policies in the region

India, Pakistan, Bangladesh and Sri Lanka have typically run highly protectionist and interventionist sugar policies. Producer prices have been maintained well above world price levels and have been insulated from world market volatility through variable levies and quantitative controls on imports. Fertilizer, water and credit to the sugarcane sector has typically been subsidized. In India and Pakistan small amounts of exports have been subsidized. State trading monopolizes trading and marketing except in Pakistan.

The net result of policies in these countries appears to have been to provide protection to the sugar producing sector which is typically above that for other crops. This has encouraged cropping resources in each country to flow into the sugarcane sector (in India and Pakistan there is also some sugar beet produced).

There is some evidence that this protection is falling in India, Sri Lanka and Pakistan. Depreciation of the rupee has brought Indian prices much more in line with world prices in the past two years (figure 1) although nominal protection for sugar is relatively high compared to other crops (figure 2) and much uncertainty surrounds Indian imports because policy is not clearly enunciated — see box 1. In Sri Lanka the tariff on sugar has been reduced from 60 percent in 1993–94 to 30 percent in 1994–95, but a state trading authority still monopolizes trading and marketing. In Pakistan imports are currently subject to an import duty of 15 percent only although this is a variable duty, leaving much uncertainty about import behaviour.

In Bangladesh sugar imports are restricted to government purchase only and domestic prices are around double the world price. Tariffs applying on other crop imports are typically around 15 percent only, implying very high relative levels of protection for sugar.

These four countries of South Asia together account for around 15 percent of world consumption and production (much more if gur and khandsari in India are taken into account). Sri Lanka is the only consistent trader, regularly importing over 90 percent of its requirements. India is an opportunistic trader, sometimes importing, some times exporting.

The long history of high levels of protection raises serious questions about the competitiveness of the South Asian
sugar industries. Moreover, given the rapid population and income growth in the region, sugar consumption is expanding quickly. This raises further questions about the capacity of these industries to competitively meet the growing demand for sweeteners. Consumption of sugar increased by nearly 60 percent in the past decade. With stronger economic growth in the region projected for the next decade, consumption growth could be stronger in the next decade.

How South Asia satisfies its growing demands for sugar will depend importantly on the sugar policies adopted. South Asia is likely to face a more competitive world sugar market in the future and global, regional and unilateral pressures to adopt competitive, market friendly policies at home. What are the implications of this for sugar markets in the region?

5.2. What are the immediate implications of the Uruguay Round for South Asian sugar markets?

The outcome of the URA seems to hold few immediate implications for South Asia’s sugar import behaviour because state trading activities are still permitted and tariffs were bound at very high levels.

Under the Agreement a World Trade Organization review process was set up to examine the implications of state trading operations, but the current conditions applying directly toward the activities of state traders do not appear to be enforceable, so the uncertainty which currently surrounds India sugar imports for instance will remain. The WTO review is being undertaken with a view to greater liberalization. However, any outcome of the review is unlikely to hold implications for South Asia until the next century. The current provisions relating to state trading organizations are that their activities should be nondiscriminatory and in accordance with commercial practices using open tendering and giving adequate opportunities for commercial activity. Use of such agencies should also be reported to the WTO. However, there does not appear to be anything concrete to prevent state trading agencies’ restrictive practices should they choose to exercise them.

On tariffs, these were bound under the URA at 100 to 200 percent for India, Pakistan and Bangladesh. For Sri Lanka they were bound at 50 percent. For developing countries there is no necessity to phase these down by a minimum of 15 percent over the life of the Agreement as applies for other countries. Given the current low tariff equivalent, India for instance can, if it wishes, put tariffs up by a factor of 10 to 15 before becoming GATT illegal. This gives government considerable flexibility to control imports should it choose...
Figure 2. India’s pricing policies favour the sugarcane sector over other important cropping sectors, increasing sugarcane’s relative command of agricultural resources.

Relative rates of nominal protection (effective assistance) for major crops in India during 1990s (1990–91 to 1994–95) — sugarcane = 100

Note: Absolute protection has been reduced in the 1990s compared to the 1980s for sugarcane, however the relativity’s still place sugarcane ahead of other main crops.

Source: Gulati and Sharma (1991) and Mission Estimates.
Imports of sugar have generally been controlled through the Food Corporation of India (FCI) with high import duties before 1991. This system continued till March 1994 when, in the face of domestic shortage, imports were suddenly opened to the private sector with zero import duty. At present, imports are decanalised, but the depreciating rupee and the improvement in world sugar prices (from below 10 US cents/lbs to above 12 US cents/lbs) is not leading to any significant imports into the country.

It is not yet certain whether these changes will stay or undergo change very quickly with minor changes in the domestic or international sugar scene. This is because changes have been announced more as ad-hoc measures to deal with temporary problems facing the sugar sector rather than as a part of any comprehensive strategy towards this sector.

The possibility of imports being commandeered for levy market sales and the lack of a clearly enunciated policy, which seems to be subject to change at short notice, imposes considerable uncertainty on importing. Port and transport infrastructural bottlenecks also appear to raise cif (cost, insurance, freight) import prices, considerably reducing the attractiveness of importing.

to do so. There are also provisions under GATT which allow developing countries (with an IMF waiver) to impose quantitative controls against imports if a balance of payments crisis emerges. And there are the safeguard measures mentioned earlier.

It is hard to see that the URA will impose any immediate or direct pressures for change in domestic sugar policies. However, changes occurring elsewhere in the dynamic economies of India, Pakistan and Sri Lanka at least, and increasing awareness of the costs of protectionist and interventionist policies are likely to create pressures for change. Moreover, the increasing reliable supplies of sugar from low cost exporters will raise the cost of protectionist policies in these countries.

### 5.3. India: a case study on pressures for change

We recently completed a major study of the Indian sugarcane sector. The results of this study help to illustrate some of the implications of changing trading opportunities in sugar for South Asia. It also helps to demonstrate the great gains which could be achieved in South Asia through pursuing market friendly policies in place of the market distorting policies currently in place.

Our analysis suggests that India faces two broadly different but plausible options for satisfying its rapidly growing demands for sucrose based sweeteners: (a) an expensive growth option; and (b) a cheap growth option.

The expensive option involves persisting with existing policies. This option involves growth through increased input usage, following existing patterns of production, trade and use of technology. This option is expensive because to command more of the economy's primary resources and to be competitive in bidding for these the sugarcane sector will need to pay more for them. And it will only be able to do this if it receives higher prices for its output. This will only be able to be done if it is protected from imports such as those likely to be available from Brazil at US 10c/lb to 13c/lb.

The cheaper option involves considerable policy reform. This is needed to relax constraints which impede resource mobility within the sector and discourage the uptake of better technologies. Rather than encouraging growth through increased input usage, this option would encourage growth through productivity increases (yield increases) and the more efficient allocation of existing resources. This would limit the extent to which the sector would need to bid up the price of resources and indeed, more efficient resource use would help offset the costs of resources such as labour which will rise anyway. This way growth in production and consumption would be able to occur without increases in the price of sweeteners.

Our analysis suggests that the second option is far superior to the first. With policy reforms the allocative and technical efficiencies which could be introduced to the sugarcane sector would sustain annual factor productivity growth of over 3.5 percent for at least a decade. In terms of international best practice, India's sugarcane policies have held the sector back meaning there is considerable scope for technical and economic catch-up. The ensuing economic gains could be worth around US$2 billion a year in real terms by the year 2005 or around 26 percent of the sector's value added in the year 2005. And all this could occur without protection from the world market. Further, potential losses of a
Figure 3. Increased area has been a more important determinant of growth than yield

Source: ISMA and USDA.

Further US$ 0.6 billion a year would be avoided.

**Background.** The sugarcane sector accounts for nearly 2 percent of India’s GDP and 16 percent of world sweetener market. Historically, growth in sugarcane production has been mostly through increased input usage. Productivity growth has been unremarkable — figure 3. Changes now occurring in the Indian economy will raise costs of labour, land, capital and other inputs to the sugarcane industry significantly over the next decade. Productivity growth will be needed to offset rising costs.

If the Indian economy maintains economic growth of 5 percent a year sweetener consumption will grow by an estimated 3 percent a year and sugar consumption by 5 percent a year. Maintaining historical rates of productivity growth will not allow production growth to keep pace with consumption growth in India. India will either need to import or to raise domestic prices to draw more land and other resources into the sugarcane sector. But raising prices will reduce international competitiveness.

Existing policies stifle productivity growth and have the potential to tax the domestic sugarcane and sugar industries relative to imports.

- Lack of competition between mills due to the licensing system, subsidies on water (particularly in Maharashtra), and other inputs, plus interventions such as the cane societies in Uttar Pradesh and government intervention in cane pricing reduce incentives for the uptake of better technology. Economies of scale in milling are not being pursued (figure 4), cane quality is low (figure 5) and irrigated cane yields are 40 to 50 percent below international benchmarks.
- The dual marketing system which requires domestic producers to supply 35 percent of sugar at below market price to the Public Distribution System is equal to a 17 percent tax on domestic sugar. This favours imports over domestic production.

**What the results show.** From the results of a detailed economic model of the Indian sweetener market, meeting consumption growth from domestic sources (without policy changes) requires increasing estimated real sugar and cane prices by up to 35 percent to draw more land and other resources/inputs into the industry. It would also require import tariff protection of over 50 percent.

Without import protection but retaining other policies, and in particular the dual market arrangements, could see India require an estimated 7.3 million tonnes of sugar imports a year by 2005. This would drive the world price of sugar up by an estimated 25 percent.
With policy changes which encourage productivity growth, results indicate that India could satisfy over 90 percent of its projected consumption growth over the next decade at world competitive prices and without tariff protection. Production of sweeteners would expand by an estimated 50 percent and sugar production by 83 percent at world competitive prices. This amounts to a US$2 billion a year payoff from better policies, or 30 percent of value added.

International benchmarking reveals that the scope for productivity catch-up is large.

- By overcoming waterlogging problems, using water more economically, applying fertilizer more scientif-
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By achieving economies of scale in milling and using better seed, it appears yields of sugar per hectare could be increased considerably. Productivity gains of around 20 percent appear to be feasible.

- By achieving economies of scale in milling and using technology which allows for better recovery of sugar in cane, feasible productivity gains at mill appear to be around 25 percent.

Results also indicate that given rapid income, population and sweetener demand growth and high internal transport costs, India is unlikely to become a sugar exporter over the next decade.

Policy implications of the results. Achieving technological catch-up requires more market oriented policies. In India this would require: (a) complete removal of the dual market designed to subsidize some consumers (this could be achieved more cheaply through targeted programmes); (b) completely open access for imports; (c) the cessation of state trading in sugar; (d) no barriers to entry and exit from milling; (e) ensuring cane prices reflect cane's contribution to sugar output; (f) removal of fertilizer, water and credit subsidies; (g) ensuring efficient dissemination of technology; (h) ensuring infrastructure is maintained and developed; and (i) reviewing administration of policy with a view to getting better coordination.

Implications relating to price instability and uncertainty. Opening the market completely to imports would expose the industry to the fluctuation of the world market. The market is known as a highly volatile one and historically this is true. However, this volatility has not been marked over the past 13 years. And as discussed earlier, there are good reasons to believe the world market will become even less volatile in the future as other countries liberalize their sugar trade and so pass less instability to that market.

Volatility is something Indian producers must already deal with anyway. Domestic sugar and cane prices vary to some extent and cane prices in particular vary considerably between years and mills. Moreover, the profitability of mills is unpredictable and subject to the vagaries of government price setting. Supplies of cane vary considerable due to cane pricing arrangements as well as the weather. Growers are uncertain of payment. Interest rates and inflation may be greater sources of uncertainty. Stockholding requirements of mills are unpredictable and outside a mill's control which adds to its uncertainties and instability of profit flows. Futures markets cannot be used to spread and transfer risk. The extent to which government varies the levy proportion has fluctuated greatly over the years which introduces another source of uncertainty.

Many of these uncertainties would be reduced by pursuing more market oriented policies.

One country in particular, Australia, which sells 85 percent of its sugar on the world market, has found ways to cope with price volatilities. If the industry is directly exposed to these volatilities they will have incentives to find ways to spread risk. If not, and government funded schemes are set up to deal with volatilities, this will mask the risk, pass the cost of risk to the rest of the economy and prevent it being dealt with efficiently.

Government controlled schemes to protect producers from international market forces run the risk of locking resources up into unproductive sectors and creating big fiscal costs.

Buffer stocking schemes do not work. There is a big literature on this and it can be proved mathematically they cannot work. For examples, look at Australia's wool stock scheme and the International Tin Council's scheme both of which did tremendous damage to their markets.

Buffer fund schemes can be shown to be superior to buffer stock schemes, but private savings can be shown to be superior to buffer fund schemes. Private savings should be promoted as a way of spreading income risks between years.

The Indian cropping sector appears to be fairly well suited to dealing with volatility. Indian sugarcane producers have clearly indicated their flexibility to take land out of cane on some occasions and to put it back on others. It appears that this along with the big gur and khandasari subsectors put the Indian sugarcane sectors among the most flexible in the world. Sugarcane is usually grown with other crops, so growers are able to spread their risks across crops. Sugarcane is grown increasingly as an annual crop or with only one ratoon. This gives Indian sugar and sugarcane producers an advantage over many producers in other countries. If not exposed to the world market, Indian producers would not be able to exploit their advantage in dealing with market volatility.

India as a large producer has the ability to influence the world price itself and its flexibility to respond to that mar-
ket will have a stabilizing influence on it. A study on Brazil shows that liberalization of its sugar trade could provide considerable added stability to the world market. There is no reason to believe India could not do the same.

Our experience of studying the costs of many schemes designed to protect domestic producers from fluctuating world prices across many commodities in many countries, is that they are very costly and always counterproductive. The main problem is that even temporary safeguard/safety net measures become vulnerable to political interference. They become captured by vested interest and manipulated in ways which make them difficult to remove or control. They come to stand in the way of normal commercial dealings. To be successfully operated they usually require supplementary regulation which becomes institutionalized and causes further costly market distortions.

Instead, it is usually more productive to orientate policy toward making sure capital markets work efficiently to allow producers to spread risks. In this regard in India, allowing futures markets for sugar to be accessed and used would be an important step in the right direction. Sugar policy could aim to promote and monitor the use of sugar futures markets in India. It could also aim to promote and monitor the efficient provision of other financial services to the sector to encourage saving as an important income stabilizing measure.

To the extent that political pressures cannot be avoided, the GATT provides a safeguard policy. There are the safeguard clauses of the GATT for developing countries to impose temporary import controls or safeguard duties when import threaten a country's balance of payments stability (this may require an IMF waiver). This at least puts the arrangements under external scrutiny, makes them difficult to be captured by vested interests, provides an automatic sunset clause to the arrangements and therefore makes them reasonable predictable so they do not impose long term political uncertainties.

VI. Conclusions

Many countries are starting to reform their sugar markets — in many cases this is an outcome of the closer scrutiny of sugar policies and exposure of their costs which occurred partly as a result of the Uruguay Round. As a result of the Round, sugar policies (which are among some of the most distortionary agricultural policies) will continue to come under scrutiny. Regionalism and ongoing unilateral reform in many countries are also bringing pressures to bear on countries with protectionist/ interventionist sugar policies.

Reforms will make the world sugar market more competitive and see a shift in production toward low cost producing countries. The world market price is likely to become less volatile and will probably be lower on average as a result. Brazil, Australia and Thailand in particular have the potential to supply the world market with a lot of cheap sugar — they are very efficient.

The need for protection is often a sign of lack of competitiveness. However, removal of protectionist policies does not mean a collapse of protected sugar industries. Often protectionist/interventionist policies insulate industries from competitive pressures. This reduces incentives for the uptake of better technology. Productivity growth suffers. This would appear to be what has happened in India. It has also happened in the Philippines, the Caribbean and Mauritius at least. It may also be the case in Pakistan, Bangladesh and Sri Lanka.

Results of our study on India suggest protectionist/ interventionist policies, if continued, could be very costly (US$2 billion a year by 2005). They will prevent technological catch-up. The Indian results and those from many other studies suggest all countries in South Asia may have much to gain by adopting more liberal, market friendly sugar policies.

Experience in other countries suggests South Asian countries will come under increasing pressures to adopt such policies. These pressures will come from reforms occurring elsewhere in their economies which will make subsidies and protection less acceptable and the costs better known. It will also come from international sources, especially as South Asian countries seek to integrate their economies with others through regional agreements.
The Abolition of the Multi-fibre 
Arrangement and its Implications 
for Fibre Markets

Will Martin*

1. Introduction

The Multi-fibre Arrangement (MFA) does not directly restrict trade in fibres. However, it affects the important fibre producing industries of the region through its profound impacts on the downstream markets for textiles and clothing. The agreement to phase out the MFA can be expected to have a major, favourable impact on the fibre-producing industries by increasing the long term demand for, and hence price of, textile fibres. Perhaps more importantly, abolition of the MFA is likely to result in strong pressures for reform of domestic policies that have discriminated strongly against fibre production. Reforms that take advantage of the new opportunities created by abolition of the MFA are likely to have a major positive impact on fibre production in the region.

The MFA contravenes two of the most fundamental principles of the multilateral trading system: the ban on quantitative restrictions, and the prohibition of discrimination between suppliers. It developed from ad hoc quantitative restrictions imposed against exports of cotton textiles from Japan and expanded into a systematic web of restrictions on virtually all significant suppliers of textiles or clothing, of whatever fibre, from developing countries to developed countries. The original agreement was intended to be temporary (GATT, 1974), providing a breathing space for adjustment in the importing countries. However, the rates of quota growth tended to decline, and the system to ossify, in a vain attempt to staunch the ever-increasing tide of imports from developing countries. By the time of the Uruguay Round, the trade barriers imposed by the MFA might aptly, along with agricultural trade barriers, be characterized as representing the Himalayas of trade protection in developed countries — soaring peaks that greatly distorted world trade in textiles and clothing, and imposed great costs on both developed and developing countries (François, McDonald and Nordström 1995).

The Agreement on Textiles and Clothing (ATC) reached under the Uruguay Round includes a landmark agreement to abolish the MFA — albeit through a ten year phase-out.

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During this ten year period, the import quotas are to be progressively phased out, with those that remain growing at increasing rates, and being abolished at the end of the tenth year. All of these changes create market opportunities for developing country exporters. The final abolition of the quotas promises to remove the barriers to world trade in textiles and clothing, and the fibre embodied within them, created by the MFA.

The long phase-out period of the MFA introduces a number of problems and risks. The importing countries choose which products are to be removed from the ATC and reincorporated under GATT disciplines. Typically countries have chosen these products in such a way that very little liberalization will occur during the phase out period. An alarmingly large amount of the liberalization will be deferred until the tenth year, raising the political stakes considerably. During the transitional period, it will, if anything, be easier for importers to bring new goods under quotas. A key risk is that it will be politically difficult for the importing countries to finalize the liberalization process.

As long as these risks are clearly recognized and dealt with, the MFA provides important new opportunities over the longer term — opportunities that could help to put South Asian countries on the type of dynamic growth path observed in East Asia (Anderson 1991). The Agreement offers scope for very large-scale expansion of the exports of textiles and clothing from developing countries in South Asia — expansion that could generate massive increases in employment in these labour-intensive industries, and stimulate demand for fibre inputs. For this potential to be realized, however, complementary domestic reforms will be required to increase the competitiveness of the domestic industries.

In the next section of this paper, the basic features of the MFA and its implications for developing countries, and their fibre producers, are reviewed. This is followed by an outline of the programme of liberalization agreed under the Uruguay Round Agreement and particularly its Agreement on Textiles and Clothing. Then, the implications of the Agreement, and the effects of liberalization, for fibre markets are assessed. Finally, some options for complementary policy reforms in South Asia and their implications for fibre markets are considered.

II. The Nature of the Multi-Fibre Arrangement

The MFA provides a framework under which developed country importers impose quotas on exports of yarn, textiles and apparel from developing countries (GATT 1974). It grew out of earlier quota arrangements which restricted only cotton products and was progressively broadened to include virtually all fibres because of the incentives created by these arrangements to diversify exports into unrestricted products. MFA quotas are typically agreed bilaterally under threat of unilateral restraints imposed by the importer. Quotas are typically negotiated for particular product categories defined by fibre and by function, such as men's cotton shirts, allowing discrimination against specific fibres and products.

MFA export quotas are administered by the government of the exporting country, which typically allocates these quotas to individual exporting firms on the basis of criteria like past export performance, or current exports of unrestricted products. Where quotas are significantly restrictive, these quota rights become valuable assets. To varying degrees in different countries, these quota rents may be traded or bartered to allow reallocation of quota rights from those unable to supply efficiently to those who are able to fill the quotas at lower cost. From the point of view of exporters, the quota rents add to the costs of exporting in much the same way as export taxes. A firm without sufficient quota allocation pays this cost directly by having to obtain a quota by purchase or barter. A firm which has quota available bears the opportunity cost resulting from not selling or bartering its quota.

In principle, the quota rents associated with the MFA should accrue to the exporting countries. However, there are serious risks of these quota rents being lost. Trela and Whalley (1995) emphasize the problem of rent dissipation, where the quota rents are wasted because of rent seeking stimulated by the incentives created by quota allocation mechanism. Assuming these losses to represent 10 percent of the quota rents in countries that, like the South Asian countries, have relatively complex quota allocation and transfer schemes, they estimate that the MFA quotas cause annual losses of US$250 million to Bangladesh, US$330 million to India, US$19 million to Nepal, US$195 million to Pakistan and US$330 million to Sri Lanka. Krishna, Erzan and Tan (1994) emphasize the possibility of rent sharing, where
part of the quota rents accrue to the importing firms because of the large market shares of the major importing firms. Even in the very large and active Hong Kong market, they estimate that 50 percent of the quota rents may be lost to Hong Kong.

The MFA is clearly a very costly form of protection to the developed countries that imposed it. These countries lose because of the induced increases in the costs of their suppliers, and hence in the prices at which they are willing to supply textiles and clothing. In contrast with conventional import protection, these countries do not receive quota rents or import duty revenues (unless they are able to share the rents as discussed above). They also lose because of the rigidities in the system, which inhibit the efficient sourcing of imports across supplying countries.

The impact of the MFA on the welfare of the exporting countries is somewhat more complex to assess. The rise in the price at which their exports are sold in the restricted markets is a potentially important benefit. However, this benefit must be weighed against the decline in the prices that they receive for exports to other markets, and the loss in the efficiency of their economies as they scale back an industry in which they have a comparative advantage. The major impacts of quotas such as those imposed under the MFA can usefully be illustrated using a simple diagram such as Figure 1.

In Figure 1, the global excess demand for the good includes two separate excess demand curves: the developed-country demand represented by EDR and an unrestricted residual demand from the rest of the world represented by EDU. In the absence of a quota, the global excess demand is represented by ED, which is the horizontal sum of the two excess demand curves. The intersection of this curve and the excess supply curve, ES, determines the world price in the absence of the restriction, p. When a quota restriction of Q is introduced into the developed-country market, the quan-
tity imported into this market falls and the price in this market rises to $p_r$. By contrast, the export price to the residual market falls to $p_e$. Quota rents equal of $(p_r - p)^*Q$ are generated with the quota having exactly the same effect as an export tax of $(p_e - p)$. To the extent that these quota rents benefit the exporter, these benefits must be offset by a decline of $(p_e - p)$ on all units of output, and the efficiency losses associated with reducing output below and expanding consumption above their free trade levels.

The overall effects of the MFA on the welfare of exporting countries depend upon the share of their exports that are directed to the restricted markets, and hence receive higher prices in the presence of the MFA (Yang, Martin and Yanagishima 1996). They also depend upon the extent to which the country's exports are restricted, since higher trade barriers sharply increase the efficiency costs of the restriction, and depress the prices received in residual markets. Tightly restricted, dynamic exporters such as India, Pakistan and Sri Lanka are much more likely to lose overall from the MFA than those, like Bangladesh, whose exports are not currently strongly restricted, or mature exporters such Hong Kong, Taiwan (Province of China) and the Republic of Korea, whose quotas are now large relative to their efficient export levels. Of course, continuation of the MFA would most likely have resulted in increasingly tight restrictions on the exports of dynamic exporters such as Bangladesh.

For fibre producers, perhaps the most important feature of Figure 1 is the reduction in the total output of the good resulting from imposition of the quota. Since production of the finished good is being diverted from the lowest cost producer to higher cost producers, the cost of the good to consumers rises, and total import demand falls, as does final consumer demand. This reduction in demand, in turn, reduces the derived demand for fibres, and puts downward pressure on their prices.

Another possibly important impact of the MFA on fibre producers arises through potential differences in the magnitudes of the distortions affecting different product types. Under the precursors of the MFA, such as the Short Term Arrangement and the Long Term Arrangement, there was clearly such a distortion, since quotas were applied only against cotton textiles and clothing (Trela and Whalley 1990). Since the introduction of the MFA, it has been far from clear what the size of the resulting trade distortions have been, let alone whether, and to what extent, these barriers discriminated against particular fibres. Differences in the magnitude of the trade barriers facing particular fibres could be particularly important given the considerable scope for substitution between fibres in the production of many types of a apparel. Given normal parameter values, such substitution effects could easily outweigh any output effects associated with changes in the overall level of demand for apparel, since the overall demand for apparel is likely to be relatively unresponsive to prices.

III. The MFA and Other Liberalization Under the Uruguay Round

The Uruguay Round was a milestone for the developing economies. For the first time, developing countries moved onto center stage of the multilateral trading system, participating actively in the exchange of market access concessions, and using their multilateral commitments to lower and restrain their own protection rates. The Round expanded the scope of the system, bringing at least some effective disciplines to agriculture for the first time and expanding the scope of the trading system into new areas such as services, intellectual property rights and investment measures. Overall assessments of the implications of the Round for developing countries are given in Martin and Winters (1995a, 1995b).

Most of the measurable trade liberalization occurred in merchandise trade and Table 1 contains a summary of the reductions in tariff protection brought about by the Round. A key feature of the Table is the small reductions in agricultural protection achieved in most regions, except for some of the East Asian countries whose rates of agricultural protection were relatively high. As outlined by Hathaway and Ingco (1995), this lamentable lack of progress had a number of causes including the high rates of protection in the base period for liberalization, "dirty tariffication" and the use of ceiling bindings in developing countries.

Greater progress was made in reducing protection on manufactured goods, with the greatest achievement being made in South Asia, where average rates of protection on manufactures are estimated to fall from 52 to 37 percent as a result of the Round. This estimate takes into account only the effects of tariff bindings that were set below the previously prevailing rate of protection, and therefore directly required a reduction in assistance rates. The estimates of
Table 1. Uruguay Round Liberalization: Average Pre- and Post-Round Protection Levels, by Importing Region

<table>
<thead>
<tr>
<th>Importing Region</th>
<th>Pre-Round Tariff (%)</th>
<th>Post-Round Tariff (%)</th>
<th>Average Import Price Changes (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Food</td>
<td>Mnfs</td>
<td>Food</td>
</tr>
<tr>
<td>US &amp; Canada (USC)</td>
<td>11.7</td>
<td>4.3</td>
<td>11.0</td>
</tr>
<tr>
<td>European Union (EU)</td>
<td>26.5</td>
<td>6.5</td>
<td>26.0</td>
</tr>
<tr>
<td>Japan (JPN)</td>
<td>87.8</td>
<td>4.9</td>
<td>56.1</td>
</tr>
<tr>
<td>Rep. of Korea (KOR)</td>
<td>99.5</td>
<td>16.1</td>
<td>41.1</td>
</tr>
<tr>
<td>Indonesia (IND)</td>
<td>21.9</td>
<td>14.2</td>
<td>15.5</td>
</tr>
<tr>
<td>Malaysia (MYS)</td>
<td>87.9</td>
<td>11.0</td>
<td>34.3</td>
</tr>
<tr>
<td>Philippines (PHI)</td>
<td>86.9</td>
<td>23.9</td>
<td>33.4</td>
</tr>
<tr>
<td>Thailand (THA)</td>
<td>59.8</td>
<td>36.2</td>
<td>34.5</td>
</tr>
<tr>
<td>Latin America (LTN)</td>
<td>2.3</td>
<td>17.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Sub-Saharan Africa (SSA)</td>
<td>15.6</td>
<td>9.5</td>
<td>12.4</td>
</tr>
<tr>
<td>South Asia (SAS)</td>
<td>-3.5</td>
<td>51.9</td>
<td>-4.3</td>
</tr>
<tr>
<td>Rest of World (ROW)</td>
<td>15.7</td>
<td>10.6</td>
<td>14.1</td>
</tr>
</tbody>
</table>


Note: Data for Taiwan, China, Hong Kong, China, and China were not available from the Integrated Data Base.

*b Change in tariff rate divided by the power of the initial tariff rate. This is the average of the disaggregate price cuts, and therefore differs from the price cut computed from the average tariffs.
Table 2. Export Tax Equivalents of the MFA: Percent of Market Prices in Exporting Region, 1992 and 2005

<table>
<thead>
<tr>
<th>MFA Exporter</th>
<th>Textiles</th>
<th>Apparel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Export Tax Equivalents</td>
<td>Export Tax Equivalents</td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>10 14</td>
<td>10 16</td>
</tr>
<tr>
<td>Taiwan, China</td>
<td>8 25</td>
<td>12 28</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>7 17</td>
<td>8 22</td>
</tr>
<tr>
<td>China</td>
<td>19 36</td>
<td>27 44</td>
</tr>
<tr>
<td>Indonesia</td>
<td>13 18</td>
<td>17 26</td>
</tr>
<tr>
<td>Malaysia</td>
<td>10 16</td>
<td>12 22</td>
</tr>
<tr>
<td>Philippines</td>
<td>9 12</td>
<td>10 24</td>
</tr>
<tr>
<td>Thailand</td>
<td>9 16</td>
<td>13 25</td>
</tr>
<tr>
<td>Latin America</td>
<td>10 5</td>
<td>13 12</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>19 24</td>
<td>27 36</td>
</tr>
<tr>
<td>Rest of World</td>
<td>5 0</td>
<td>6 6</td>
</tr>
</tbody>
</table>

Sources: Hertel, Bach, Dimaranan and Martin (1996).

using the GTAP computable general equilibrium model (Hertel 1996) to track the World Bank projections of growth in GDP, the labour force and investment in physical and human capital. The model projections take into account the fundamental shifts in market size and in comparative advantage under way in a rapidly globalizing world — changes that substantially increase the gains from the liberalization agreed under the Uruguay Round (Hertel et al 1996).

The proposed abolition of the MFA is particularly important because of the high rates of implicit export taxation imposed by this arrangement. The elimination of these distortions is to be accompanied by relatively modest reductions in the relatively high tariff rates imposed on textiles and clothing in developed countries (Abreu 1995; Blackhurst, Enders and François 1995). The complete abolition of the MFA trade distortions contrasts sharply with the partial cuts in manufactures tariffs summarized in Table 1, and the even more modest initial reductions in protection on agricultural and food products agreed under the Round.

Under the MFA, the stated objective was that quotas should grow by a minimum of 6 percent per year (GATT 1974, p. 21). In practice, this minimum turned out to be more nearly a maximum growth rates and many regions and commodities were restricted to far lower growth rates. Fortunately, South Asia's growth rates have typically not been so sharply curtailed as the growth rates of many other exporters, especially to the North American markets. In Table 3, South Asia as a group has the highest growth quota growth rates for exports in each group except for Apparel exports to the European Union.

These higher growth rates have been an advantage under the MFA and will become an even greater advantage under the Agreement on Textiles and Clothing, since these rates form the basis from which acceleration of the quota growth takes place. Under this agreement, the quota growth rates will increase in three stages, first by 16 percent, then by a further 25 percent, and finally by another 27 percent (World Trade Organization 1995, p.89). At the end of the transition period, the quota growth rates subject to acceleration will be growing at rates 84 percent higher than the base rates given in the table. On this basis, Sri Lanka's export quotas for apparel to the European Union will be growing at an average of 13.7 percent per year at the end of the transition period and India's quotas for apparel to North America will be growing at almost 10 percent. Clearly, these accelerated growth rates will establish a good initial negotiating posi-
tion for the developing countries, and particularly South Asia, should the importing countries attempt to open negotiations on continuing some form of quotas after the expiration of the Agreement on Textiles and Clothing.

The Agreement on Textiles and Clothing provides for the progressive elimination of the MFA quotas on particular products during the ten year phase-out period, with these products to be re-integrated into the GATT. Products accounting for 16 percent of total imports in 1990 were integrated at the beginning of the transition process with a further 17 percent to be integrated after three years and another 18 percent after seven years (World Trade Organization 1994, p. 88), leaving 49 percent of total imports to be integrated at the end of the ten year transition period. The products to be integrated are chosen by the importing country subject to the condition that they include products from each of four broad groups: tops and yarns, fabrics, made up textile products, and clothing. Unfortunately, it appears that the developed country importers have chosen the products to minimize the extent of liberalization undertaken during the transition period, and hence to back-load liberalization to the end of the implementation period.

The International Textiles and Clothing Bureau (1995) concludes that the EU and the United States have integrated relatively low-value items in the first phase of their liberalization programmes. The 16 percent by volume of 1990 imports (re-)integrated into the GATT covers only 9 percent of the value of EU imports and 7 percent of the value of US imports. There has also been a bias towards liberalizing imports from industrial countries. The EU’s initial integration covers 17 percent of the value of its imports from industrial countries but only 8 percent from developing countries. Similarly, the initial US integration covers 15 percent of the value of its imports from industrial countries but only 5 percent from developing countries. The choice of products to be liberalized has also been biased heavily away from the “sensitive” products covered by the MFA; the initial integration programmes of the EU, Norway and the United States integrate no products subject to MFA restrictions. Even in the second phase of liberalization, after three years, only peripheral restrictions will be liberalized under the announced US programme. Only in the third stage of this programme, after seven years, will a significant number of restricted categories be liberalized.

### Table 3. Average MFA quota growth rates for textiles and apparel to major markets

<table>
<thead>
<tr>
<th>World Regions</th>
<th>Textiles</th>
<th>Apparel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exporter</td>
<td>US/Canada</td>
<td>European Union</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Taiwan, China</td>
<td>2.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>China</td>
<td>3.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>6.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Philippines</td>
<td>6.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Thailand</td>
<td>5.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Latin America</td>
<td>5.9</td>
<td>3.8</td>
</tr>
<tr>
<td>South Asia</td>
<td>6.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Rest of world</td>
<td>6.1</td>
<td>3.4</td>
</tr>
<tr>
<td>South Asia Exporter</td>
<td>US/Canada</td>
<td>European Union</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>7.0</td>
<td>na</td>
</tr>
<tr>
<td>India</td>
<td>6.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Pakistan</td>
<td>6.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

As Mirus, Sholnick and Spinanger (1995) conclude, the flexibility allowed by the ATC in the implementation of the quota phase out has clearly allowed protectionist interests to delay liberalization of the textile and clothing sectors. Like the slippage in agricultural liberalization highlighted by Hathaway and Ingco (1995), this problem highlights the importance of transparency and simplicity in the success of trade liberalization efforts.

Even where the products integrated into the GATT have not previously been under MFA restraint, they may provide important growth markets for developing countries. Spinanger (1995) estimates that the products integrated into the GATT by the EU included 16 percent of the volume and 8.9 percent of the value of India’s exports to the EU and that these exports had grown at 14.4 percent and 17.9 percent per year in volume and value over the 1988 to 1992 period. For one year after their re-integration into GATT, products are subject to the threat of special safeguards that could allow re-implementation of MFA-type quotas (WTO 1995, p90). After this period, such protectionist measures are subject to the disciplines of the Agreement on Safeguards, which limit the duration and severity of these measures as described by Finger (1995).

Two recent studies of the impact of the Round provide different insights into the implications of abolishing the MFA. The first study, by Harrison, Rutherford and Tarr (1995) considers the implications of immediate abolition of the MFA. The second, by Hertel, Martin, Yanagishima and Dimaranan (1995) considers abolition of the MFA at the end of the ten year phase-out. Key results for the Harrison, Rutherford and Tarr study are presented in Table 4.

In the Harrison, Rutherford and Tarr study, liberalization of the MFA is an important feature of the Round, although it generates only 12 percent of the global gains. The largest absolute gains are realized by the major importing countries which, against their own interests, introduced and defended these policies. Japan loses from its abolition because it currently benefits from low-cost imports currently excluded from the MFA importing markets. Amongst the developing countries, relatively "mature" developing countries such as the Republic of Korea suffer gains because they lose their preferential access to the restricted markets; their current quotas are much larger relative to their supply capacity than those of emerging exporters such as China and India. Emerging exporters such as China, South Asia and Indonesia gain from the abolition of the MFA because they

<table>
<thead>
<tr>
<th>MFA (US$ billion)</th>
<th>Full (US$ billion)</th>
<th>Full (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>9.22</td>
<td>26.68</td>
</tr>
<tr>
<td>European Union</td>
<td>7.78</td>
<td>49.93</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.52</td>
<td>22.73</td>
</tr>
<tr>
<td>Australia</td>
<td>0.1</td>
<td>3.26</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.04</td>
<td>1.43</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.93</td>
<td>2.61</td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>-0.43</td>
<td>7.45</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.24</td>
<td>2.37</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.84</td>
<td>12.63</td>
</tr>
<tr>
<td>China</td>
<td>1.71</td>
<td>2.00</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.06</td>
<td>2.35</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.09</td>
<td>4.27</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.23</td>
<td>2.29</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>-0.10</td>
<td>-0.69</td>
</tr>
<tr>
<td>South Asia</td>
<td>1.92</td>
<td>6.74</td>
</tr>
<tr>
<td>Developing total</td>
<td>3.42</td>
<td>55.2</td>
</tr>
<tr>
<td>Industrial total</td>
<td>16.86</td>
<td>115.4</td>
</tr>
<tr>
<td>World total</td>
<td>20.28</td>
<td>170.6</td>
</tr>
</tbody>
</table>

As Mirus, Sholnick and Spinanger (1995) conclude, the flexibility allowed by the ATC in the implementation of the quota phase out has clearly allowed protectionist interests to delay liberalization of the textile and clothing sectors. Like the slippage in agricultural liberalization highlighted by Hathaway and Ingco (1995), this problem highlights the importance of transparency and simplicity in the success of trade liberalization efforts.

Even where the products integrated into the GATT have not previously been under MFA restraint, they may provide important growth markets for developing countries. Spinanger (1995) estimates that the products integrated into the GATT by the EU included 16 percent of the volume and 8.9 percent of the value of India's exports to the EU and that these exports had grown at 14.4 percent and 17.9 percent per year in volume and value over the 1988 to 1992 period. For one year after their re-integration into GATT, products are subject to the threat of special safeguards that could allow re-implementation of MFA-type quotas (WTO 1995, p90). After this period, such protectionist measures are subject to the disciplines of the Agreement on Safeguards, which limit the duration and severity of these measures as described by Finger (1995).
are able to take greater advantage of their comparative advantage in textiles and clothing, and benefit from increased prices in the residual markets to which much of their exports are currently directed.

The study by Hertel et al explicitly considers the impact of liberalization following a transition period during which MFA quotas grow at accelerated rates. By the end of this period, the export tax equivalents of the MFA have grown in most markets, increasing the gains from its abolition. In this analysis, the benefits from abolishing the MFA are in two parts, one arising from quota acceleration and the second arising from their final abolition. Adding these two components together, we find that the MFA reforms account for roughly 20 percent of the total gains of US$257 billion in 1992 dollars, or 0.89 percent of projected world GDP in 2005. South Asia gains substantially from both the acceleration of quota growth (which allows its exports to expand rapidly), and from the abolition of the quotas in 2005. The total gains to South Asia from abolition of the Arrangement are 27 percent of its overall gains from liberalization under the Round.

While any estimates of the implications of abolishing such a complex policy as the MFA are subject to considerable margins of uncertainty, the available results do highlight the very considerable potential for substantial gains from this reform. It should be recalled that the estimated gains reported above do not include the potential stimulus to growth from taking greater advantage of the abundant labour in the current generation of dynamic exporters of labour-intensive products. It is even more difficult to quantify these gains than the static gains measured by the models underlying the results in Tables 4 and 5, the broad experience of the high performing East Asian countries suggest that they may be very substantial.

IV. Implications for fibre markets

As noted above, the abolition of the MFA can be expected to affect fibre markets through both output and substitution effects. The output effect is a direct consequence of the inefficiencies created by the MFA. These inefficiencies raise average costs of transforming fibres into final consumer

| Table 5. Welfare gains (increases in real income) under the Uruguay Round: total by component, by region |
|---|---|---|---|---|
| Regions | Percentage Change in Welfare | US$ million | Gains in US$ million from individual components (percentage change in parentheses) |
| | | | Quota Growth Acceleration | Tariff Cuts | MFA Abolition |
| US and Canada | 0.40 | 32,130 | 5,829 (18) | 2,797 (9) | 23,505 (73) |
| European Union | 0.72 | 56,530 | 2,674 (5) | 28,934 (51) | 24,922 (44) |
| Japan | 1.04 | 43,009 | 327 (1) | 41,923 (97) | 759 (2) |
| Newly industrialized economies of Asia | 3.82 | 39,022 | 111 (0) | 45,221 (116) | -6,310 (-16) |
| China | 1.46 | 19,993 | -522 (-3) | 14,644 (73) | 5,872 (29) |
| Indonesia | 2.94 | 7,101 | 1,019 (14) | 3,595 (51) | 2,487 (35) |
| Malaysia | 21.38 | 34,187 | 242 (1) | 34,827 (102) | -881 (-3) |
| Philippines | 6.63 | 5,497 | 321 (6) | 5,343 (97) | -167 (-3) |
| Thailand | 4.54 | 10,531 | 873 (8) | 8,947 (85) | 711 (7) |
| Latin America | -0.08 | -1,258 | 585 (-46) | 2,453 (-195) | -4,296 (341) |
| Sub-Saharan Africa | -0.51 | -1,233 | -78 (6) | -558 (45) | -597 (48) |
| South Asia | 1.93 | 11,101 | 1,056 (10) | 8,084 (73) | 1,960 (18) |
| Rest of world | 0.03 | 1,147 | 402 (35) | 11,452 (998) | -10,707 (-933) |
| World Total | 0.89 | 257,758 | 12,838 (5) | 207,661 (81) | 37,259 (14) |

Source: Hertel, Martin, Yanagishima and Dimaranan (1995).
goods, and hence reduce total derived demand for fibres, as was illustrated in Figure 1.

For this paper, I made a rough estimate of the output effect of MFA abolition by estimating the impact of this experiment on global output of textiles in the recent study by Hertel, Bach, Dimaranan and Martin (1996). Since virtually all fibre output passes through the textile sector before reaching the consumer, the impact on textile output should give a reasonable indication of the output effect on demand for all fibres. The resulting estimate of the resulting increase in global textile output was a very small 0.32 percent. The aggregate primary agriculture sector in this simulation contracted by 0.23 percent, primarily in response to the reductions in export subsidies required by the agreement. The reduction in the output of primary agriculture, combined with the increase in textile output would clearly require an increase in the relative price of cotton and other natural fibres. The required increase based on these numbers would, however, be very small.

Whether there are substitution effects between fibres depends upon whether the MFA has differential impacts on products containing different fibres. It seems clear that the policy pressures motivating the MFA are not directly biased towards or against any particular fibre. However, it is possible that such biases could result, for instance, from differences in the labour intensity of the production processes. If, as seems plausible, MFA protection bore more heavily upon more labour intensive products, and cotton products were on average more labour intensive than other products, then protection rates against cotton products might be higher than protection against products produced from other fibres.

The only data available to examine this proposition are from Hong Kong, where a relatively large and free market in MFA quotas exists, and prices are regularly recorded by the Hong Kong Garment Manufacturers’ Association. Price data for a number of years were generously provided by the Hong Kong Trade Department. In this evaluation, these prices were compared with unit values for the correspond-

<table>
<thead>
<tr>
<th>Table 6. Export tax equivalents of Hong Kong MFA quotas to the US market</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
</tr>
<tr>
<td>348 Cotton, WG Trousers</td>
</tr>
<tr>
<td>648 MMF, Trousers, WG</td>
</tr>
<tr>
<td>340 Cotton, Woven shirts, MB</td>
</tr>
<tr>
<td>640 MMF, Woven shirts, MB</td>
</tr>
<tr>
<td>341 Cotton, Woven shirts, WG</td>
</tr>
<tr>
<td>641 MMF, woven shirts, WG</td>
</tr>
<tr>
<td>339 Cotton, Knit shirts, WG</td>
</tr>
<tr>
<td>639 MMF, Knit shirts, WG</td>
</tr>
<tr>
<td>338 Cotton, Knit shirts, MB</td>
</tr>
<tr>
<td>438 Wool, Knit shirts</td>
</tr>
<tr>
<td>345 Cotton, sweaters</td>
</tr>
<tr>
<td>446 Wool, Sweaters, WG</td>
</tr>
<tr>
<td>646 MMF, Sweaters, WG</td>
</tr>
<tr>
<td>335 Cotton, Coats, WG</td>
</tr>
<tr>
<td>435 Wool, Coats, WG</td>
</tr>
<tr>
<td>635 MMF, Coats, WG</td>
</tr>
<tr>
<td>334 Cotton, other coats, MB</td>
</tr>
<tr>
<td>634 MMF, Other coats</td>
</tr>
<tr>
<td>342 Cotton, Skirts</td>
</tr>
<tr>
<td>642 MMF, Skirts</td>
</tr>
</tbody>
</table>

MMF: man-made fibre; MB: men, boys; WG: Women, girls.
Table 7. Average export tax equivalents of MFA quotas—by fibre content

<table>
<thead>
<tr>
<th>Simple averages</th>
<th>1991 (%)</th>
<th>1992 (%)</th>
<th>1993 (%)</th>
<th>3 Year Average (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>23.0</td>
<td>45.3</td>
<td>28.6</td>
<td>32.3</td>
</tr>
<tr>
<td>Man-made fibre</td>
<td>11.1</td>
<td>18.8</td>
<td>9.5</td>
<td>13.1</td>
</tr>
<tr>
<td>Wool</td>
<td>11.5</td>
<td>37.8</td>
<td>10.5</td>
<td>20.0</td>
</tr>
<tr>
<td>Overall average</td>
<td>16.5</td>
<td>33.6</td>
<td>18.2</td>
<td>22.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weighted averages</th>
<th>1991 (%)</th>
<th>1992 (%)</th>
<th>1993 (%)</th>
<th>3 Year Average (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>26.1</td>
<td>38.5</td>
<td>28.5</td>
<td>31.0</td>
</tr>
<tr>
<td>Man-made fibre</td>
<td>9.3</td>
<td>18.6</td>
<td>8.9</td>
<td>12.3</td>
</tr>
<tr>
<td>Wool</td>
<td>8.2</td>
<td>18.3</td>
<td>5.0</td>
<td>10.5</td>
</tr>
<tr>
<td>Overall average</td>
<td>19.64</td>
<td>30.94</td>
<td>20.66</td>
<td>23.75</td>
</tr>
</tbody>
</table>

ing goods obtained from the US Department of Commerce. The import unit values were supplied in square metre equivalents and the quota prices in trade units such as dozen shirts; the two were converted into common units using standard US conversion factors. Annual export tax equivalents for each category were then calculated as QP/(UV-QP), where QP is the quota premium and UV the import unit value (including the quota premium). Since these export tax equivalents are measured relative to cif prices, they would be expected to be lower than export tax equivalents calculated at fob, such as those appearing in the GTAP model.

To avoid relying on estimates for minor products, for which the quota market might be "thin," the analysis was restricted to quota categories with more than US$10 million dollars worth of imports in 1993. This initial analysis was conducted only for 1991 to 1993, for which all of the needed data series were readily available. To avoid potentially misleading compositional differences, the categories to be analyzed were further confined to those categories where comparable products of different fibre content (such as cotton shirts, men's and boys vs. man-made fibre shirts, men's and boys) could be compared. The products included in the comparison, and their annual average export tax equivalents, are presented in Table 6.

Examination of the individual products in Table 6 seems to point towards higher export tax equivalents on cotton products. This is very clear for some products, such as women's trousers, and men's shirts, but less clear in other products, such as women's woven shirts. To provide a clearer overall indication of the extent to which the MFA discriminates between fibres simple and trade weighted average tariff rates were calculated for the product categories in Table 6. The resulting estimates are presented in Table 7.

The results presented in Table 7 suggest that the MFA has discriminated quite strongly against cotton products. Using either simple or weighted averages, the export tax equivalents are 20 percentage points higher against cotton products than against man-made fibre products. Using simple averages, wool products appear to be discriminated against relative to synthetics, but this does not appear to be the case when weighted averages are considered.

The large degree of discrimination against cotton evident in Table 7 could have a substantial impact on world raw cotton prices. This effect will depend heavily upon the structure of the fibre markets, and the extent to which changes in the prices of apparel are passed back into fibre prices. Since fibre prices make up only a small fraction of the total cost of producing a final product, such a protection differential could have a very large negative impact on relative fibre demands. If, for instance, the price of a dozen cotton shirts was US$100 dollars in the absence of discrimination, its price would rise to US$120 with a 20 percent tax differential. A US$20 cost differential would typically be a substantial multiple of the cost of the raw cotton, creating a strong incentive not to produce goods classified as cotton. To some degree, however, this sharp impact would be blunted by the option of partial substitution between cotton and man-made fibres to achieve a blend classified as a man-made fibre.

To get a feel for the potential orders of magnitude involved, a simple illustrative calculation might be based on the assumption that the prices of man-made fibres are
constant because their production involves constant, or even increasing, returns to scale and synthetic fibre production involves no long-run fixed factors. Adding the less plausible assumption that a 20 percent increase in textile and apparel prices raises the consumer cost of the raw fibre content of his/her purchases by 20 percent, allows us to assess the impact of a 20 percent protection margin on producer prices for cotton using only information on elasticities of supply and demand for cotton. For such a stylized calculation, it would seem reasonable to take elasticities at the high end of those reported for cotton by FAO and ICAC (1993). Given all of these assumptions, if we use a demand elasticity of 0.3 and a supply elasticity of 1.0, the substitution effect of the 20 percent protection differential would be to reduce the producer price of cotton by close to 5 percent. This estimate is, if anything, probably an underestimate of the long-run impact on world cotton prices of abolishing the implicit MFA tax on cotton products. Such a sustained increase in cotton prices would be of significant benefit to cotton exporters such as Pakistan and India.

V. Policy options for South Asia

The fibre, textile and apparel sectors in South Asia are severely distorted by a range of policy measures including: (i) Export quotas on cotton, (ii) restrictions on the activities of formal sector trading and processing firms, (iii) weaknesses in the systems for providing access to duty-free imports of textiles for the production of exports, (iv) quotas for the production of hank yarn by the spinning sector, and (v) restrictions on imports of textiles and apparel.

These distortions are implemented in a way that makes it extremely difficult for this sector to respond rapidly to the opportunities that are being created by the rapid growth and change in the world economy, and the liberalization resulting both from autonomous reforms and those ushered in by the Uruguay Round. It seems likely that these policies will come under severe pressure not only as a consequence of the Round, but also because of the dramatic pressures for adjustment in a world that is growing, liberalizing and becoming more integrated.

Table 8: Percentage change in sectoral and regional output: base case (left-hand entries), and full Uruguay Round (right-hand entries)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Primary Agriculture</th>
<th>Processed Food</th>
<th>Natural Resource-Based Industries</th>
<th>Textiles</th>
<th>Wearing Apparel</th>
<th>Light Manufacturing</th>
<th>Heavy Manufacturing</th>
<th>Transportation Machinery and Equipment</th>
<th>Housing &amp; Construction Services</th>
<th>Utilities</th>
<th>Other Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. and Canada</td>
<td>23 27</td>
<td>21 21</td>
<td>42 43</td>
<td>30 7</td>
<td>22 41</td>
<td>31 30</td>
<td>60 62</td>
<td>42 41</td>
<td>40 40</td>
<td>41 41</td>
<td></td>
</tr>
<tr>
<td>European Union</td>
<td>12 5</td>
<td>8 5</td>
<td>24 24</td>
<td>11 3</td>
<td>-12 60</td>
<td>15 15</td>
<td>46 48</td>
<td>19 19</td>
<td>19 20</td>
<td>46 47</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>30 13</td>
<td>28 21</td>
<td>60 62</td>
<td>22 25</td>
<td>8 1</td>
<td>38 40</td>
<td>30 29</td>
<td>42 43</td>
<td>46 47</td>
<td>40 40</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>65 43</td>
<td>92 109</td>
<td>134 128</td>
<td>91 221</td>
<td>67 146</td>
<td>147 167</td>
<td>117 98</td>
<td>141 143</td>
<td>115 120</td>
<td>148 148</td>
<td></td>
</tr>
<tr>
<td>Taiwan, China</td>
<td>76 79</td>
<td>94 114</td>
<td>143 142</td>
<td>174 181</td>
<td>74 89</td>
<td>170 168</td>
<td>89 83</td>
<td>188 182</td>
<td>137 139</td>
<td>121 120</td>
<td></td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>55 62</td>
<td>181 155</td>
<td>126 164</td>
<td>154 185</td>
<td>41 63</td>
<td>185 198</td>
<td>110 124</td>
<td>158 164</td>
<td>101 98</td>
<td>78 73</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>121 125</td>
<td>194 180</td>
<td>246 238</td>
<td>250 262</td>
<td>225 327</td>
<td>285 278</td>
<td>237 220</td>
<td>315 301</td>
<td>234 225</td>
<td>207 207</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>71 66</td>
<td>111 110</td>
<td>79 73</td>
<td>126 227</td>
<td>114 639</td>
<td>157 142</td>
<td>146 130</td>
<td>177 163</td>
<td>130 133</td>
<td>151 152</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>102 69</td>
<td>156 441</td>
<td>119 98</td>
<td>169 217</td>
<td>196 262</td>
<td>215 166</td>
<td>132 92</td>
<td>154 262</td>
<td>153 161</td>
<td>228 214</td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>60 19</td>
<td>73 118</td>
<td>79 67</td>
<td>74 136</td>
<td>88 285</td>
<td>71 53</td>
<td>33 30</td>
<td>78 64</td>
<td>68 71</td>
<td>85 81</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>95 77</td>
<td>149 140</td>
<td>104 91</td>
<td>171 205</td>
<td>168 338</td>
<td>218 208</td>
<td>152 168</td>
<td>194 195</td>
<td>171 174</td>
<td>212 210</td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>44 44</td>
<td>46 47</td>
<td>76 78</td>
<td>53 46</td>
<td>53 42</td>
<td>51 51</td>
<td>23 22</td>
<td>50 50</td>
<td>37 37</td>
<td>70 71</td>
<td></td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>76 75</td>
<td>81 78</td>
<td>43 46</td>
<td>75 58</td>
<td>111 30</td>
<td>59 63</td>
<td>13 16</td>
<td>51 52</td>
<td>51 51</td>
<td>71 73</td>
<td></td>
</tr>
<tr>
<td>South Asia</td>
<td>63 67</td>
<td>94 108</td>
<td>115 103</td>
<td>116 138</td>
<td>114 241</td>
<td>130 129</td>
<td>126 86</td>
<td>131 102</td>
<td>137 138</td>
<td>89 89</td>
<td></td>
</tr>
<tr>
<td>Rest of World</td>
<td>14 15</td>
<td>24 19</td>
<td>18 18</td>
<td>24 9</td>
<td>17 11</td>
<td>31 34</td>
<td>27 31</td>
<td>28 29</td>
<td>34 34</td>
<td>47 47</td>
<td></td>
</tr>
</tbody>
</table>

Note: The upper row entries refer to the "base case" projections, in which the MFA remains in place and none of the Uruguay Round provisions are implemented. The lower entries refer to the outcome when all of the Uruguay Round provisions explored in this chapter are implemented - the combined effects of implementing the ATC, tariff cuts, and reductions in agricultural export subsidies in the period 1992-2005, as well as the effects of eliminating the MFA in the year 2005.

Source: Hertel, Martin, Yanagishima and Dimaranan (1995).
The export quotas on cotton are intended to lower the price of cotton to textile producers. On average, they appear to have been effective in doing this, with the price of raw cotton in India being reduced by perhaps 10 percent relative to export parity (Pursell and Sharma 1996, p31), despite a substantial subsidy to the seed component of raw cotton resulting from the protection applying to oilseeds. The export quotas needed to depress lint prices to mills have reduced cotton exports to around five percent of production. In Pakistan, raw cotton prices have been more severely depressed, by an estimated average of 24 percent (Ingco and Winters 1995). These reductions in the price of cotton have seriously adverse impacts on producers both through their impact on prices and through the uncertainty they create about opportunities of producing and marketing for export markets. If the textile sector expands more rapidly than the cotton production, then these policies are likely to come under particularly strong pressure, at least in India, if domestic cotton production becomes insufficient to meet import demand.

An indication of the rates of change in industry structure that are likely to be required to take advantage of the opportunities created by the Round is given in Table 8. Clearly, the projections presented in Table 8 point to very rapid structural change, particularly in developing countries. Growth and change is particularly rapid in the textile and apparel industries of developing countries, with South Asia's textile and apparel sectors growing by 138 and 241 percent over the projection period considered (1992-2005) when the liberalizing effects of the Uruguay Round are incorporated. The high rates of growth of the textile and clothing sectors are a consequence of the relatively high growth rate anticipated for South Asia, the structural changes associated with investment in physical and human capital, South Asia's liberalization and the shifts in international demand created by growth and liberalization in other countries. Only at great cost would South Asia avoid participating in this process and taking advantage of the opportunities that these changes create.

As noted by Pursell and Sharma (1995), India has begun the process of policy reform that will be required to take advantage of the new opportunities unfolding before it. The agreements by India and Pakistan to open up imports of textile products is particularly important both for its direct impacts on their economies, and because of the negotiating leverage they provide should the United States or the EU contemplate negotiations on extending the MFA quotas. The availability of imported textiles and apparel should help to make the domestic market for these goods more competitive and in maintaining international quality standards.

However, much more needs to be done to take full advantage of the new market opportunities. When the textile industry is likely to more than double in just over ten years, and the apparel industry to more than triple in size, it would seem desirable to focus policies on restructuring and on stimulating and nurturing the development of new industries rather than on preserving the historical structure of an industry where change is inevitable.

VI. Conclusions

The MFA attempts to entangle the world textile and clothing industries in an extremely complex web of trade distortions. For most purposes, the effect of these distortions can usefully be analyzed in terms of the set of export taxes that would have equivalent effects. Because the exporting countries administer the export quotas, the importing countries that imposed these measures can be expected to lose substantially from these trade barriers. Efficient and tightly restricted exporters, such as most of the South Asian countries, can be also be expected to lose substantially.

The Uruguay Round ushered in a wide range of trade reforms, of which the abolition of the MFA was particularly important. Unfortunately, this abolition involves a ten year phase-out period during which the rate of growth of the current quotas will be increased according to a simple and transparent formula, and quotas will be progressively eliminated under rules that allow the importing countries considerable discretion. Unfortunately, the importers have used this discretion in ways that slow, almost to a crawl, the phase out process, and are likely to leave virtually all of the quota elimination to the end of the phase-out period.

For fibre producers, the MFA phase-out has two distinct effects: an output effect arising from increases in the volume of textile and clothing output, and hence fibre input; and a substitution effect resulting from elimination of the distortions between fibres created by the MFA. Based on currently available estimates, it appears that the output effect may be relatively small. At least for cotton producers, the substitution effect is likely to be relatively large, since the available
evidence suggests that the MFA has imposed an implicit tax of around 20 percent on cotton products relative to man-made fibre products.

The textile and clothing industries of South Asia and other rapidly growing and liberalizing developing countries in East Asia appear to be poised for extremely rapid growth. This growth is fuelled primarily by broad shifts in comparative advantage arising from rapid growth and change in the region. These changes will be strongly reinforced by tariff liberalization and abolition of the MFA under the Uruguay Round, creating opportunities for extremely rapid growth in the industry. Taking advantage of these opportunities will require a complementary process of policy reform — a process that has begun and appears to be firmly under way.

References


GATT (1974), Arrangement regarding international trade in textiles, General Agreement on Tariffs and Trade, Geneva.


Mirus, R., Schohnick, B. and Spinanger, D. (1995), 'Frontloading protection: Canada's approach to phas-
ing out the Multi-fibre Arrangement', *ITC Working Paper* No 5, Institute of Textiles and Clothing, Hong Kong Polytechnic University, Hong Kong.


National Implications of the Uruguay Round in South Asia
Bangladesh Agriculture and the Uruguay Round: Policies, Commitments and Prospects

Nuimuddin Chowdhury, Habibur Rahman and Sajjad Zohir*

I. Bangladesh Agriculture: an Overview

Agriculture accounts for 36 percent of the gross domestic product in Bangladesh, and manufacturing contributes another 12 percent. The rest of the output comprises of services. Bangladesh’s per caput income in 1994/95 was about US$200. Considering her low level of income, it is somewhat surprising that services have such a large share in total output. Public expenditure (revenue and capital combined) accounts for some 22 percent GDP. Nontradeables (salaries and perquisites) account for some two-thirds of total public expenditure. This high incidence of nontradeables in the economy serves to reduce the external competitiveness of the economy.

Bangladesh’s agriculture is a low-input and low-yield economy, if the diffusion of modern technology (hybrid seeds, high-quality seeds of high-yielding-variety grains, etc.) is itself included in the concept of “input.” With few exceptions crop yields in Bangladesh compare unfavourably with other countries in South East Asia. Low yields are essentially due to what Mosoher has called a “technology/management problem” not due to “an economic incentives problem.”

The reasons why this is so are not far to find. Extreme pressure on land amounts to a severe land constraint. Bangladesh has one of the highest population densities: its net cropped land endowment per caput was 0.064 ha in 1992/93. About a half of the total population in and an even higher proportion of the rural population, live in poverty. About 73 percent of Bangladesh’s farm operators are at best small farmers, tilling no more than 1 ha of land, with a full 100 percent of the soil on their possession suffering from an organic matter deficiency problem (Chowdhury, Morris and Meisner, 1994). Many farmers are credit-constrained for agricultural diversification.

Seasonality is an important aspect of Bangladesh’s organization of agricultural production. There are two agricultural seasons in Bangladesh, namely, kharif (extending from May to October) and rabi (extending from November

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Table 1. Imports of Wheat and Rice into Bangladesh 1973/74-1992/93

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat Imports (000 tonnes)</th>
<th>Rice Imports (000 tonnes)</th>
<th>Imports as a percentage of availability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wheat</td>
</tr>
<tr>
<td>74/75</td>
<td>1.488</td>
<td>345.2</td>
<td>81</td>
</tr>
<tr>
<td>75/76</td>
<td>1.267</td>
<td>328</td>
<td>88</td>
</tr>
<tr>
<td>76/77</td>
<td>1.213</td>
<td>280</td>
<td>89</td>
</tr>
<tr>
<td>77/78</td>
<td>1.239</td>
<td>342.4</td>
<td>95</td>
</tr>
<tr>
<td>78/79</td>
<td>1.222</td>
<td>260</td>
<td>92</td>
</tr>
<tr>
<td>79/80</td>
<td>1.301</td>
<td>250.2</td>
<td>92</td>
</tr>
<tr>
<td>80/81</td>
<td>1.340</td>
<td>252.8</td>
<td>77</td>
</tr>
<tr>
<td>81/82</td>
<td>1.493</td>
<td>279.8</td>
<td>83</td>
</tr>
<tr>
<td>82/83</td>
<td>1.461</td>
<td>282.8</td>
<td>64</td>
</tr>
<tr>
<td>83/84</td>
<td>1.495</td>
<td>272.8</td>
<td>62</td>
</tr>
<tr>
<td>84/85</td>
<td>1.594</td>
<td>296.2</td>
<td>68</td>
</tr>
<tr>
<td>85/86</td>
<td>1.755</td>
<td>351.4</td>
<td>75</td>
</tr>
<tr>
<td>86/87</td>
<td>1.795</td>
<td>327.8</td>
<td>71</td>
</tr>
<tr>
<td>87/88</td>
<td>1.662</td>
<td>249.8</td>
<td>64</td>
</tr>
<tr>
<td>88/89</td>
<td>1.676</td>
<td>245.2</td>
<td>69</td>
</tr>
<tr>
<td>89/90</td>
<td>1.679</td>
<td>200.8</td>
<td>67</td>
</tr>
<tr>
<td>90/91</td>
<td>1.375</td>
<td>86</td>
<td>56</td>
</tr>
</tbody>
</table>

Source: Computed by authors.

to April). Of the total cropped area of some 7.63 million ha, as much as 6 million ha (nearly 79 percent) are rice-cropped during the first (with the rest being allocated to non-rice crops), while during the second, only about 45 percent are cultivated. During the kharif season, the main crops raised are two rice crops (aman and aus), jute and sugarcane. All these three crops are essentially rainfed, raised traditionally with low-yielding genetical material. Other than modern variety aman rice that substitutes local varieties, the scope for further crop intensification or yield gains during this season is severely technology-constrained. The season with somewhat larger scope for diversification of cropping pattern, and for increasing cropping intensity/yields, is the rabi season. While many changes are currently in progress towards commercial farming of non-cereal crops, suitable land with irrigation is an important constraint. Farmers, with powerful unmet demand for calories, have a strong material reason for growing rice: own-account rice is excellent for food security. This monoculture drags diversification, and rapid growth of high-value crops.

While the crop sector still dominates Bangladesh agriculture, its growth has slowed down during the recent past. In contrast, the less important ones, fishery and livestock, have had significant growth. During the early 1990's, the crop sector accounted for more than 78 percent of agricultural GDP (at constant prices) while livestock and fishery each accounted for 7.5 percent. By 1994-95, the latter's shares had increased to more than 9 percent, while that of the crop sector had declined to less than 75 percent. Shrimp is an important earner of foreign exchange whose production is now widespread in the coastal region. The practice of cultured fish production in closed waters has begun only recently and has much potential to be harnessed. Commercial activities in the livestock sector by small private entrepreneurs have grown substantially in periurban areas. However, in contrast to her neighbours, Bangladesh is a long way from meeting her deficit in meat and dairy products.

Self-sufficiency ratios, providing an indicator of a country's production status vis-a-vis her potential trading status, are summarized for selected agricultural commodities in Tables 1 and 2. Bangladesh has been self-sufficient in rice for some time: the last two years are here assumed to have been different from the general trends, without changing that fact. The assertion holds in spite of the gov-
ernment imports of small quantities of rice as a means of sourcing the ration offtake demand arising from the most elitist of the ration conduits. Private rice imports, virtually non-existent in the period shown in the table, have been important in meeting deficits during the last two years. In wheat, the country has reduced what used to be a considerable deficit from the very high levels of the 1970s to close to three-fifths in the early 1990s. In wheat Bangladesh has increased her self-sufficiency ratio considerably, due to relatively rapid growth in wheat production during the period up to about 1984/85. In spite of this progress, Bangladesh is expected to remain perennially deficit in wheat. Projections up to 2010 show that Bangladesh would in most years generate a small or no rice surplus, while in most years it would have a small to moderate wheat deficit. What happens to international prices of wheat and rice in the wake of Uruguay Round is therefore of substantial importance to Bangladesh.

Table 2 presents the ratios of self-sufficiency for several other selected agricultural commodities. Bangladesh is projected to have substantial deficits in oilseeds, edible oils, fresh fruits, processed foodstuffs, spices, beverages and fats, and dairy and poultry products by 2010. Also, because livestock, poultry and fisheries output have expanded, the demand for feed is growing rapidly (Abdulah et. al, 1995); and this in turn, may render some of the agricultural produce to be in deficit.

Commercialization of Bangladesh agriculture was for long confined to a few crops, such as, jute, tea, sugarcane, tobacco, betel leaves and cotton. Other than sugarcane and tobacco, the remainder have also been exported and once accounted for a significant part of the country’s foreign exchange earnings. Over the years, agricultural production in the country has increasingly been meant for market sales; and commercial farming goes beyond the traditional set. Shares of produce marketed have increased for rice, vegetables, fruits, fish and dairy products. In contrast to this trend, however, the share of agricultural produce traded internationally has declined substantially.

II. The structure of Bangladesh's import and export trade for agricultural goods

Bangladesh’s real imports and exports have grown by 3.1 percent and 8.2 percent annually between 1981 and 1994. Over the years, Bangladesh’s trade orientation (i.e., the ratio of the sum of the value of imports and exports to GDP) rose slightly from 22.4 percent in 1977/78 to 26.2 percent in 1991/92 (estimate based on five-year moving average). Given the significant liberalization of trade in the country, such an increase is not breathtakingly large, and is suggestive that trade liberalization is one of several elements in integrating an economy robustly with the world market.

Table 2. Self-sufficiency in non-cereal crops, 1981–93 (percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cotton</th>
<th>Oilseeds</th>
<th>Edible Oil</th>
<th>Milk</th>
<th>Cotton Yarn</th>
</tr>
</thead>
<tbody>
<tr>
<td>80/81</td>
<td>0.164</td>
<td>0.909</td>
<td>0.760</td>
<td>0.908</td>
<td>0.806</td>
</tr>
<tr>
<td>81/82</td>
<td>0.208</td>
<td>0.951</td>
<td>0.694</td>
<td>0.937</td>
<td>0.776</td>
</tr>
<tr>
<td>82/83</td>
<td>0.148</td>
<td>0.937</td>
<td>0.713</td>
<td>0.912</td>
<td>0.736</td>
</tr>
<tr>
<td>83/84</td>
<td>0.69</td>
<td>0.985</td>
<td>0.786</td>
<td>0.825</td>
<td>0.738</td>
</tr>
<tr>
<td>84/85</td>
<td>0.83</td>
<td>0.960</td>
<td>0.774</td>
<td>0.733</td>
<td>0.588</td>
</tr>
<tr>
<td>85/86</td>
<td>0.108</td>
<td>0.959</td>
<td>0.796</td>
<td>0.751</td>
<td>0.664</td>
</tr>
<tr>
<td>86/87</td>
<td>0.143</td>
<td>0.790</td>
<td>0.371</td>
<td>0.723</td>
<td>0.546</td>
</tr>
<tr>
<td>87/88</td>
<td>0.19</td>
<td>0.752</td>
<td>0.220</td>
<td>0.761</td>
<td>0.564</td>
</tr>
<tr>
<td>88/89</td>
<td>0.175</td>
<td>0.912</td>
<td>0.762</td>
<td>0.762</td>
<td>0.714</td>
</tr>
<tr>
<td>89/90</td>
<td>0.229</td>
<td>0.905</td>
<td>0.385</td>
<td>0.737</td>
<td>0.417</td>
</tr>
<tr>
<td>90/91</td>
<td>0.230</td>
<td>0.993</td>
<td>0.383</td>
<td>0.761</td>
<td>0.441</td>
</tr>
<tr>
<td>91/92</td>
<td>0.200</td>
<td>0.873</td>
<td>0.419</td>
<td>0.808</td>
<td>0.462</td>
</tr>
<tr>
<td>92/93</td>
<td>0.216</td>
<td>0.937</td>
<td>0.290</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculated by authors from Statistical Yearbook of Bangladesh (various years)
Major agricultural goods traded account for 16 percent and 21 percent respectively of Bangladesh's total recorded value of imports and exports during 1994/95. Table 3 presents the semi-logarithmic growth rates of value (at constant prices) of agricultural imports into and exports from Bangladesh over a decade. The highlight of this comparison is that edible oils, oilseeds, milk products, raw materials (cotton), apices and some preparation of farm goods have dominated Bangladesh's import transition. Annual growth in the export value of leather and shrimp has been over seven percent, while the more traditional sources of export earnings (e.g., jute and tea) had performed poorly. During the period covered by Table 3, rice imports had declined significantly rendering rice to be virtually a non-tradable commodity. More recent statistics suggest that the share of agricultural commodities in the total imports has been increasing while the share in exports had declined. On the import side, increases in cereal imports (from four percent in 1993–94 to seven percent in 1994–95) contributed to the increase in agricultural imports. During the same period, export earnings from raw jute, jute goods and tea had declined significantly.

Figures on imports reported above are based on official records. A good deal of imports from India, most of which are not officially recorded, comprise of farm goods. Thus, the official import statistics understate the actual imports of agricultural commodities. Indian exports of agricultural products include oilseeds, sugar, spices, live animals and more recently, grains, especially rice. Recent studies on informal trade also suggest informal imports of powder milk, some species of fish, and selective spices and pulses from India. These aspects of Bangladesh's trade in agricultural commodities call for caution in interpreting trade-related statistics, including those on nominal protection rates.

The need to take account of these factors in analysis has gained a greater footing with private sector importation of rice during the last two years, most of which came from India. For importables, assumption of geographical market chains, especially for grains (rice), leads to different conclusions in terms of welfare implications of trade policy. If India and rest-of-world net of India are considered to be polar categories for price comparison in the analysis of nominal protection, rice will be accepted to be importable with the former being the comparator. It will be treated to be nontraded, with domestic price being intermediate between the import parity price (IPP) and export parity price (EPP), when the latter (say, Thai rice) is the comparator. In the absence of informal trade, uncritical use of market chains preoccupied with rest-of-world sources other than India, may underestimate the degree of protection since import parity price would be over-estimated. In the presence of informal trade, the country would effectively be open to imports from India; and the conventional measure on protection from rest of the world (net of India) would still be an under-estimate since the domestic prices would be lower due to "free" imports from India. Thus, for a country like Bangladesh, positive protection against imports is almost synonymous with offering preferential trade opportunities to imports from India. The same would also possibly hold for Bangladesh's exports to India. However, directions of past flows of most agricultural produce across borders suggests the former to be more sizable.

III. Policy evolution pertaining to agriculture in Bangladesh

Bangladesh has experienced significant changes in the policy environment, at both macro level and in the agriculture sector. The Government of Bangladesh launched a trade reform programme in 1985 with the objective of streamlining procedures, rationalizing and reducing tariffs and import taxes, and gradually eliminating import prohibitions and quantitative restrictions. The official and the wage earner scheme exchange rates, that prevailed under the previous dual exchange rate regime, have been unified since January 1992; and Taka has been made convertible on current account transactions since October 1993. The government has also, with some success, pursued stabilization programme in fiscal and monetary sectors. The reforms in the agricultural sector have been more pronounced and visible than in most other sectors. Restriction of imports of small diesel engines was withdrawn in 1986–87 and import duties on them were withdrawn in 1988–89. A new seed policy paper, with a more liberalized view, had been approved in 1992. A more noteworthy change in the policy towards input market has been the withdrawal of all subsidies on chemical fertilizer. Food policies have also undergone changes, even though clear direction is yet to emerge. We briefly summarize, in this section, changes in policy environment that pertain to UR commitments on trade in agricultural commodities.
### Table 3. Growth rates of value of agricultural imports into and exports from Bangladesh and (trend growth rates, percent per year)

<table>
<thead>
<tr>
<th>Growth of Consistently Importable Items</th>
<th>Vegetable</th>
<th>Wheat</th>
<th>Milk Powder</th>
<th>Edible Oil</th>
<th>Edible Oilseeds</th>
<th>Cotton</th>
<th>Pulses</th>
<th>Spices</th>
<th>Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Rate</td>
<td>0.1305</td>
<td>0.0173</td>
<td>-0.056</td>
<td>0.0607</td>
<td>0.0381</td>
<td>0.0675</td>
<td>0.157</td>
<td>0.091</td>
<td>0.0636</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth of Consistently Exportable Items</th>
<th>Jute/Jute Goods</th>
<th>Leather</th>
<th>Tea</th>
<th>Shrimp/Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Rate</td>
<td>0.011</td>
<td>0.0732</td>
<td>-0.05</td>
<td>0.0862</td>
</tr>
</tbody>
</table>

### 3.1. Tariff and Non-Tariff Barriers

An analysis of changes in import policies at four-digit level HS codes suggest the following. The proportion of goods that have been accorded duty-free import access fell from 20 percent to 7–8 percent over this period. Quite expectedly, the proportion of HS–4 codes that are subject to import duties at various rates increased from 39 percent in 1980 to 92 percent. This is a result of the elimination of bans, which were replaced with tariffification of imports. The unweighted average import duty fluctuated around 40 percent during the 1980s. During the first four years of the 1990s, this average increased to 52 percent, as many of the bans were first replaced with duties as high as 100 percent, which increased the average duty level (Table 4). The coefficient of variation of duties however remained fell somewhat over this period from 54 percent during the early 1980s to about 44 percent during the early years of the 1990s. The reduction in the dispersion of the import duties is part of the broader trend within Bangladesh’s trade policies towards greater uniformity of rates within economic sectors. What is significant is that, while over the period 1991/92 to 1995/96, average import duties clearly fell from 58 percent in the first year to 29 percent in the last year in the series, the CV if anything, rises from 45 percent to 52 percent.

While the unweighted average tariff rates may have increased in some years due to tariffification of banned items, most other measures suggest of declining protections on imports of agricultural commodities. Operative tariff rates and value added taxes on some selected agricultural imports are reported in Table 5. Quite evidently, import duties on important import items, cereals, pulses and oilseeds, have declined during the 1990’s. The figures also suggest that among the list of agricultural imports, import duties are relatively high on edible oil, dairy products and sugar.

An often used measure of protection is the nominal rate of protection (NRP); estimates on which are summarized in Table 6. While the levels of protections on edible oil and sugar have declined significantly, a number of clarifications on the estimates are warranted. As noted previously, import parity price based on Thai 15 percent broken rice results in negative protection on rice, even though rice was imported from India during 1994–95. Negative coefficients for wheat largely reflect the important presence of the public food distribution system in the wheat market as well as export subsidy.
on US wheat exports. A more puzzling finding is the negative protection rate on milk, which is counter-intuitive given the high duties and restrictions on import of powder milk. Our initial esquire suggest of two plausible explanations. One, already mentioned, is informal imports (that do not pay duties) of powder milk from India. Second is the alleged under-invoicing of milk imports, which apparently had compelled the government to impose tariff value on imports of powder milk.

The extent of trade liberalization may hardly be comprehended without prior assessment of the exchange rate. The latter is also important to be addressed in calculation of protection measures. Bangladesh had significant depreciation in its nominal exchange rate; and yet, it does not appear to have consistently offset differences between inflation rates between Bangladesh and its trading partners. In particular, rapid relative depreciation in the currencies of countries like India, Pakistan, Thailand, and China has probably adversely affected the competitiveness of Bangladesh’s exports of jute, leather and frozen fish. Especially in 1995 and 1996, large Indian devaluations/depreciations are likely to have rendered Bangladesh externally even less competitive vis-à-vis India. Changes in the REER are likely to have affected traditional and non-traditional exports differently. Non-traditional exports, in particular garments, have a high import content, while traditional exports like jute and unprocessed leather rely much less on imports. An appreciation in the exchange rate by affecting input and output prices of nontraditional exports in equal measure may leave their competitiveness roughly unchanged, while will likely have adversely affected the competitiveness of traditional exports. Most agricultural exports of Bangladesh are in this second category.

### 3.2. Government Support to Agricultural Production

Bangladesh has reduced what until the late 1980s was a large incidence of subsidies in agriculture. Much of these subsidies were by way of input subsidies per se, including fertilizer and credit subsidies. As a part of Structural Adjustment Programme (SAP) and Extended Structural Adjustment Programme (ESAP) with the IMF, Bangladesh has phased
out much of these subsidies. Chemical fertilizer, that were once subsidized by almost 30 to 40 percent, have currently a zero subsidy. The same holds for minor irrigation in the country. Much of the prevailing subsidies presently are mediated through the consumption subsidies administered by the Ministry of Food. The effective rate of assistance (ERA), especially in the production of grains in Bangladesh, is presently quite small. This is not altered by the presence of a nominal “grain procurement programme” because such programmes cover only a small part (under four to five percentage) of marketed surplus.

3.3. State Trading Enterprises

Article XVII of GATT recognizes the right of its members to give import or export monopoly to its state enterprises. The limitations for this waiver are about the imperative to follow commercial principles in a non-discriminatory manner and provide information on import mark-ups when requested. The Uruguay Round Agreement has attempted to probe into whether member countries are monopolizing market access: the litmus test was whether government-given powers were being utilized towards this end. This was a general criterion, capable of judging both parastatals and private businesses. In many countries, especially parastatal enterprises have continued to exercise import monopolies despite the apparent toughening of the oversee stance of the international community. This is a large drawback to Uruguay Round’s attempt to tariffy quantitative restrictions.

The power of parastatals in import trade in Bangladesh has steadily been rolled back over the years. Especially since the reform of 1991/92, efforts to remove products from canalization has been intensified. This applies to spices (onions, garlic), a number of milk products (butter milk, whey, cheese), etc. While a number of these remain subject to licensing controls, as of July 1995 state trading per GATT definition has been removed from all important agricultural

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Average of 1986-87 to 1990-91</th>
<th>1993-94</th>
<th>1994-95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice, import</td>
<td>-0.11</td>
<td>-0.22</td>
<td>-0.11</td>
</tr>
<tr>
<td>Rice, export</td>
<td>0.40</td>
<td>0</td>
<td>na</td>
</tr>
<tr>
<td>Wheat, import</td>
<td>0.10</td>
<td>-0.25</td>
<td>-0.10</td>
</tr>
<tr>
<td>Sugar, import</td>
<td>1.50</td>
<td>0.98</td>
<td>0.84</td>
</tr>
<tr>
<td>Edible oil (Rapseed Oil), import</td>
<td>0.78</td>
<td>0.31</td>
<td>0.304</td>
</tr>
<tr>
<td>Onion, import</td>
<td>0.31</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Dry Chili, import</td>
<td>0.31</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Potato, import</td>
<td>1.70</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Potato, export</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Whole Milk, import</td>
<td>*</td>
<td>*</td>
<td>-0.32</td>
</tr>
<tr>
<td>Pulse, import</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Note: * indicates that estimates using secondary sources have not been possible. Effective rates of assistance, normalized by overall value added, 1988.

Source: Computed by the authors.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>ERA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>0.086</td>
</tr>
<tr>
<td>Wheat</td>
<td>0.083</td>
</tr>
<tr>
<td>Other Crops</td>
<td>0.324</td>
</tr>
<tr>
<td>Sugar</td>
<td>1.40</td>
</tr>
<tr>
<td>Livestock</td>
<td>0.50</td>
</tr>
<tr>
<td>Forestry</td>
<td>0.218</td>
</tr>
</tbody>
</table>

commodities except rice, wheat, coarse grains and oilseeds. Even in the latter cases, private traders are free to participate in their imports.

All agricultural commodity imports into Bangladesh can be divided into (a) private; (b) Trading Corporation of Bangladesh's imports; and (c) imports by Directorate of Food and other statutory importers. Up until 1992/93, private importers were not in a position to import foodgrains on the OGLE: importing them was a de facto Government monopoly. This was changed in that year. The role of private imports has increased: from five percent of all agricultural imports in 1978, the share of private imports in the total rose to 97 percent in each of the years 1991 and 1992. In contrast, the share of imports by the government agencies per se has fallen from 94 percent in 1978 to 3 percent in the last-noted years. (The increase in the role of state enterprises in foodgrain imports during the last two financial years, which has been due to domestic crop losses, is unlikely to change this long run trend.) All in all, Bangladesh has privatized and liberalized its agricultural goods trade more significantly than some of its neighbours.

IV. Bangladesh's offer to the Uruguay Round

Bangladesh as a sovereign nation has never bound any farm good under GATT. Under the rules, it could pitch its ceiling tariff bindings at any level it desired. Also, it faced no obligation to reduce those ceilings during the ten-year phase out period.

Bangladesh has set a uniform ceiling binding rate of 200 percent on agricultural products. These adopted bindings are much higher than the prevailing operative rates for agricultural products. The current average applied rate in Bangladesh is 30 percent. It is true of course that in the past domestic prices of some products have exceeded border prices by even more than these high ceiling bindings, and so the bindings here do amount to a potential upper limit if the conditions that were responsible for the high implicit protection of the past were for some reasons to be repeated in the future.

Not all of the farm product tariffs were bound at these prohibitive levels, however. The following commodities have been tariff-bound at 50 percent: live horses, etc., frog legs, seed potatoes, green tea (non-fermented), black tea, rice in the husk, canary seeds, soybean seeds, cotton seeds and gasses (Schedule of concessions, 1994). But these goods are not the staples of Bangladesh's import mix.

The question now must be faced of why were ordinary customs duties on such disparate farm goods as rice and oilseeds, for example, bound at 200 percent. Among the South Asian countries, Bangladesh will have the highest post-Round bound rates.

Based on the limited information available, it is clear that Bangladesh has opted to bind the rates for major agricultural products at a higher level than their rates applied in 1986–88. That finding does not change when we compare the bound rates with implicit protection prevailing more recently. On the contrary, India and Sri Lanka have bound their rates for similar products at lower rates than the prevailing NPRs. Some commentators have made the point that India and Sri Lanka may fare better in the post-round environment given their more liberalized stance vis-à-vis imports of major foodgrains.

Is one to say that Bangladesh's binding policy appears to be incongruous with the general thrust of the country's trade policy during the period, which has been one of quite clearly liberalizing in effect? Has the policy been ill-considered?

The question implicates some fundamental considerations. For one thing, zero bound customs on rice and coarse grains may not be of great price-policy significance in India's case because common rice may well be a suppressed exportable with domestic prices normally well below export parity prices. Again, for the FCI, with an import monopoly to match, and which does not normally import rice, a serious domestic shortage of grains could easily result in both the WTO rules and the zero ceiling binding not imposing any limit on the extent to which domestic rice prices might rise above import parity prices. Finally the balance of payment justification for using QRs could conceivably be invoked to sell import licenses by the government to FCI, in which case the price of these licenses would be included in the FCI's costs, reducing FCI's margin to zero as required by the zero ceiling binding. The point worth remembering is that at least for rice, the zero binding decision for India has more bark than bite. This is another instance of "dirty tariffication" at work. For the same reason, the zero ceiling for coarse grains are much more liberalizing than in fact, as long as FCI import monopoly continues, and the BOP justification for invoking QR continues to have force. Bangladesh has abolished
parastatal import monopoly in rice, wheat and coarse grains peremptorily. Therefore, it is not entirely fair to label Bangladesh's binding policy effort as ill-considered by comparison with India. Bangladesh by abolishing the more significant aspects of parastatal monopoly on import trade has thrust upon itself the necessity to peg bound rates at high levels.

Even so, there is no doubt that Bangladesh’s bound rates are on the high side. And this is not negated by the fact that as a least developed country (LDC), Bangladesh does not need to reduce the tariff binding over a period of ten years. Unilateral trade liberalization does good to a country’s competitiveness, and by taking shelter behind its LDC status Bangladesh has foreclosed this window of opportunity.

Binding and a phased reduction of its level induce greater openness and predictability to a country’s trading framework. It is also about the pace at which a country calculates its advantage to integration in international trade. A high level of bound tariff amounts to a calculation that the industry in question would need a long period of domestic protection. In a world of relatively rapid technical and marketing change, to adopt such a fixed-frame position may be poor economic policy, as it will make a virtue, quite possibly erroneously, to seriously second-guess markets. Governments especially of developing countries, have little proven comparative advantage in second-guessing markets. Such a policy premise can readily induce a sense of innovation laxity among market players; can create a sense of false security among those that need to adapt. This insularity can retard technological, organizational and policy changes within farm sectors. It can be damaging to a country’s competitive prospects over the medium and long run, Bangladesh not only has lost an excellent opportunity to lock in its own reforms.

Each country was required to quantify farm incentives as measured by the differences between domestic and world prices, plus input and other subsidies. Roughly speaking, the AMS is the sum of the annual total product-specific support plus the annual value of non-product-specific support. If the aggregate AMS is no more than 10 percent for a developing countries — the least developed countries were waived — the country is not required to reduce either its product-specific or its non-product-specific support. Because Bangladesh is a least developed country, the issue of AMS is a non sequitur in this context. Bangladesh does not have to reduce its support level in agriculture, small as it is, either in the aggregate for its individual components. For the same reason, Bangladesh is unlikely to be affected by UR agreements on market access and export subsidies.

Despite the abolition of the import monopoly of the Trading Corporation of Bangladesh in 1991, some exports (e.g., fertilizer exports during some years) would probably fall within the GATT definition of state trading and would require to be registered owing to the government backed arrangements with private firms described earlier.

Under the GATT, import markups of state trading enterprises (STEs) may be bound the same way as tariffs and, once bound, cannot top the resulting tariff equivalent. Because Bangladesh is a least developed country, it was given the waiver from this requirement. But even so, the greater transparency brought about by the notification protocol would probably have induced added constraining of restrictive practices.

**V. Post-Uruguay Round Bangladesh agriculture**

Bangladesh agriculture potentially is a beneficiary of the URA to the extent that some liberalization of world agricultural trade occurs as a result of the Round. Even if little or no liberalization of world agricultural trade occurs, as some have argued, there is nothing to prevent Bangladesh from realizing the benefits of its own unilateral trade liberalization. Although firm studies are not as yet on hand, there is some support for the position that Bangladesh possesses at least a measure of export competitiveness in some varieties of rice (long staple rice and aromatic rice); vegetables (potatoes, onions, baby corn and gherkin); and some fruits (bananas). Of course, as a precondition, Bangladesh would have to invest in grading and standardization of produce, in infrastructure support such as bulk storage, and handling facilities at rail heads and ports for cereals, and to establish fast track facilities (preferably dedicated cargo terminals at major air/sea ports for perishable goods and vegetables).

Unilateral trade liberalization would also contribute to making Bangladesh’s agriculture more competitive. The level of protection of agriculture through trade policy per se was low, while industrial prices were kept high by legislating high rate of protection. The protection level of agriculture during the 1980s was barely half that of the industrial sector (Yilmaz and Verma, 1994). Nor did farm subsidies on in-
puts, because they have been rolled back, make amends for implicitly-subsidized cereal prices. Also, significant government interventions in the form of distributional controls, large public storage of cereals (Chowdhury, 1994), large-scale food for work programme (FFWP) (Dorosh and Haggblade, 1995), though originally intended to improve the welfare of the poor, have spawned inefficiencies in Bangladesh’s farm system. As and when these inefficiencies are sorted out through Bangladesh’s unilateral trade liberalization, agriculture in Bangladesh will pull resources more strongly in future, making it more productive.

Given the status of a least developed country, Bangladesh is exempted from many of the commitments that constitute the UR negotiation. With such status, the level at which any country binds its tariffs may reflect partly its policies towards liberalization, and may partly be due to perceived isolation leading to inadequate concern with the negotiation process. Binding ultimately issues a signal. How important the signalling is, for actors both within and outside the local economy, is a matter of conjecture. Some aspects of this have been raised in the previous sector. Here, we briefly probe into the hopes and concerns for Bangladesh agriculture in the post-UR environment.

Since the post-UR environment itself is in the realm of prediction, some plausible aspects of this scenario need to be conjectured prior to assessing what the implications may be for Bangladesh agriculture. For a small price-taking country such as Bangladesh, the most important concern is with price changes. There have been a number of projection analyses; and quite expectedly, the variations among them are wide. A number of such results are reported in Warr and Ahammad (1996); which generally suggest highest price increases in milk and cream, and the price increases for cereals are predicted to be greater than those of non-cereal food items. Compared to these, projections in Goldin and Mensbrugge (1995), suggest only modest increases in prices. Only in the case of wheat, price increases are predicted to be substantially high under most scenarios. In summary, one may assume with some degree of confidence that international prices of milk and cereals will increase relatively more than other agricultural produce; that of edible oil will remain unchanged; and changes in prices of others will be very modest.

While international prices of agricultural produce will affect all trading countries, there are specific aspects that may concern Bangladesh. These include the following: (i) The average tariff reduction for Bangladesh exports in the OECD countries is expected by one study to be only around four percent (Majd, 1995) and gains from NTB removal in these countries is unlikely to benefit agricultural exports from Bangladesh since only 0.3 percent of fish exports are currently covered by non-tariff barriers. (ii) Import duties on fertilizer in OECD countries are expected to be substantially reduced which is likely to raise international prices of fertilizer with subsequent effect on domestic prices, especially of urea. (iii) Phytosanitary measures, anticipated to be more frequently applied by the developed countries, may adversely affect Bangladesh’s exports of frozen food (for example, shrimp). (iv) With reduction in export subsidy and in domestic supports, the prospects of food aid are likely to become gloomier.

A detailed quantitative analysis of the possible implications of the above mentioned outcomes is beyond the scope of the present paper. However, some aspects of the future are quite alarming for a country such as Bangladesh which depends heavily on food imports. This is more so since supply response in the aggregate is low for agricultural production in Bangladesh. The country is land-constrained; and often, intensive cultivation (with modern technology) is constrained by agro-ecological conditions. Relative increases in cereal prices will induce farmers to produce more rice, thwarting the prospect of diversification of crop production and development of agro-processing industry. More importantly, increases in rice production may not be sufficient to meet the country’s deficit of cereals; thus, price increases are likely to raise the import bill. Similar outcomes are expected from price increases in dairy products. The only item on which there may be relative savings is on account of edible oil.

References


Indian Agricultural Trade Liberalization and the Uruguay Round Agreement

Anil Sharma*

I. Introduction

The Uruguay Round commitments in the area of agriculture fall under three main categories namely, market access, domestic support and export competition. The agreement calls for converting all types of non-tariff barriers into tariff barriers and reduce these tariffs, open domestic markets to imports, reduce domestic and export subsidies under a time bound programme in a phased manner. The impact of these commitments on Indian agriculture has already been discussed elsewhere by Gulati and Sharma (1994). In this paper we analyse India's agricultural tariff bindings including an assessment of the considerable distance which still has to be travelled for India to have a truly liberal trade regime by international standards. In the process we also attempt to put the recent economic reforms in a broader perspective, and analyse how the reforms undertaken so far relate to India's Uruguay Round commitments and compare with the commitments of other countries in these negotiations. With this purpose, the paper is organised as follows. In Part II, we present an overview of current agricultural policies. Part III is devoted to analyse the Indian agriculture in the Uruguay Round including its AMS and tariff bindings. This is followed by a discussion of specific aspects of trade policy developments affecting agriculture in Parts IV to VII. In Part VIII, we sum up the main conclusions of the paper.

II. Current agricultural policies

Agriculture was effectively omitted from India's 1991 reforms, and the pre-existing web of controls over both the domestic market and international trade remained in place. As regards import policies, this meant that practically all agricultural products were subject to some type of quantitative restriction (QR). The only exceptions of any signifi-

cance were pulses and greasy wool, which could be imported freely over low tariffs, but the consequent share of tradable agricultural GDP which was potentially subject to QR-free import competition was only about 6 percent. As regards exports, there were two broad groups of industries which were treated differently. One group consists of traditional and newer export products: tea, coffee, spices, tobacco, oilmeals, hides and skins, jute, fish, and fruit and vegetables. In the 1960s and early 1970s exports by these industries were restricted by export taxes and other controls, but during the late 1970s and the 1980s policies became more supportive of exports by, for example, removing most export taxes. At the time of the 1991 reforms a number of complex export regulations to which these products were subject were abolished or simplified, but a number remain, and most of these industries and their exports are still regulated by commodity boards (Table 2). A second and much larger group of industries in terms of production, employment and domestic consumption include the main foodgrains, sugar, oilseeds and common rice. Exports of all of these have been controlled, in most cases directly by parastatal monopolies (“canalising agencies”), and this basic policy was not changed in 1991. As with import controls, the principal motivations for export controls - often not mutually compatible - have been self-sufficiency, the insulation of domestic prices from fluctuations in world prices, low domestic prices, and in the case of rice and wheat, the desire to keep down the budgetary cost of subsidised supplies going to the Public Distribution System.

Some tentative steps to liberalise agricultural trade began about a year and a half after the July 1991 reforms, and these have been followed by a number of bolder reforms in fiscal 1994 and 1995. The first tentative trade reforms accompanied a little noticed but very important liberalization of domestic agricultural controls, namely the abandonment of the informal but effective controls on the movement of wheat out of the surplus north-west region (mainly Punjab, Haryana and western UP) during the harvest in order to ensure that the Food Corporation of India (FCI) could obtain all its required supplies at its announced procurement price in seasons when open market prices in these areas would otherwise have been higher.2 Subsequent reforms were in part motivated by the long delayed recognition of the considerable export potential of India’s major crops, a recognition which was in part sparked by the urgency of dealing with the 1991 balance of payments crisis and in part by the gaps between domestic prices and prices in export markets which opened up or widened with the substantial Rupee devaluation.

The liberalising initiatives taken since 1991 include the abolition of some export controls and minimum export prices, and the removal of some products from the lists of restricted imports. Of these measures, the most important in terms of the size of the domestic industries affected and the potential for increased trade are the removal of import controls from sugar, cotton, and edible oils, and the lifting of bans and other controls from exports of durum and common wheat varieties and common rice. On the import side these measures cut the share of tradable agricultural GDP protected by QRs from about 94 percent immediately after the 1991 reforms to about 84 percent in May 1992. If it is assumed that the liberalization of imports of processed agricultural products (edible oils and roasted coffee) amounts to a de facto import liberalization of the primary products also, the QR-protected share of agricultural GDP would have declined further to about 77 percent. Because the export controls are especially complex and apply to some varieties but not other varieties of given products, it has not been possible to match them satisfactorily to production and to estimate their GDP coverage. However, the lifting of the controls from common rice and from fine and common wheat varieties will have very substantially reduced the export QR coverage of agriculture, since rice alone accounts for about 40 percent of Indian agricultural production, and the bulk of this is common rice. Nevertheless, QRs on agricultural exports as well as imports are still extremely common. The QR situation of India’s principal agricultural commodities is discussed in Table 2, together with the actual tariff in March 1995, the corresponding Uruguay Round tariff bindings, and averages of the estimated implicit nominal protection over the five years from 1990/91 to 1994/95. Implicit nominal protection for many of these industries was negative during this period, and even when positive, was lower than the March 1996 tariffs. With three important exceptions, however, the Uruguay Round bindings are far above both implicit protection and the 1995 tariffs and would be prohibitive if they were ever applied. The exceptions are rice and sorghum (tariffs bound at zero) and rubber (tariff bound at 25 percent), but protection of the domestic mar-
Indian Agricultural Trade Liberalization and the Uruguay Round Agreement

In these cases has been assured by continuing the import monopoly ("canalization") of the Food Corporation of India over rice and sorghum imports and by continued licensing controls over natural rubber imports. India has registered its parastatal import monopolies as WTO-recognised State Trading Enterprises (STE) and has claimed the right to continue non-tariff controls at its discretion on balance of payments grounds.

III. Agriculture and the Uruguay Round

Given this background, we now examine the evidence on agricultural incentives as measured by actual differences between domestic and international prices and input and other subsidies. These were required to be quantified in the submission of estimates of India’s Aggregate Measure of Support (AMS) in connection with the Uruguay Round negotiations on agriculture.

3.1. India’s Aggregate Measure of Support

Very approximately, the AMS is defined as the sum of the annual aggregate product-specific support measures plus the annual value of non-product specific support. If the aggregate AMS does not exceed 10 percent of the total value of agricultural production in the case of a developing country, the country is not required to reduce either its product specific or its non-product specific support. Official estimates of the AMS were submitted by the government during the Uruguay Round negotiations, but more accurate estimates which are consistent with the broad findings of the official estimates are available in a paper by Gulati and Sharma (1994), the results of which are reported in Table 1. According to them, at official support prices, the product-specific AMS for India (for 17 products out of 22 products for which India maintains market price support programmes) was negative to the tune of minus Rs. 242 billion during the triennium (TE) ending 1988–89. This was equivalent to minus 27.7 percent of the total value of agricultural production (excluding forestry and fisheries). The non-product specific AMS was estimated at Rs. 46 billion, 5.2 percent of the total value of agricultural production.

Adding these two, the total AMS was minus Rs. 196 billion, equivalent to approximately minus 22.5 percent of the average value of agricultural production during the triennium. Since the official support prices for a number of products were not binding, Gulati and Sharma also calculated the AMS using farm harvest prices. As shown in Table 1, the result still indicates strong but negative support (taxation), although somewhat less marked than at official support prices. For the official AMS estimates in the Uruguay

<table>
<thead>
<tr>
<th>Support Type</th>
<th>TE 1992-93</th>
<th>TE 1992-93</th>
<th>TE 1994-95</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Specific AMS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Based on support prices</td>
<td>-242.25</td>
<td>-427.89</td>
<td>-479.07</td>
</tr>
<tr>
<td></td>
<td>(-27.74)</td>
<td>(-26.33)</td>
<td>(-24.69)</td>
</tr>
<tr>
<td>(b) Based on farm harvest prices</td>
<td>-151.03</td>
<td>-295.21</td>
<td>-295.93</td>
</tr>
<tr>
<td></td>
<td>(-17.29)</td>
<td>(-18.17)</td>
<td>(-15.25)</td>
</tr>
<tr>
<td><strong>Non-product Specific AMS</strong></td>
<td>45.77</td>
<td>86.45</td>
<td>114.71</td>
</tr>
<tr>
<td></td>
<td>(5.24)</td>
<td>(5.32)</td>
<td>(5.91)</td>
</tr>
<tr>
<td><strong>Total product specific and non-product specific AMS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Based on support prices</td>
<td>-196.48</td>
<td>-341.44</td>
<td>-364.35</td>
</tr>
<tr>
<td></td>
<td>(-22.50)</td>
<td>(-21.01)</td>
<td>(-18.78)</td>
</tr>
<tr>
<td>(b) Based on farm harvest prices</td>
<td>-105.26</td>
<td>-208.76</td>
<td>-181.22</td>
</tr>
<tr>
<td></td>
<td>(-12.05)</td>
<td>(-12.85)</td>
<td>(-9.34)</td>
</tr>
</tbody>
</table>

Note: Excludes forestry and fishery.

Source: Gulati and Sharma (1994) for TE 1989-89 and TE 1992-93. TE 1994-95 has been computed.
### Table 2. Major agricultural products: import tariffs and trade policy status

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Existing Tariff April 1995 (%)</th>
<th>Uruguay Round binding (%)</th>
<th>Average Implicit Nominal Protection Rate (Price comparisons)</th>
<th>Quantitative Restrictions</th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Meat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh, chilled, frozen</td>
<td>10</td>
<td>150</td>
<td>Mostly rtd.</td>
<td>Mostly rtd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processed-homog. meats, hams</td>
<td>50</td>
<td>55</td>
<td>Mostly rtd.</td>
<td>Mostly free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hides and skins incl. leather</td>
<td>0</td>
<td>25</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fish and crustaceans</td>
<td>10</td>
<td>150</td>
<td>Mostly rtd.</td>
<td>Mostly rtd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Dairy products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk and cream</td>
<td>40</td>
<td>100</td>
<td>Mostly rtd.</td>
<td>Mostly rtd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yoghurt</td>
<td>40</td>
<td>150</td>
<td>Mostly rtd.</td>
<td>Mostly rtd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powdered milk (&lt;1.5%)</td>
<td>0</td>
<td>0</td>
<td>Free</td>
<td>Free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powdered milk (&gt;1.5%)</td>
<td>0</td>
<td>0</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powdered milk (&gt;1.5%) sweetened</td>
<td>40</td>
<td>40</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter</td>
<td>40</td>
<td>40</td>
<td>Free</td>
<td>Free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter oil</td>
<td>40</td>
<td>40</td>
<td>Free</td>
<td>Free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheeses</td>
<td>40</td>
<td>40</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Rice</td>
<td>0</td>
<td>0</td>
<td>-43</td>
<td>-35</td>
<td>Free</td>
<td>Canalised</td>
</tr>
<tr>
<td>6. Wheat and wheat flour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durum (hard) wheat</td>
<td>0</td>
<td>100</td>
<td>-41</td>
<td>-5</td>
<td>Free</td>
<td>Canalised</td>
</tr>
<tr>
<td>Other wheats</td>
<td>0</td>
<td>100</td>
<td>-31</td>
<td>21</td>
<td>Restricted</td>
<td>Canalised</td>
</tr>
<tr>
<td>7. Coarse grains and flours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>0</td>
<td>0</td>
<td>-18</td>
<td>34</td>
<td>Restricted</td>
<td>Canalised</td>
</tr>
<tr>
<td>Sorghum</td>
<td>0</td>
<td>0</td>
<td>-13</td>
<td>27</td>
<td>Restricted</td>
<td>Canalised</td>
</tr>
<tr>
<td>Millet</td>
<td>0</td>
<td>0</td>
<td>Restricted</td>
<td>Canalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td>0</td>
<td>100</td>
<td>Restricted</td>
<td>Canalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rye</td>
<td>0</td>
<td>100</td>
<td>Restricted</td>
<td>Canalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>0</td>
<td>100</td>
<td>Restricted</td>
<td>Canalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>100</td>
<td>Restricted</td>
<td>Canalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Processed cereals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby foods</td>
<td>15</td>
<td>17.5</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baker’s dough</td>
<td>50</td>
<td>55</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakfast cereals</td>
<td>50</td>
<td>55</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other</td>
<td>50</td>
<td>150</td>
<td>Free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Pulses</td>
<td>10</td>
<td>100</td>
<td>-10</td>
<td>Restricted</td>
<td>Free</td>
<td></td>
</tr>
<tr>
<td>11. Vegetables</td>
<td>10</td>
<td>100</td>
<td>-3 to -32</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
</tr>
<tr>
<td>Dried mushrooms, onions, and potatoes</td>
<td>10</td>
<td>35</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Fruits</td>
<td>50</td>
<td>100</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grapes and plums</td>
<td>30</td>
<td>30</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dried prunes</td>
<td>50</td>
<td>55</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Preparations of fruits</td>
<td>50</td>
<td>100</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>About 13 vegetables</td>
<td>50</td>
<td>55</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange juice</td>
<td>50</td>
<td>85</td>
<td>Mostly free</td>
<td>Restricted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. (Cont.) Major agricultural products: import tariffs and trade policy status

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Existing Tariff April 1995 (%)</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imp (%)</td>
<td>Exp (%)</td>
<td>Exports Imports</td>
<td></td>
</tr>
<tr>
<td>Other fruit juices</td>
<td>50</td>
<td>85</td>
<td>Free Restricted</td>
<td></td>
</tr>
<tr>
<td>14. Coffee (unprocessed)</td>
<td>10</td>
<td>100</td>
<td>Restricted       Restricted</td>
<td></td>
</tr>
<tr>
<td>Roasted &amp; decaff. coffee in bulk</td>
<td>in bulk 10</td>
<td>150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>15. Tea</td>
<td>10</td>
<td>150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>16. Spices</td>
<td>50</td>
<td>100 or 150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>Caraway seeds</td>
<td>35</td>
<td>35</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>Thyme, bay leaves</td>
<td>35</td>
<td>35</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>17. Oilseeds, etc.</td>
<td>40/50</td>
<td>100</td>
<td>Mostly rtd. Canalised</td>
<td></td>
</tr>
<tr>
<td>Oil cakes, meals, and flours</td>
<td>50</td>
<td>150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>Soya, rapeseed, mustard, olive, and colza oils</td>
<td>30</td>
<td>45</td>
<td>Mostly rtd. Free</td>
<td></td>
</tr>
<tr>
<td>Other edible oils incl. coconut &amp; palm oils</td>
<td>30</td>
<td>300</td>
<td>Mostly rtd. Canalised</td>
<td></td>
</tr>
<tr>
<td>18. Raw cotton</td>
<td>0</td>
<td>150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>19. Greasy wool</td>
<td>10</td>
<td>25</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>Jute, sisal, etc.</td>
<td>0</td>
<td>40</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>20. Sugar</td>
<td>0</td>
<td>150</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>21. Natural rubber</td>
<td>25</td>
<td>25</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>22. Raw tobacco</td>
<td>50</td>
<td>100</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
<tr>
<td>23. Wood and wood products</td>
<td>25-50</td>
<td>25-40</td>
<td>Mostly free Restricted</td>
<td></td>
</tr>
</tbody>
</table>

Note: The implicit nominal protection rates are averages for the years indicated. "Imp" means that domestic prices are compared with import prices adjusted for port, transport, marketing and other costs. "Exp" means that domestic prices are compared with similarly adjusted export prices. A blank space means that nominal protection estimates are not available. "Mostly restricted" means that most products or product varieties in the category are subject to licencing or other non tariff controls.

Round, 1988/89 was the triennium required. Gulati and Sharma also calculated it for the triennium ended 1992/93. While higher in nominal Rupee terms, mainly due to the Rupee devaluation over this period, it remained negative and about the same in relation to the value of agricultural production. We have extended it up to TE 1994/95 and the results reveal that the taxation of agricultural sector between TE 1992/93 and TE 1994/95 has come down from minus 21 percent to about minus 19 percent at support prices and from 13 percent to 9 percent at farm harvest prices, respectively. This reduction in taxation reflects the increases in prices of commodities such as rice and wheat announced during 1992/93 and 1993/94. In nominal terms, the increase in the support price of rice works out to be 47.83 percent between 1991/92 and 1994/95 and the growth in the support price of wheat works out to be 55.55 percent during the same period.

This negative support (net taxation) of agriculture in India principally reflects the fact that export bans and other restrictions have kept the domestic prices of some major crops (notably rice and cotton) below world prices, while others in most years are at about the same level as world prices. In the aggregate the negative or low protection of these crops has outweighed the positive support levels of protected crops such as oilseeds, rubber and sugarcane and input subsidies lowering the cost of fertilisers, credit, electricity and canal irrigation. Under the Uruguay Round rules, the consequent negative AMS exempts India from reducing its support levels either in the aggregate or for any individual crops. For the same reason, India is unlikely to be affected
by the Uruguay Round agreements on market access and export subsidies (Gulati and Sharma, 1994). On the other hand, Indian agriculture is a potential beneficiary to the extent that some liberalization of world agricultural trade occurs as a result of the Uruguay Round. Even if, as some argue (e.g., Ingco, 1995) little or no freeing of world agricultural trade is achieved by the Round, India would in any case and above all benefit from its own unilateral trade liberalization. This view is supported by the apparent export competitiveness of many Indian agricultural commodities. Studies by Gulati and Pursell (1995) and Gulati, Sharma et al (1994) suggest that India possesses export competitiveness in cereals (rice and wheat), commercial crops (cotton), fruits (bananas, grapes, sapota, lychee, mango and apples), vegetables (onions, tomatoes and potatoes) and processed vegetables (mushrooms and tomato paste). However, to properly exploit this export potential the remaining export controls and regulations like to remove or reduce export taxes or controls. It would also be important to invest in infrastructure facilities such as bulk storage and handling facilities at the rail heads and sea ports for cereals, and to canalization, export licencing and quotas, and minimum export prices, would need to be abolished. These reforms would have to be taken on Indian initiative: there is no Uruguay Round requirement established fast track facilities, (preferably dedicated cargo terminals) at major air/sea ports for perishables such as fresh and processed fruits and vegetables.

The unilateral trade liberalization measures will also help to make Indian agriculture more competitive. It is known that the agricultural product prices in India were kept low presumably to protect the poor, but industrial prices were kept high by erecting high tariff barriers. A study by Pursell and Gulati (1993) reveals that during 1970-71 to 1987-88, the protection level for agriculture was about half the protection level for manufacturing (average value). Also, the lower prices of agricultural output were not offset by the subsidies on inputs. In addition to the low output prices, the pervasive government intervention in terms of movement restrictions, distributional controls, stocking, domestic and foreign trade, though initially designed to improve the welfare of the people, have injected inefficiencies in the entire agricultural system. The terms of trade moved against agriculture. This diverted resources away from agriculture to industry and the ultimate result of this strategy was that investment in agriculture remained stagnant during the 1980s. This is in sharp contrast to the trends observed in investment during the 1960s and 1970s. Therefore, when these inefficiencies are corrected through unilateral trade liberalization measures, the resources will start moving in to agriculture which will make it even more competitive in the coming years.

3.2. India's agricultural tariff bindings

In the Uruguay Round agricultural agreements, ceiling tariff bindings had to be submitted for all agricultural products. For developing countries, provided the tariffs had not been previously bound under the GATT, there was no limit on the level of these bindings and no obligation to reduce them during the 10-year phase-in period. India had not previously bound its agricultural tariffs, and for most but not all products submitted had very high bindings of 100, 150, or 300 percent. Most of the bindings at these levels appear to be prohibitive if they are compared with actual tariffs in March 1995 or with current and past implicit protection: for example fish and crustaceans, wheat, barley, rye, oats, pulses, and export crops including tea, coffee, and cotton. (see Table 2). But occasionally in the past the domestic prices of some products have exceeded border prices by even more than these high ceiling bindings, and so the bindings in these cases do set a potential upper limit if the conditions which created the high implicit nominal protection of the past were to be repeated in the future. Examples are copra and coconut oil (binding 300 percent), sugar (binding 150 percent), and some oilseeds (binding 100 percent).  

Not all of the agricultural tariffs were bound at these prohibitive or almost prohibitive levels, however (see Table 2) and we comment on some of the more important of these cases below. Before doing so, we would emphasise that the significance of zero or relatively low ceiling bindings is quite limited as a result of India's continuing use of the balance of payments loophole to justify continued QRs, and its continuing of the parastatal import monopolies registered with the WTO as STEs. If QRs are used to regulate imports, the only WTO-related constraint is the requirement that the tariff applied not exceed the ceiling binding, and there is no constraint on the extent to which the domestic price can exceed world prices. If imports are regulated by a monopoly STE, the WTO agreements require that the margin between the CIF cost of the imports plus "reasonable" port and other
expenses and the STE’s selling price, should not exceed the ceiling binding. But this is not the same as a commitment to keep the excess of domestic prices, i.e., implicit nominal protection, lower than the ceiling binding. For example, if the STE does not import at all, there would be no recourse under the WTO rules regardless of the level of the domestic price. If the STE imports, the ceiling binding would set an upper limit to its own resale price, but the STE may be able to sell at lower than prevailing market prices to some other organization which may be able to distribute the consequent economic rents without greatly affecting the domestic price, provided the imports are a small proportion of the domestic market.

Rice. Ceiling binding zero. This binding is of very limited significance because, in the first place, common rice is a suppressed exportable with domestic prices normally well below export parity prices. Secondly, FCI has an import monopoly and normally does not import. In drought years, it imports wheat. If there were ever a serious domestic shortage of grains, the WTO rules and the zero ceiling binding would not impose any limit on the extent to which domestic rice prices could rise above import prices. Even if FCI were to import rice, it could sell the rice to the Public Distribution System at prices below the open market price with limited impact on the open market price while still meeting the zero constraint imposed on its selling margin by the zero ceiling binding. Thirdly, the balance of payments justification for using QRs could conceivably be used to justify the sale of import licences by the government to FCI, in which case the price of the import licences would be included in FCI’s costs, reducing FCI’s margin to zero as required by the zero ceiling binding.

Maize, sorghum and millet. The ceiling bindings are zero, even though the ceiling binding on their coarse grain substitutes (barley, rye and oats) is 100 percent. But coarse grains are an FCI import monopoly, and generally there are no imports. Consequently, as for rice, the zero ceiling binding will not have any influence on the domestic price while the FCI import monopoly and the balance of payments justification for QRs continues.

Soya oil, olive oil, and rape, colza and mustard oils. The ceiling bindings for these oils are 45 percent, compared with bindings of 300 percent for the other major edible oils. The parastatal import monopoly of edible oils was abolished in 1995 and the import duty on most was reduced to 30 percent. As long as canalization and/or import licensing are not reinstated, the ceiling bindings on soya, rape and mustard oils will effectively tie in the substantial import liberalization affecting the edible oil industry directly, and indirect import liberalization of the edible oilseed industry. This is because rape/mustard and soya are the second and third largest components of the Indian oilseed growing industry, and because of the high degree of substitutability between the various edible oils in consumption. For this reason, as long as imports are not restricted quantitatively, a commitment to not raise tariffs on soya, rapeseed and mustard oils above 45 percent will also impose an effective upper limit on the domestic prices of the other edible oils. Even though oilseeds themselves remain canalised with a tariff binding of 100 percent, this upper limit on domestic edible oils prices will in turn set an upper limit to domestic oilseed prices, which are determined by the selling prices of their joint products, edible oils and oilseed meals. Since there is a surplus of oilseed meals which are exported, domestic prices are generally about equal to export prices, so that the nominal protection of oilseeds is approximately a weighted average of the nominal protection of the edible oils and the zero nominal protection of the oilseed meals.

Dairy products. Liquid milk, cream and yogurt tariffs were bound at high and effectively prohibitive levels (100 and 150 percent) and imports in any event are banned as part of the general prohibition of consumer good imports. However, low ceiling bindings were set on the dairy products in which most international trade takes place, specifically powdered milk (zero), butter oil (40 percent) and cheeses (40 percent). In March 1995 imports of skimmed milk powder and butter oil were decanalised and delicenced, so that in principle unlimited private sector imports are allowed at these tariffs. There is a very large potential Indian market for butter oil, which substitutes for ghee in Indian diets, and probably also for low fat powdered milk. If these imports remain decontrolled, these changes could represent a very significant liberalization not only for India but for world trade in dairy products.

Natural Rubber. Natural rubber tariffs were bound at 25 percent, which is the same as the 1995 applied tariff. It is about equal to average implicit protection during 1988–93, but well below implicit protection in most years since at least the mid 1960s. This binding would effectively put a cap on protection of the rubber industry, but only if import licens-
ing were removed. This would be politically difficult in the face of the strong rubber lobby in the southern state of Kerala.

IV. Intellectual Property Rights (IPRs)

Following the URA, member countries are required to provide protection to plant varieties either by patents or by an effective *sui generis* system, or by a combination thereof (GATT 1994). The agreement also calls for reviewing the provisions of this system four years after the entry into force of the WTO agreement. As against a stricter patent regime, the *sui generis* system of plant variety protection is a special form of protection which provides the breeder’s exemption as well as farmer’s exemption. The Policy Planning Committee of the ICAR had set up a Group in March 1990, to formulate a suitable *sui generis* system. The recommendations of the group were accepted in 1992 and the Act was formulated in 1993. India’s draft Plant Varieties Act 1993 (PVA 1993) is on the lines of UPOV 1978 which provides freedom to breeders and farmers to save, keep and exchange seeds. After consulting eminent experts in this field, the government has finalized the Draft Plant Varieties Act 1994. The revised draft combines features such as setting up a Gene Bank and a National Plant Variety Protection Authority and offers farmers to save, use, exchange and share seeds. However, at the time of writing, the Act was awaiting clearance by Parliament. Also, one of the issues which has not yet been resolved is on what conditions farmers may or may not sell seed when that seed is under Intellectual Property Rights. The issue is important because the revised draft Act provides freedom to farmers to produce and sell seeds with the consent of the breeding right holders. Although it is an established fact that farmers exchange seeds in an informal way, this freedom is limited to the extent that it does not threaten the protection that should apply to commercial marketing transactions.

V. Sanitary and Phytosanitary (SPS) Measures

The provisions of the agreement on Sanitary and Phytosanitary measures state that “measures taken to protect human, animal or plant life or health, must be based on scientific principles and shall not be applied in a manner that would constitute a disguised trade restriction.” However, there are no specific guidelines in this regard. The reason for this, perhaps is the recognition that differences in geographical and sanitary conditions among countries make it difficult to apply uniform sanitary and phytosanitary requirements of products originating from different countries. However, the agreement calls for harmonization, equivalence and transparency to SPS regulations.

As stated above, the aim of this agreement on sanitary (human and animal health) and phytosanitary (plant health) is to prevent member countries from using human, animal and plant health standards for protectionist purposes. Every country has its own rules regarding these restrictions such as inspection of imported products, specific treatment or processing of products, fixing of maximum allowable levels of pesticide residues or permitted use of certain specific additives in food. India also has a number of acts such as Prevention of Food Adulteration Act, Fruit Products Order, Milk and Milk Products Order, the Meat Food Products Order. These acts define procedures to be followed before selling a particular product and their objective is to ensure hygiene and quality to the consumers. However, lack of alignment with international standards does affect exports of agricultural exports from India. For example, non-availability of vapour heat treatment (VHT) before 1995 prevented India from exporting fresh fruits to countries like Japan that have regulations regarding VHT for imported fruits. Although developing countries have been given differential treatment in terms of longer time-frame for compliance to new SPM, there is a possibility that sanitary and phytosanitary measures will become more prominent trade issues in the future. India will have to strengthen its sanitary and phytosanitary standards in order to meet international specifications to face these challenges.

VI. Safeguard Provisions — Anti-dumping

Dumping is said to occur when products are sold by a firm in an export market for less that what is charged in its home market or if the export price of a product is below the costs of production. Provisions of Article VI of the URA allow action to be taken against dumped imports if dumping causes or threatens material injury to domestic import competing industry. The agreement allows countries to use anti-dumping duties (against firm) or countervailing duties (against
country). These duties are to be terminated within five years of imposition (de minimus rule) unless a review determines that both dumping and injury caused by dumped imports continues to persist or that removal of the measure would be likely to lead to the recurrence of dumping or injury. The commerce ministry has also prepared a guide to strengthen the administrative machinery to deal with dumping. It is reported that the set of rules are consistent with URA rules. It has been reported that around 13 or 14 anti-dumping suits were initiated by India during the least two years. Out of these 14 cases, anti-dumping duties were levied in 10 cases. The main products affected are chemicals related to the drug industry.

VII. The Uruguay Round and State-Trading Enterprises

The right of GATT members to give import or export monopolies to state or other enterprises is recognised in Article XVII of the GATT. The only constraints are that these enterprises are supposed to act in accordance with commercial principles, in a non-discriminatory manner and provide information on import markups when requested by trading partners (Hoekman, 1995). In the Uruguay Round, it was agreed to improve the possibilities of surveillance of State Trading Enterprises (STEs) by requiring countries to notify them to the WTO for review by a working party. A definition of STEs was also provided which makes it clear that government provided power to influence imports or exports is the key test, so that private firms could be covered as well as parastatal enterprises and marketing boards. Despite this attempt to tighten the rules, the continuing right to employ government owned or sanctioned import and export monopolies is clearly a major loophole in the Uruguay Round's attempt to tariffy quantitative restrictions, especially in the agricultural trade of developing countries where marketing boards and similar organizations are so prevalent. It could even be argued that the new situation may make matters worse, if for example, a country establishes a government import monopoly instead of allocating licences to private imports.

As mentioned earlier, the role of parastatal monopolies (canalising agencies) in Indian trade policies was slowly cut back during the second half of the 1980s and more drastically by the 1991 reforms. However, the 1991 reforms mainly concentrated on the removal of industrial products from canalization, but a number of agricultural products were also decanalised viz. imports of raw silk, jute and cotton, exports of jute, sugar and molasses. In 1995 imports of edible oils and exports of dairy products were also decanalized. While a number of these remain subject to licensing controls, as of June 1995 state trading that would probably come under the GATT definition had been removed from all important agricultural commodities except coffee, onions, sugar and possibly molasses, and from all agricultural imports with the very large and important exceptions of rice, wheat, coarse grains and oilseeds. Despite the abolition of the export monopoly of the State Trading Corporation (STC) in 1991, sugar and molasses exports would probably fall within the GATT definition of State trading and would require to be registered owing to the government backed arrangements with private firms described previously.

Under the Uruguay Round agreement, the import markups of STEs may be bound in a similar way to tariffs, and once bound are not supposed to exceed the resulting tariff equivalent. As far as we know, however, no such bindings have been negotiated, and certainly not volunteered by India. Furthermore, for reasons given earlier in the paper, it seems that India's tariff bindings on agricultural products — even the zero bindings for rice, maize, sorghum, and millet — will probably not constrain either the import or domestic pricing policies of the Food Corporation of India. For this reason, India will be under no compulsion from the GATT to further liberalise the trade controlled by STEs, although the greater transparency provided by the notification provisions could conceivably constrain greater restrictiveness. The notification provisions will presumably also constrain the reinstatement of previously abandoned parastatal monopolies or the extension of state trading to new products.

VIII. Summary

It is apparent from the above discussion that India did not use the Uruguay Round negotiations to reinforce or tie in its own unilateral liberalization of agricultural trade policies. Rather, its objective appears to have been to leave for itself plenty of space for future manoeuvres and bargaining space. This is clearly evident from its claim to con-
continue using QRs for balance of payment reasons, in the continuing monopoly of grain and oilseed imports by FCI and STC, and in its setting very high prohibitive ceiling tariff binding for most commodities. In addition the URA has little to say about licensing and other restrictions applied to exports such as cotton, sugar and pulses. In addition, the negative outcome of the Aggregate Measure of Support test means that India is under no WTO imposed obligation to remove or reduce its present input subsidies or support prices.

Although this broad assessment seems clear, the Uruguay Round outcome could help promote a more liberal agricultural trade regime in some ways, even though most of these are contingent on other unilateral liberalising measures. Firstly, the ceiling tariff bindings on some key edible oils and dairy products should help consolidate the removal of the import controls on these products undertaken in 1995, provided of course that import licensing or canalization are not reintroduced. Secondly, if import licensing of copra, coconut oil and oilseeds is removed and is not reintroduced for sugar, the tariff bindings for these commodities, though very high could keep protection below some extreme levels observed in the past. Thirdly, the zero ceiling bindings for rice, maize, sorghum and millet would represent a real constraint on protection if both the FCI import monopoly and the use of QRs were given up. Likewise, the abolition of import licensing of rubber would turn the 25 percent tariff binding into an upper limit on rubber protection. Fourth, the use of STEs may be constrained to some extent by the new requirements that these arrangements should be notified to the WTO and periodically reviewed. Finally, India has not in general subsidised its agricultural exports and did not list any agricultural export subsidies in its Uruguay Round submissions, and as a result in principle it will not be able to introduce them in the future.

References


Nepal: Agricultural Trade Policies and Programmes

Thakur Nath Pant*

1. Introduction

The objectives of this paper are to analyze the current agricultural trade policies and programmes of Nepal, evaluate the potential impact of the Uruguay Round Agreement (URA) on Nepalese agricultural trade and suggest consequent adjustment measures required in its trade policies. The current tariff measures, quantitative restrictions (QRs) and non-tariff barriers (NTBs) including protection rates — direct or otherwise, if any, in the trade of the main agricultural commodities are also examined.

The policy of the government in the trade regime is geared towards liberalization with gradual reduction in tariff rates and complete removal of QRs and NTBs. But the operational aspects of these measures have not been that effective. There are some NTBs and QRs in some of the primary products for export which require recommendation from the Ministry of Agriculture and licensing from the Department of Commerce. Imports are free and without any quantitative restrictions.

There have been few studies undertaken to measure the protection level of industrial products and none for agricultural commodities. These studies were carried out under the technical assistance of the Asian Development Bank in 1985 and 1991 and as such the present study relies on these data, which may not be relevant in the context of the economic liberalization policy adopted by Nepal since 1992. Nevertheless, the findings of such studies provided some indication of the protection rates in agriculture vis-à-vis industry. With the implementation of economic liberalization policy, studies have found that protection levels of industry have shrunk to a large extent because of the reduction in the overall tariff structures and the implementation of an open general licensing system. Such measures might have turned the terms of trade in favour of agriculture.

In the area of subsidies, the government since 1992 has adopted a policy of gradually phasing out subsidies for inputs and public distribution of foodgrains. Subsidies are being provided through budgetary allocation in such areas and production inputs like fertilizers, seeds, interest on bank loans, irrigation facilities both for surface and underground water, biogas, and foodgrains. These subsidies are meant for target groups, but the real beneficiaries, it is believed, are mostly large farmers. The budgetary allocation for these subsidies has steadily increased over the years and, above all, these are not transparent. Unfortunately, data is not avail-
able to quantify the level of subsidy in each case and as such it is not possible to assess its contribution to agricultural growth. There is, therefore, a need for in-depth study in this area even though Nepal, as a least developed country, is not required to follow URA provisions in this regard.

II. Agriculture in Nepal

Nepal, with a population of 21 million and a per caput income of $200, is primarily an agricultural country, agriculture accounting for 43 percent of the GDP, over 80 percent of employment, and 10 percent of the recorded exports in 1994. Over 85 percent of the population depend upon agriculture for their livelihood.

Although agriculture is still the largest sector of the economy with crops occupying 59.7 percent of the agricultural GDP followed by livestock and fisheries, its contribution to the GDP has been declining over the years from 51 percent in 1992/93 to about 41 percent in 1994/95.

During the past decade, the economy grew at an average annual rate of 2.2 percent in real terms, whereas agriculture posted a growth rate of merely 3 percent per annum, half a percentage point higher than the growth rate of population. The poor performance of agriculture can be attributed to several factors.

The overall macro economic policy of the past was not conducive to the agricultural sector which was inward looking. Nepal’s agricultural policies were geared towards import substitution, self-sufficiency and food security down to the local level. The Government was involved actively in the development of agriculture through protectionism and providing subsidies on chemical fertilizers, seeds, interest, irrigation facilities and public distribution of foodgrains. Institutional support for agricultural development was weak and changes were quite frequent. Agricultural research and extension programmes were unable to address problems faced by farmers. Coordination among agricultural agencies and also among individual programs was lacking. Public enterprises and government sponsored cooperatives were involved in the distribution of inputs and marketing of farm products. The importation and the distribution of agricultural inputs like chemical fertilizers and improved seeds were virtually monopolized by the state. Prices of several commodities including fertilizers and seeds were controlled and there were even restrictions on the movement of certain primary products across districts. In addition, local authorities used to levy Octroi in the movement of agricultural products from one place to another including between districts, towns, cities and villages. Government intervention thus inhibited the active participation of the private sector in the development and promotion of agriculture. As a result, agricultural production stagnated and exports declined.

Market prices for major products were distorted due to the government’s pricing policy which always tried to depress prices. The private sector was discouraged in the development activities of agriculture; instead it was involved in other rent seeking activities through the importation of consumption goods and raw materials for industries. Thus, the private sector was regarded as an adversary in the economic development process of the country. Furthermore, a high population growth rate and the sluggish growth in agriculture turned Nepal into a net importer of foodgrains since the 1970s.

Since the restoration of democracy in 1990 and particularly from 1992, the Nepalese government has been liberalizing the economy, letting free market forces take over economic activities. Administered prices were revised upward and the government now is committed to leave prices of public goods and services to market forces. Price-subsidy on chemical fertilizers and foodgrains, except for the transport subsidy for remote villages, has been reduced.

Realizing the importance of agriculture for enhanced economic growth of the country, the government has initiated reform measures in the agricultural sector. These include:

- A program of national self-sufficiency in foodgrains production and a market led cash crop development;
- Improvements in technology, research, physical infrastructure and institutional development in the delivery of agricultural extension packages for increased agricultural productivity;
- A gradual reduction in the subsidy of chemical fertilizers along with improvement in the credit, supply, and distribution system to make fertilizers available to farmers on time; and
- Promotion of market induced commercialization of agriculture through private sector involvement.

These reform measures are expected to liberalize the agricultural sector and promote private sector participa-
3.2. Increased market access and exports of different agricultural commodities

With accession to the UR agreement, Pakistan can regain the competitiveness it has lost due to declining world prices of agricultural products from trade distortions in the past. With the lifting of quantitative restrictions, Pakistan will benefit in terms of increased volume of exports due to a wider global market access opportunities. Exports of major agricultural commodities, in particular, are expected to expand due to the phasing out of quotas in major export markets and the elimination of production and export subsidies in other countries. With transparency and predictability realized through tariff bindings and harmonization of sanitary and phytosanitary measures, exports will be secured and lower transaction costs will be incurred in trading.

The increased demand for export goods will increase local production of these goods. In the case of Pakistan, the products that will be positively affected are the export winners and potential export earners, namely: rice, cotton, fruits, juices, food preparations, cut flowers and tobacco.

In the post-UR period, the expectation is that Pakistan’s agricultural products would become more competitive in the international market. Commodity prices are likely to rise over the longer term with freer trade than in the past but Pakistan will have to face increased competition from other developing countries. Also as tariffs on agricultural raw materials and food stuffs are lowered, Pakistan will lose the benefits drawn from the preferential tariffs accorded to it under the GSP Scheme.

Pakistan has a vital interest in agriculture trade consisting mainly of rice, cotton, wheat, edible oils and tea. Although agricultural trade now accounts for about 21 percent of total trade, it has larger consequences for the economic development of Pakistan. Any deliberate policy to restrict or liberalize trade of the agricultural commodities at the international level is bound to adversely or positively affect the growth of the agricultural sector.

**Rice.** In the case of rice, the US Department of Agriculture (USDA) estimates that the farm-gate price of rice will be 12–13 percent higher in 2000 as a consequence of the UR agreements. The USDA also estimates that one-third of the increase in world imports for rice will be for long-grain rice — a variety where Pakistan’s interest lies.

The prospects for Pakistan to get a large share of the rice markets in South-East Asia are not bright as the variety of glutinous rice popular in South-East Asia is not produced in Pakistan. ASEAN countries have been extremely reluctant to meet the market access commitments that they have made. This is obvious from Table 7. The quality factor will also prevent Pakistan in gaining increased market share in this region. Thus, the opening up of the rice markets in Japan, Indonesia and the Republic of Korea is unlikely to create major new opportunities for Pakistan in the immediate future. Access to the EU is also expected to remain unchanged. The EU has made a commitment that it would refrain from increasing current protection as it would keep the margin between the import price and support price constant at the pre-UR level.

**Cotton.** In the case of cotton, the problem of market access is not critical as liberalized market access in textiles and clothing in the post-UR period would provide an enhanced opportunity to export processed cotton products. As a result of rising demand in the domestic and international market for cotton products, the price of cotton is expected
to rise. Also, in view of the expansion in demand, there would be no problem in absorbing raw cotton produce.

Besides tariffs, Pakistan also employs a number of non-tariff barriers (NTBs) to limit or control imports. Sometimes these NTBs are used in conjunction with tariffs [See Table 1]. Moreover, Pakistan also uses Trading Corporation of Pakistan to control imports by giving it exclusive rights to control imports.

Other commodities. Pakistan can also expect to reap benefit in the category of “other agricultural products.” In this category, the developing countries will reduce their tariffs by 48 percent, North America by 49 percent and Western Europe by 44 percent. Currently exportable surpluses for such products are insufficient in Pakistan but increased market access will provide incentives to domestic producers to increase production of such non-traditional products for export markets.

3.3. Increased incomes/gross value added in agriculture and generation of jobs
Concomitantly, the increase in export volumes will increase export earnings. This implies an expansion of the gross value added (GVA) of agriculture. The need to improve the quality of export products in order to be competitive will also require greater demand for post-production services (e.g., packaging and processing), thereby increasing the demand for labour and creating more jobs. Consequently, incomes in the sector will increase.

3.4. More efficient agriculture sector and competitive prices of goods
The lifting of quantitative restrictions on agricultural commodities in the country will result in the free entry of goods and services. When there is an import surge, however, higher tariff rates will be imposed on imported goods for a certain period of time. The free entry of goods will result in more competitive prices which will favour domestic consumers. However, the competition may ease out less competitive sub-sectors in agriculture and may result in labour dislocations. Notwithstanding this possibility, this may result in the reallocation of resources to the more efficient sectors, thereby resulting in a more productive agriculture sector where only the activities which are operating at a comparative advantage will persist in the long run.

3.5. Increased prices of imported food products and production inputs
On the other hand, the lifting of production and export subsidies in developed countries will result in increased prices for imported food products. In the case of Pakistan, consumers will have to pay more for products such as dairy products, wheat, and feed ingredients. Due to the increase in prices, the import of these products may decrease in line with price elasticity of demand for these commodities. Nonetheless, a possible and more positive impact will be the domestic production levels of alternative substitute products which will consequently create new jobs for the sector.

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Table 7. Current Market Access of Rice by Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Pre-UR Ban-year</th>
<th>Post-UR FinalYear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tariff Quotas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quantity</td>
<td>Tariff Rate</td>
</tr>
<tr>
<td>1. European Union</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Japan</td>
<td>379,000</td>
<td>Free</td>
</tr>
<tr>
<td>3. USA</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. Rep. of Korea</td>
<td>51,307</td>
<td>5.0</td>
</tr>
<tr>
<td>5. Malaysia</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Indonesia</td>
<td>70,000</td>
<td>90.0</td>
</tr>
<tr>
<td>7. Philippines</td>
<td>59,730</td>
<td>50.0</td>
</tr>
<tr>
<td>8. Pakistan</td>
<td>100.00</td>
<td>—</td>
</tr>
</tbody>
</table>

believed to have a comparative advantage in livestock production. However, this comparative advantage can only be realized if the necessary trade policy reforms that would reduce the cost of feeds and other inputs, and the appropriate infrastructural support are put in place.

While the tariffication of quantitative barriers on agricultural commodities will in a way protect local producers of the same products, it will increase prices of imported goods. This will specifically have a negative impact on the local producers such as the feedmillers who depend on primary imported products as inputs to the production of other intermediate goods. Nonetheless, this will encourage them and consumers to demand local substitutes causing some reallocation of resources towards the domestic industries. Consequently, this may also result in increased agricultural production.

3.6. Impact on trade balance
The impact of UR agreement on Agriculture on the trade balance is not easy to assess. The probable impact of the agreement on both exports and imports of agricultural commodities has been discussed above. To summarize, it be noted that after the removal of subsidies on wheat and other food import items, the bill on account of food imports should increase due to rise in world prices for food. Under different scenarios of population and income growth and despite supply enhancing efforts, the quantity of wheat to be imported would always be quite large in Pakistan. However, some analysts have shown that the changes in world prices are going to be modest. The analysis based on the RUNS model by Goldin and van der Mensbrughe (1995) predicts very small price changes in the range of -1 percent to 4 percent. For Pakistan’s major imports, real prices (relative to prices of manufacturing exports from OECD) are foreseen to rise in 2002 by 3.8 percent for wheat, 2.3 percent for coarse grains, and 1.8 percent for sugar; at the same time, world prices of some major imports are predicted to decline such as other foods (-1.4 percent). For Pakistan’s major exports such as rice and cotton, world prices are predicted to decline slightly from the benchmark levels with rice prices declining by 0.9 percent and cotton by 1.2 percent in 2002.

Despite small changes in prices, the trade balance effect would be significant mainly due to large wheat and edible oil imports and only limited increases in the value of agricultural exports. The possibility of compensation to be given to net food importers by the food donors under the Agreement can help somewhat to finance the import bill for food.

3.7. Opportunities for agricultural trade expansion both within and outside the region
Pakistan and every other country in South Asia trades largely with the rest of the world. Table 8 shows that Pakistan’s agricultural exports to the rest of the world have been more than 92 percent while agricultural imports have also dominantly come from the rest of the world. The importance of different commodities can be determined by two measures i.e., in terms of (i) the share of exports and imports in the SAARC region and (ii) the share of exports and imports with the rest of world. Major agricultural export commodities

<table>
<thead>
<tr>
<th>Table 8. The relative importance of Pakistan trading partners for agricultural exports and imports</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countries</strong></td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>Bhutan</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>Maldives</td>
</tr>
<tr>
<td>Nepal</td>
</tr>
<tr>
<td>Sri Lanka</td>
</tr>
<tr>
<td>SAARC</td>
</tr>
<tr>
<td>Rest of the world</td>
</tr>
<tr>
<td><strong>Total World</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category of Policy</th>
<th>Pakistan's Policy</th>
<th>Agreement on Agriculture</th>
<th>Structural Adjustment Programme</th>
<th>Efficiency and Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Domestic Agricultural Policies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Output Prices</td>
<td>Commodity-specific mechanisms using some form of administered price to support producer prices.</td>
<td>Will influence the AMSs to the value of PD-Pb(Qm). Support is negative in aggregate and for most individual commodities except sugar and coarse rice. Current policies therefore comply unless removal of implicit taxation leads to a positive AMS. Even then the de minimis ruling may exempt commodities with positive protection.</td>
<td>SAPs' emphasise elimination of producer subsidies or taxes. Current negative levels of support for most agricultural commodities do not therefore comply. Implementation of SAP provisions should lead to removal of the gap between domestic and adjusted border prices and increasing returns to producers.</td>
<td>While minimum price guarantees can provide a degree of price stabilisation which may increase efficiency though reducing market risk, in general output price impact may result in an inefficient allocation of resources. It is generally regressive in its impact, favouring those who market most, or those able to produce commodities for which support is most positive.</td>
</tr>
<tr>
<td>2. Traded Input Prices</td>
<td>These input subsidies have been largely phased out. Subsidy on fertilizer as do the subsidies on certified wheat seed and on renting of certain machinery.</td>
<td>Input subsidies generally available to poor farmers are exempt from inclusion in the AMS. This should apply at least to fertiliser and seed subsidies.</td>
<td>Elimination of input subsidies are an important SAP condition. Current policies which are in the process of eliminating subsidies on traded inputs therefore comply.</td>
<td>Such support is potentially more cost-effective to administer than output price support, and can be used to promote technical innovation, but it frequently bypasses the poorest farmers who may not use these inputs.</td>
</tr>
<tr>
<td>3. Non-Traded Input Prices</td>
<td>Subsidies for such imports are important type of input subsidy in Pakistan. The largest government expenditure is on implicit subsidies for irrigation water, followed by those for credit and electricity.</td>
<td>Providing these are generally available to poor farmers, they should be exempt from inclusion in the AMS measurement.</td>
<td>Implicit subsidies on water and electricity as well as general interest rate subsidies are not compatible with the spirit of SAPs and there may be pressure to reduce or eliminate them.</td>
<td>Credit subsidies, being input neutral compared with traded inputs, provide a relatively efficient form of support with substantial scope for targeting towards the poorest. However, water and electricity subsidies may lead to excessive and inefficient use.</td>
</tr>
<tr>
<td>4. Marketing Interventions</td>
<td>Most agricultural commodities are marketed, at least partly, by public sector agencies, both imports &amp; exports and for non-traded commodities: e.g. Provincial Food Departments and PASSCO. For exports the RMC (rice) and the CEC (cotton).</td>
<td>Only those subsidies which 'distort' prices of inputs or outputs are the concern of the Agreement, which is, therefore, neutral with regard to any subsidies which merely facilitate public sector marketing. Marketing subsidies affecting input or output prices are included in the AMS. Subsidies which reduce export marketing costs are exempt.</td>
<td>De-regulation and privatisation of public sector enterprises are a significant feature of SAPs which are likely to reinforce current moves in this direction.</td>
<td>Public sector marketing is often regarded as highly inefficient, although frequently this is due to a failure to account separately for commercial and social functions. The latter can be important to areas disadvantaged by poorly developed physical and market infrastructures.</td>
</tr>
<tr>
<td>5. Non-Price Measures</td>
<td>Direct (&quot;de-coupled&quot;) income payments, income insurance; restructuring grants.</td>
<td>Not applicable in Pakistan at present.</td>
<td>SAP conditionality seldom makes reference to this type of policy, except in so far as high levels of government expenditure are discouraged. At the same time, interventions which reflect environmental concerns are increasingly considered favourably.</td>
<td>In so far as 'de-coupled' non-price support does not directly affect resource allocation it can be an efficient mechanism of intervention. Direct income transfers may also be potentially easy to target. At the same time, administrative costs may render such interventions prohibitively expensive in developing countries.</td>
</tr>
</tbody>
</table>
B. Trade Policy Instruments

1. Export Policies
Taxes, subsidies, and export prohibitions, etc.

- Export duties on basmati rice and cotton; an export subsidy on cut flowers; export prohibitions on oilseeds, pulses, certain livestock, timber and (periodically) cotton.
- Export taxes do not run counter to the Agreement. Prohibitions do, however, except for health or social reasons, so some of these will be hard to justify. The cut flower subsidy is a 25% freight subsidy, and therefore compatible with the agreement which exempts from restriction national and international subsidies on exports by developing countries.\(^\text{10}\)
- Export taxes\(^\text{11}\) and subsidies, in so far as they distort domestic resource allocation, are frowned upon, although the promotion of export earning activity is encouraged.

Tariffs are a relatively inefficient way of raising government revenue since they act as disincentive to export production, although 'windfall' taxes following world price escalations may be justifiable on equity grounds. Export subsidies may be efficient in the short term (but only in the short-term) to foster market access or, in the 'small-country' case, to dispose of atypical surpluses.

2. Import Policies
Tariffs, quotas, other non-tariff barriers, import prohibitions.

- Import subsidy on wheat; import tariffs on coarse rice, maize, non-traditional oilseeds and minor cereals; import prohibition on pigs and pig products.
- Most current tariffs fall well within the negotiated tariff boundaries, and import subsidies are not considered, so compliance is not an issue. The decision to simplify and increase the transparency of the tariff system will reinforce this state of affairs.
- SAP conditionality encourages reduction of tariff barriers and tariffication of non-tariff barriers, although limited use of tariffs is acceptable at a common rate.
- Import subsidies, in providing disincentives to domestic producers are discouraged.

Tariffs are less inefficient than other forms of import restriction, although any intervention which increases the import price of food is likely to disadvantage the poorest, particularly the urban poor. Import subsidies are highly inefficient, since the subsidy benefits foreign suppliers directly, although the distributional effect, in the case of wheat, is ambiguous; it benefits consumers, many of whom are poor, at the expense of producers, many of whom are also poor.

3. Public Investments
Investment in research and extension; provision of physical or marketing infrastructures.

- Expenditure on research and extension is exempt from AMS considerations, i.e. falls into the 'green box' category, as does investment in physical or marketing infrastructures.
- Investment in economic and physical infrastructures especially where it assists in overcoming market imperfections while leaving resource allocation to market influence, is encouraged providing expenditures are within the spending constraints.
- Since this type of investment typically facilitates private sector activity, and does not directly affect prices, it is regarded as efficient. At the same time, public investments are typically long-term, and the poor tend to have relatively short time horizons. Such investments are also difficult to target.

General food subsidies, such as that on wheat, are highly inefficient since the poor and non-poor may benefit equally. Such leakage is reduced through targeting, but the associated administrative costs can be high.\(^\text{12}\)

4. Food Security Measures
Consumer price subsidies; food stock maintenance; food and provision.

- There are substantial consumer subsidies affecting wheat, edible oils and sugar.
- The agreement is neutral with regard to consumer subsidies, so these do not affect compliance. Neither do the maintenance of food reserves (which are not used to support producer prices) or the provision of foodstuffs at subsidised prices.
- SAPs generally require curtailment of public spending, particularly on consumer subsidies. Current subsidies are non-compliant and conditionality likely to involve their reduction or elimination.

6. As with subsidies on traded inputs the opportunity for targeting assistance, particularly regarding credits, may be constrained by the Agreement, although encouraged under SAPs.

Notes:
1. The Table considers compliance with the Agreement on Agriculture, and does not cover the Sanitary and Phytosanitary Agreement.
2. AMS = Aggregate Measure of Support, where \(P_d\) = domestic price, \(P_b\) = adjusted border price and \(Q_m\) = the marketed quantity.
3. Note that the de minimis provision of the Agreement is based on the total value of production: 10% of total production may be a much larger proportion of marketed production, increasing the possibility of exemption of positive support to key commodities such as rice, oilseeds and sugar, in the event that negative protection is ended for other commodities.
4. SAP = Structural Adjustment Programme.
5. These input subsidies are largely phased out, but any re-introduction could be compatible with the Agreement providing subsidies were generally available to the poor.
6. As with subsidies on traded inputs the opportunity for targeting assistance, particularly regarding credits, may be constrained by the Agreement, although encouraged under SAPs.
7. PASSCO = The Pakistan Agricultural Storage and Services Corporation; REC = The Rice Export Corporation; and CEC = The Cotton Export Corporation.
8. The Search for forms of intervention which are both appropriate to developing country needs and which fall into the 'green box' category is likely to be an important focus in the future.
9. Providing they are not seen as circumventing reduction commitments on export subsidies.
10. Removal of export taxes may present problems when the government is already under pressure to reduce its spending. Revenue loss can exacerbate the problem.
11. SAP pressures to increase producer incentives coupled with conditionality associated with lower government spending (cutting consumer subsidies) makes it imperative to find efficient and cost efficient and cost effective mechanisms for targeting lower levels of consumer subsidy to the most food insecure.
from Pakistan to the SAARC markets in order of their importance are sugar, cereals, vegetables and fruits, fish and raw cotton; while to the rest of world are cereals, fish, cotton, sugar, vegetables and fruits. On the other hand, major agricultural import commodities from the SAARC region to Pakistan in order of their importance include tea, oil seeds and vegetables and fruits; while agricultural import commodities to Pakistan from the rest of world are fixed vegetable fats, tea, vegetables, cereals, and cotton.

It may also be noted that the SAARC region’s share of Pakistan’s exports of agricultural commodities has gone down from 49 percent in 1991–92 to 39 percent in 1993–94. This reflects not only the supply side constraints in Pakistan but also a reflection of import substitution in the agriculture sector going on in our export markets in the SAARC region or a trade diversion away from South Asia. Interestingly, imports of agricultural commodities from SAARC countries to Pakistan have increased from 31.7 percent in 1991–92 to 43.6 percent in 1993–94 which shows the efforts made by Pakistan to promote trade of agricultural commodities in the SAARC region.

As far as the SAARC region is concerned, the prospects of increase in trade are not very bright in the medium-term; however, once the regional countries sign South Asian Free Trade Area (SAFTA) agreement then trade in agricultural commodities will increase.

IV. Compliance of Pakistan’s agricultural policies with the provisions of the Uruguay Round Agreement on agriculture and structural adjustment programmes

Table 9 provides a check list of compliance of Pakistan’s agricultural policies with both the UR agreement on Agriculture and Structural Adjustment Programmes. The check list is provided for five types of policies, i.e. domestic agricultural policies (output prices, traded input prices, non-traded input prices, marketing interventions and non-price measures); trade policy instruments (export policies and import policies); public investments and food security measures.

The check list is divided into four columns. The second column shows the current status of Pakistan’s policy for each area/sub-area. The third column is divided into two sub-columns; one for the UR agreement on Agriculture and the other for Structural Adjustment Programmes. For each, information is provided on whether and by how much each policy is compatible with the agreement on Agriculture or Structural Adjustment Programmes respectively. The last column summarises possible efficiency and equity outcomes from each of the policies listed in the table.

References

Impact of Uruguay Round Agreement on Pakistan's Agriculture Sector

Agricultural Trade Liberalization in the Uruguay Round: Implications for Sri Lanka

Prema-Chandra Athukorala* and Saman Kelegama**

I. Introduction

The paper begins with a stage-setting introduction to the agricultural sector in the Sri Lankan economy with a focus on its significance in the overall economy in terms of contribution to output, employment and foreign trade, and the salient sectoral peculiarities which have a bearing on the formulation of agricultural trade policy. Section III provides a detailed account of the current agricultural trade and production policies while paying due attention to their roots in the post-independence policy-making process and the related socio-political considerations. Section IV is the core of the paper. It examines Sri Lanka’s commitments to date to the URA and constraints to further compliance, focusing in turn on market access, domestic support and export subsidy provisions. Section V surveys the existing evidence on the impact of the URA on world agricultural trade from the perspective of global trading opportunities for Sri Lanka.

II. Agriculture in the Sri Lankan economy

Despite significant structural transformation over the past three decades, the agricultural sector still constitutes a fifth of GDP in Sri Lanka. It provides employment to about 40 percent of the labour force, surpassing the contribution of any other major sector. About 65 percent of the country's population are largely dependent on agriculture for their livelihood. Within the agricultural sector, the output share of plantation agriculture (tea, rubber and coconut production and related processing activities), the mainstay of the classical export economy of Sri Lanka, has declined sharply. The output share of non-plantation agriculture is now almost three times that of plantation agriculture.

The land area under cultivation of tea, the main agricultural export, is about 222 thousand hectares. Over 55 percent of this land is covered by state-owned plantations, while the remainder is held by small holders with less than 20

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hectares. Coconut and rubber, which cover 191 thousand and 416 thousand hectares respectively, are predominantly smallholder crops. More than 90 percent of Sri Lanka's tea production, 65 percent of rubber production and a small share (17 percent) of coconut production are exported.

Paddy (rice), the main staple crop, dominates the nonplantation agriculture. The area under paddy cultivation is 930 thousand hectares or 45 percent of total area under agriculture. The majority of farmers in the paddy sector are small-scale producers; more than 70 percent of paddy holdings are less than one hectare and only about 5 percent have a holding size of greater than two hectares. The rice sector employs about half of the total agricultural labour force in Sri Lanka (about 20 percent of total labour force). Rice accounts for approximately 25 percent of the consumer goods basket, about three quarters of total grain consumption and 45 percent of calorie intake in the country. Nearly 90 percent of total domestic rice requirement is now met from local production. The other non-plantation crops include subsidiary food crops such as maize, pulses, chillies, onion and potatoes, and a range of tree-crops such as cinnamon, cardamom, coffee, cloves, pepper and arecanut which are based mostly on home-garden activities. The non-plantation tree-crops are mostly export oriented, and they jointly contribute some 3 percent to total export earnings by encouraging private companies to increase their productivity and also by inviting foreign investors to further develop the sugar industry (MFPEANI, 1995, p. 51). In terms of organizational characteristics, the sugar industry differs significantly from other agricultural activities. It is based on a nucleus estate/outgrower system under which three companies (one state-owned and the other two foreign-owned and managed) undertake end production while a major portion of sugar cane cultivation is done by individual farmers.

The share of agricultural products in total exports declined from 40 percent in 1987 to 21 percent in 1994. The underlying factors included decline in production in public sector plantations, rapid growth in the absorption of rubber in domestic industry and the expansion of manufacturing exports (especially garments). These structural changes in gross terms, however, hide the continued importance of tea and other agricultural products in the balance of payments. As many of the manufacturing exports are based on domestic processing of imported inputs (garments and diamonds, in particular), in terms of net foreign exchange earnings, agriculture is much more important than indicated by the data on the value of exports (Athukorala and Bandara 1990). Sri Lanka is the leading tea exporting country in the world, accounting for over 20 percent of world tea trade. In other agricultural product markets, Sri Lanka is a minor player.

Agricultural imports (proxied here by food and drinks plus wheat and meslin) accounted for 13 percent of total commodity imports in 1993–94. The main import items were sugar (3.3 percent), flour (0.2 percent), wheat (2.6 percent) and rice (0.8 percent).

III. Agricultural policy

3.1. Key policy trends

During the first three decades or so after independence in 1948, Sri Lanka's agricultural policy was characterised by a striking dualistic approach; policy discrimination against plantation agriculture and an emphasis on the promotion of domestic food-production agriculture, in particular rice. The plantation sector continued to suffer from high levels of taxation imposed on exports. This sector also suffered from a continuing fear of nationalization from about the same time, and from mismanagement following the nationalizations that did occur in 1973 and 1975 (Bhalla, 1991; Cuthbertson and Athukorala, 1991). On the other hand, the paddy sector and, since the early 1970s, subsidiary food crops have benefited from government investment in irrigation schemes, subsidised inputs, cheap bank credits, guaranteed purchase prices and stringent import controls aimed at maintaining domestic market prices above competitive world prices. In fact, the policy emphasis of Sri Lankan political leaders on reviving domestic food crop agriculture in the sparsely populated dry zone (through large-scale public investment in irrigation-cum-land development projects) has a history dating well back to the 1930s (Athukorala and Jayasuriya, 1993, p. 9).

Since 1977, Sri Lanka has made significant progress in undoing a legacy of import substitution policies and removing distortions in the price system. The initial focus of the reforms was on trade policy reform, focusing largely on manufacturing (ADB 1995). The liberalization attempts have, however, become broad-based over the years with the objective of redressing distortions on an economy-wide basis and harmonising competitive conditions across sectors.
Export duties on all plantation products were removed with effect from December 1992, thus correcting a long standing anomaly in the taxation of traditional exports vis-à-vis non-traditional exports. In the same year, steps were taken to turn the management of plantation companies over to private sector companies. The other noteworthy reform measures implemented since the mid-1980s have included the abolition of government monopoly (operated through the Paddy Marketing Board, PMB) in the procurement of paddy output, the rationalization of rural credit schemes, the gradual removal of monopoly import rights enjoyed by the Cooperative Wholesale Establishment in food imports, and the relaxation of restrictions on foreign capital participation in agriculture. However, the licensing of agricultural imports is still widespread, notably for rice, wheat, chillies, onions and potatoes.

The change of government in 1994 has not resulted in a policy reversal. The inaugural policy statement of the new government has assured that economic policy will in general be market friendly and the private sector will be considered the principal engine of growth (Government of Sri Lanka 1995). According to this policy statement the key objectives of the agricultural policy are: (a) removing hidden discrimination against agriculture resulting from macroeconomic and trade policies, bureaucracy, over regulation and other discriminatory measures which have hitherto reduced agricultural productivity and constrained investment; (b) limiting State intervention and eliminating monopolies so as to foster greater competition in agricultural markets; (c) granting freehold titles to settlers and removing restrictions on leasing land in agricultural settlement schemes in order to create a land market and give farmers the freedom to make the best use of their land; (d) ensuring a greater role for the private sector in agricultural development through privatization of plantations, investment in agro-based industries to create rural employment, transfer of commercial activities of Mahaweli Authority to private enterprises, a greater voice in agricultural research and encouragement of collective agreements between the plantation companies and trade unions.

The new government is committed to the stated aim of progressively reducing and harmonizing tariffs towards a single rate over the medium term (Government of Sri Lanka, 1995). A two-pronged import tariff of 10 and 20 percent (1996) and a single (uniform) 15 percent tariff (1997 or 1998) are under consideration. The 1995 budget proposed a restructuring of the plantation sector under long-term (50 year) management contracts and a financial stake for the private sector management companies. This initiative recognises that privatization in some form is the best way of revitalising the tree crop plantations. (Under the management contract system introduced in 1992, there has been some improvement in agronomic practices and management in the plantation sector. However, the management contracts failed to provide appropriate incentives for private companies to invest their own resources in rehabilitating the estates.)

3.2. Current policies

(a) Export duties. After the abolition of export duties on all plantation crops in December 1992, the taxation of exports has been limited to various surcharges and cesses which are applied at rather moderate rates. The proceeds from these surcharges and cesses are ploughed back into the export sector in the form of selective incentives, replanting subsidies and start-up subsidies for new exporters.

The share of export taxes (duties + cesses + other surcharges) to total government revenue was as high as 25.16 percent in the early 1980s. As a result of progressive reduction and the final elimination of export duties, this had dropped to 0.05 percent by 1993 (PCTT, 1994, p. 27). There are no quantitative restrictions on exports, apart from a licensing requirement on a limited number of minor items on grounds of cultural value and health implications.

(b) Export subsidies. The Export Development Board (EDB) assists new exporters in non-traditional agricultural activities with grants up to 3 percent of the FOB value during the first year of operation. There are no other direct transfers to encourage exports. In principle these exporters are also eligible for the use of refinancing facilities and the provision of seed capital for new ventures by the EDB, and income tax exemption and waiver of customs duty on intermediate goods import under the Board of Investment (BOI). These facilities have hardly been utilised by agricultural producers with the exception of a few large companies involved in the sea-food industry and horticulture. All subsidies on non-plantation export crops amount to less than 1 percent of export earning from the designated products.

A variety of subsidies are given by the Tea Board to promote the marketing of processed tea. These include a 50 percent interest rate subsidy on loans obtained for the purchase
of tea bagging machinery. In 1992, this subsidy costs 26 million rupees, exemption from import duty and other levies of capital goods used for export processing of tea; a cash grant to exporters who increase the volume and export price of processed tea over the previous year. In 1992, the total value of these subsidies amounted to less than 0.5 percent of the total value of processed tea exports. Similar subsidies, but on a smaller scale, are given by the Sri Lanka Export Development Board to exporters of fresh fruit and vegetables on imported packing materials. There are no export subsidies on coconut products, spices and tobacco.

(c) Import duties and quantitative import restrictions. Liberalization initiatives since 1977 have reinforced the role of tariff as the central instrument regulating Sri Lanka's merchandise trade. The tariff regime has also become less distortionary during subsequent rounds of reforms. It currently relies on a three-pronged structure with rates of 10, 20, and 35 percent. In 1994, the unweighted average (across 6,050 tariff items) was in the order of 20 percent and the ratio of actual duty revenue to imports was even lower (about 11 percent) (WTO, 1995a, p.35). These developments notwithstanding, both high tariffs and quantitative restrictions still remain important deterrents to import trade in agricultural goods (Table 1).

The importation of rice to Sri Lanka is subject to licensing and an ad valorem tariff of 35 percent. Licences are issued by the Food Commissioner's Department guided by the twin objectives of protecting domestic rice producers and maintaining a reasonable price for the consumers. The Presidential Commission on Tariffs and Trade (1994) has spelled out the government policy stance as follows:

Fluctuation in international market price could be detrimental to the interests of Sri Lankan farmers. However, if this item is liberalised and placed at some higher rate of duty to protect the local farmers, the consumers will be adversely affected. The only practical method by which both objec-

| Table 1. Tariff and Trade Restriction on Agricultural Imports January 1996 |
|---------------------------------|-----------------|-----------------|-----------------|
| Item                            | Tariff (%)      | Trade Restrictions                      |
| 1. Rice                          | 25              | Licence — imports by selected bondsmen  |
| 2. Wheat                         | 25              | Licence — imports by CWE                |
| 3. Wheat Flour                   | 35              | Licence — imports by CWE                |
| 4. Potatoes                      | 100             | Licence — Seasonal restriction          |
| 5. Chillies                      | 5               | Licence — Seasonal restriction          |
| 6. Onions — big                  | 5               | Licence — Seasonal restriction          |
| 7. Onions — red                  | 5               | Licence — Seasonal restriction          |
| 8. Pulses — Lentils              | 5               | Licence — Seasonal restriction          |
| 9. Pulses — Other                | 5               | Licence — Seasonal restriction          |
| 10. Maize                        | 5*              | Licence — imports by selected bondsmen  |
| 11. Ginger                       | 60              | Licence — imports by selected bondsmen  |
| 12. Turmeric                     | 60              | Licence — imports by CWE                |
| 13. Saffron                      | 60              | Licence — imports by CWE                |
| 14. Aniseed                      | 5               | Licence — Seasonal restriction          |
| 15. Coriander                    | 5               | Licence — Seasonal restriction          |
| 16. Cumin Seed                   | 5               | Licence — Seasonal restriction          |
| 17. Fennel Seed                  | 5               | Licence — Seasonal restriction          |
| 18. Sugar                        | 60              | Licence — imports by selected bondsmen  |
| 19. Milk — Full Cream            | 60              | Licence — imports by selected bondsmen  |
| 20. Milk Powder                  | 60              | Licence — imports by selected bondsmen  |

Note: * 75% for non-animal feed.
Source: Customs Notifications.
tives of protection to the local farmer and providing rice to consumers at a reasonable price would be to permit import during a shortfall of domestic production under an appropriate tariff (PCTT, 1994, p. 71).

Until 1990, the Cooperative Wholesale Establishment (CWE) had a monopoly in rice imports. In August 1990, a "bondsmen" scheme was introduced. Under this scheme private traders (bondsmen) are allowed to import and operate buffer-stocks subject to the requirement of paying import duties only when the stocks are released to the domestic market. The gazetted tariff rate on rice import was 20 percent until 1992, which was then revised upward to 35 percent in 1993. Though the present duty is 35 percent, the government in effect is levying a duty varying from 12 percent to 20 percent in order to keep the price of imported rice slightly above the price of rice milled out of the paddy purchased under the GSP.

Wheat and wheat flour are the only agricultural commodities in which the CWE currently has import monopoly. The major obstacle to the privatization of trade in these commodities is a long-term agreement (entered into in 1980 and due to expire in 2004) between the government and the Prima Flour Mill under which the government supplies an agreed amount (450,000 tons) of wheat on condition that Prima provides the CWE with 74 tons of flour for every 100 tons of wheat supplied for distribution through the CWE trading network. Prima is allowed to retain and market wheat bran Prima Ceylon Ltd., a foreign-owned (Singaporean) company that is the only flour mill in the country. It has the capacity to meet the full requirements of the country for wheat flour. Sri Lanka's flour and wheat requirements are entirely met through imports.

The government fixes (through the CWE) the domestic price of wheat flour. Imports of wheat and wheat flour are therefore determined in such a way that the demand requirements are satisfied at the fixed price. Until 1994, flour prices were normally set to cover the full cost and the CWE continued to make a profit from flour sale. On 29 August 1994, the administered price for flour sales by CWE was reduced from Rs. 11.00 to Rs. 6.55 per kg, accompanied by a reduction of the price of a loaf of bread from Rs. 5.00 to 4.50 to fulfil an election promise. With the rise in the world market price of wheat, the subsidy on wheat flour has become a big burden to the government. Although the price of wheat flour was raised twice, it is still below cost and the government subsidy is estimated at Rs. 4000 million a year at prevailing prices. The wheat subsidy, by reducing the price of flour relative to rice, has increased the consumption of wheat in the country on one hand and acts as a disincentive to rice cultivation on the other. The shift in consumer demand from rice to heavily subsidized wheat has begun to exert downward pressure on the price of rice and paddy.

Chillies, onions and potatoes are subject to stringent import quotas. The import quantities of these seasonal food crops are decided at a weekly Food Security Meeting (involving the Department of Census and Statistics, the Food Commissioner, Ministry of Agriculture, and the Controller of Imports and Exports). The Food Commissioner issues import licences to private traders. The stated operational rule has been to "decide import quantities by taking into account the country's food supply situation and additional considerations such as the cost of living" (PCTT, 1995). However, in practice, the objective of protecting farmers seems to receive priority. In particular, imports of potatoes have been virtually banned for many years. Imports of seed potatoes are, however, allowed under a licence scheme. Given the exorbitantly high market price for potatoes (as high as US$3 per kg during off-harvest seasons), seed potato importers are believed to reap handsome quota rent by selling seed potatoes illegally for consumption.

There are no quantitative restrictions on sugar imports. The importation, distribution and maintenance of buffer stocks of sugar are now mainly in the hands of the private sector, and the CWE plays only a supplementary role. The import tariff is set by the government according to a special agreement with the Pelmatte Sugar Company (a subsidiary company of the sugar giant, Booker International) aimed at guaranteeing certain rate of return to the company. The current tariff (35 percent) aims to maintain a minimum efficiency ex factory price of not less than US$550 per tonne (US$22.7 cents per lb) based on "the average cost of production of efficient producers elsewhere in the world and ensure reasonable remuneration to the cane producer and the miller" (MFPEANI, 1995). However, according to a recent ADB study "This is a price in line with prices in the highly protected US domestic market and about twice the import price" (ADB, 1995, p 112). The government usually justifies its controversial sugar pricing (tariff) policy by pointing to the "strategic importance" of increasing local production to meet a considerable part of the domestic demand.
The current import duty on milk powder and full-cream milk is 20 percent. The intention of tariff protection here is apparently to increase protection “to ensure adequate returns to domestic producers/processors” and to increase domestic fluid milk consumption and reduce dependence on imported milk powder” (MFPEANI, 1995). A subsidiary company of Nestle is the sole milk powder producer in the country. Nestle established its production plant in Sri Lanka (in the early 1980s) under the assurance given to it at the highest political level to ensure reasonable returns through tariff policy (Ratnayake 1993).

There are subsidies to encourage the production of the country’s major export crops: tea, rubber, coconut and minor export crops: cinnamon, cloves, pepper, coffee, cocoa, nutmeg, cardamom and citronella oil. Subsidies for the tea sector provided by the Tea Smallholdings Development Authority and the Tea Board in 1994 under new planting, replanting, factory development and factory modernization schemes amounted to Rs. 250 million or 1.6 percent of the value of total tea production in that year. The coconut subsidies formed only 0.44 percent of the value of production.

Minor export crops — cinnamon, cloves, coffee, cocoa, pepper, nutmeg, cardamom and citronella oil — are provided with incentives in the forms of direct subsidy to producers, fertiliser subsidy, supply of planting material at subsidised prices by the Department of Agriculture, a price support scheme and credit subsidies through the assistance of the Asian Development Bank for increasing commercial production and productivity. The direct subsidy and fertilizer subsidies in 1993 amounted to Rs. 9.6 million, while the subsidy under the price support scheme was Rs. 16.8 million.

The government policy to promote rice production has historically involved three key elements: a guaranteed price scheme operated by the Paddy Marketing Board (PMB), a fertiliser subsidy and concessionary bank credits. The guaranteed price scheme has been virtually inactive since the abolition of the PMB monopoly in the procurement of paddy in the mid 1980s. In the competitive market for paddy, the PMB now purchase only about 2 percent of total paddy output in the country. As a result of reforms in 1979, concessionary credit for paddy farmers is now responsible for only a very small share (7.5 percent) of input financing in non-plantation crop agriculture. In a context where the saving deposit rate is well below the concessionary loan rate, the farmers rely mostly on self-financing for cultivation purposes. The fertiliser subsidy was abolished in 1990 as part of a wide-ranging structural adjustment policy package. It was reintroduced in 1994. The current subsidy rates are 40 percent for urea, 15 percent for ammonium sulphate, 9 percent for nitrate of potash and 22 percent for triple super phosphate.

Apart from direct production and price supports, the paddy sector has continued to be the beneficiary of state sponsored research and extension services and, more importantly, free irrigation of rice fields by state built and maintained irrigation schemes. According to a recent World Bank study, the annual irrigation subsidy amounts to some 12,500 million rupees or 3 percent of total value added in the paddy sector. The annual equivalent of subsidy to new major irrigation schemes amounts to about Rs. 50,000 per hectare or 20 percent of the value added per hectare (Hunt and Lister, 1995).

There are no direct subsidies as such to encourage the production of subsidiary crops although in some areas farmers benefit from free irrigation. There are however, agricultural extension services to educate the farmer on improved methods of production. There are also guaranteed price schemes operated by both the Paddy Marketing Board and the Cooperative Wholesale Establishment for eight subsidiary food crops: maize, kurakkan, groundnuts, soybean, gingelly, cowpea, green gram and black gram. Like in the case of paddy, annual purchases under these schemes are small (about 3 percent of annual output) and hence the effect on market prices is insignificant.

### 3.3. Quantifying policy intervention: NPC, EPC and ESC

Two recent studies provide estimates of assistance to agriculture (Edwards, 1993 and Shilpi, 1995). A major limitation of Edwards’ estimates is that they are based on duty adjusted border prices, not on direct price comparisons. Thus the reliability of these estimates for food crops which are under stringent licence control is questionable (PCTT, 1994, p. 69). Estimates provided in Shilpi (1995) do not suffer from this limitation. Moreover, this study provides estimates of effective subsidy coefficients (ESC), in addition to nominal protection coefficients (NPC) and effective protection coefficients (EPC). For these reasons, the discussion in this section is based on Shilpi’s estimates which are summarised in Table 2.
### Table 2. Structure of incentives for agriculture 1993

<table>
<thead>
<tr>
<th></th>
<th>NPC</th>
<th>EPC</th>
<th>ESC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Import Competing Agriculture</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>1.33</td>
<td>1.53</td>
<td>1.68</td>
</tr>
<tr>
<td>Others — average</td>
<td>—</td>
<td>1.70</td>
<td>1.79</td>
</tr>
<tr>
<td>Chillies</td>
<td>1.50</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Onions (big)</td>
<td>2.60</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Potatoes</td>
<td>1.60</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lentils 1990–93</td>
<td>1.20</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>B. Export oriented agriculture</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-plantation crops</td>
<td>—</td>
<td>1.02</td>
<td>1.06</td>
</tr>
<tr>
<td>Plantation crops</td>
<td>—</td>
<td>1.35</td>
<td>1.45</td>
</tr>
<tr>
<td>Tea</td>
<td>—</td>
<td>1.00</td>
<td>1.03</td>
</tr>
<tr>
<td>Rubber</td>
<td>—</td>
<td>—</td>
<td>1.04</td>
</tr>
<tr>
<td>Coconut</td>
<td>—</td>
<td>—</td>
<td>1.02</td>
</tr>
<tr>
<td><strong>C. Agriculture — average</strong></td>
<td></td>
<td>1.24</td>
<td>1.32</td>
</tr>
<tr>
<td><strong>D. Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import competing manufacturing*</td>
<td>—</td>
<td>1.30</td>
<td>—</td>
</tr>
<tr>
<td>Export oriented manufacturing</td>
<td>—</td>
<td>1.70</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>1.00</td>
<td>—</td>
</tr>
</tbody>
</table>

Notes: *This estimate is directly from Edwards (1993).
— Not available.

NPC: Nominal protection coefficient — the ratio of domestic price over border-equivalent (world) price.
EPC: Effective protection coefficient — the ratio of value added under existing trade policy intervention to value added at border price.
ESC: Effective subsidy coefficient EPC adjusted for net subsidies on non-traded inputs.


The NPC for import competing agricultural crops is 1.33. This suggests that the price paid by the Sri Lankan consumers for these goods on the average is 33 percent higher than what they would pay in the absence of trade protection. The estimates for individual items vary in the range of 1.3 (rice) to 2.4 (big onions). There is a clear relationship across commodities between the incidence of quota restrictions (as discussed above) and the price raising impact of the trade regime. For QR restricted items, the existing tariff rates seem largely irrelevant. The effective protection coefficient for this product group is 1.53, with rice and other subsidiary food crops showing coefficients of 1.36 and 1.70 respectively. The fact that the EPCs for rice and subsidiary food crops do not differ much from respective NPCs suggests that trade restrictions play a more important role than various price supports on the production side in providing incentives to the farmers. The degree of protection enjoyed by export agriculture is well below the levels observed for import competing agriculture. Following the abolition of export duties in 1992, plantation agriculture now operates under virtually free trade conditions.

The effective subsidy coefficient (ESC) for import-competing agricultural crops is 1.68 compared to an EPC of 1.53. The difference is largely a reflection of the irrigation subsidy (free irrigation facilities) for the rice sector. As there is no user charge for irrigation, the effective subsidy per hectare for rice under major irrigation schemes is fairly high (giving rise to an ESC of 2.30) while it is less for minor irrigation schemes and absent in rain-fed cultivation. Thus the average ESC for the rice sector turns out to be around 1.56 compared to an EPC of 1.36.
The degree of protection of import-competing manu-
facturing is much higher (EPC = 1.70) than that of both to-
tal (1.24) and import-competing (1.53) agriculture. How-
however, the use of EPC estimated only for import substituting
manufacturing for an inter-sectoral comparison of protec-
tion rates seems to give a misleading picture about the anti-
agricultural bias of the incentive structure for two reasons.
First, the share of export-oriented production (which re-
ceived relatively low protection) in the manufacturing sec-
tor has increased significantly, reaching a level of over 60
percent by the mid 1990s. Second, there is evidence that
many manufacturing tariffs are not binding and in the pres-
ence of various tariff exemptions, the gazetted rates are nor-
mally much higher than the actual rates. On these grounds,
Shilpi (1995) estimates a weighted-average tariff rate for to-
tal manufacturing, assuming an EPC coefficient of 1.00 and
60 percent output share for export-oriented production. Ac-
cording to this weighted-average rate (1.30), the manufac-
turing sector is largely at par with agriculture in terms of
the degree of protection enjoyed.

IV. Sri Lanka and the Uruguay Round

Sri Lanka has been a contracting party to the General Agree-
ment on Tariff and Trade (GATT) since 1948. It ratified the
Marrakesh Agreement establishing the World Trade Orga-
nization (WTO) on 1 June 1994 to become a founding mem-
ber of the WTO on 1 January 1995. Sri Lanka thus assumed
the commitments of the Multilateral Agreement of Trade in
Goods, the General Agreement on Trade in Services (GATS)
and the Agreement on Trade-Related Aspects of International
Property Rights.

Trade reform provisions of the Uruguay Round Agree-
ment on Agriculture (URA) fall under three main catego-
ries: market access, domestic support and export subsidies.
In this section we discuss Sri Lanka's commitments to date
to URA, and constraints to further compliance following this
three-way classification.

4.1. Market access

In compliance with its commitments under the URA, Sri
Lanka has bound all tariffs on agricultural goods at a uni-
form rate of 50 percent. Sri Lanka informed the WTO Sec-
retariat on 1 January 1995 that it “implemented 99 percent
of its agricultural trade bindings” (WTO, 1995a, p. 21). The
tariff lines in the relevant list contained about 700 agricul-
tural items including meat, fish, milk, milk powder, fruits,
vegetables, nuts, spice, coffee, seeds, sugar, maize, starches,
oils and fats, cocoa, pastries, fruit juices and fruit prepara-
tions. The Government has appointed a Committee on Ag-
riculture to monitor the implementation of the commit-
ments undertaken under the Uruguay Round, to review no-
tifications of new or revised support measures and other
matters of concern. This committee will work in conjunc-
tion with the Secretariat of the WTO.

Sri Lanka bound import tariffs without abolishing the ex-
histing non-tariff measures (NTMs). Thus compliance with
the Uruguay Round in the present form, will result in no tar-
iff effect on the NTM restricted agricultural imports. As we
have already noted for these items the actual nominal rate of
protection is well above the bound rate. The tariff binding may
only constrain the use of surcharges during harvest seasons.
The Sri Lankan government has justified the maintenance of
existing NTMs on balance-of-payments grounds. During its
recent (November 1994) consultations with the Committee
of Balance of Payments Restrictions of WTO, Sri Lanka in-
formed that licensing would be retained on these products for
their indirect impact on the country's balance of payments.
The following products were listed: potatoes, fresh or chilled
(H.S. Code 0701.90); onions, shallots, garlic, other alliaceous
vegetables, fresh or chilled (0703.10.01 and 0703.10.02), pep-
per of the genus 'piper' dried or crushed or ground (0904.20);
wheat and meslin (including flour) (1001.10, 1001.90 and
1101.96); and cereal groats, meal and pellets (1103.11). (WTO,
1995a, p. 46). The Balance of Payments Committee expressed
its concern that “Sri Lanka no longer apply these measures
on such grounds” (WTO, 1996, p. 10).

At present, Sri Lanka's position relating to the tarifi-
cation of existing NTMs remains unclear. The Govern-
ment's stated policy is in favour of complete tarification. For instance, in the Budget Speech presented
on February 8, 1995 stated that:

.....all remaining trade licences, ad hoc surcharges and other indirect controls will be eliminated ex-
cept those essential for security, health and environ-
mental reasons. In order to ensure transparency in
our protection structure, the government will also
do away with specific duties and introduce ad va-
lorem tariffs. However, with a view to providing rea-
sonable protection to agricultural commodities, the government will impose temporary and time-bound surcharges, particularly during harvesting seasons. Similarly, when international prices of essential consumer items such as sugar, lentils, milk powder, etc., rise to exceptionally high levels, the government will grant temporary duty waivers to protect consumers.

However, in practice, there are significant constraints set by socio-political considerations. As the WTO review of Sri Lanka under its trade policy review mechanism has correctly acknowledged, “for social and regional policy reasons, rice farming is likely to attract strong continued policy attention” in Sri Lanka (WTO 1995). This concern seems to apply equally to other subsidiary food crops as well. Rice self-sufficiency has been a cherished goal of successive governments, and continued massive investments in new irrigation and rehabilitation of old systems have been geared to this end.

The available evidence on rice and subsidiary food crop production has come up with convincing evidence that Sri Lanka is a high cost producer by international standards. Thus both continuation and further increase in production, unless brought about by productivity improvements, will have to come at a very high cost to the economy. Moreover, the opportunity costs of investments in irrigation will increase over time if, as long term rice projections show, real international prices decline. Thus the economic argument for removing existing trade barriers with a view to diverting resources to alternative uses appears very strong (Bhalla, 1991; Edirisinghe et al 1991; Hunt and Lister, 1995; Shilpi 1995, Brandão, 1995). However, political will required for such bold policy initiatives is invariably compromised by socio political considerations. As Bhalla has aptly put it, “whether in terms of rice subsidies for consumers, protection for producers, or massive irrigation programmes, rice has been central to the affairs of the nation” (Bhalla, 1991, p 197).

In the case of subsidiary food crops, the political sensitivity of import liberalization is compounded by the regional concentration of production (Table 3) and the resultant greater visibility of short-run output disruption and related adjustment costs. This is particularly so for chillies, potatoes and onions — the three most heavily protected agricultural crops.

For sugar and wheat flour, impediments to import liberalization are firmly rooted in the past foreign investment approval policy of the country. In both cases, trade related conditionality was written into the investment agreements signed with the respective foreign companies without giving due consideration to future developments in related commodity markets and invariable implications for the overall trade policy of the country in a rush to entice foreign investment. This criticism seems to have some validity for milk food imports as well.

Despite the escalation of defence expenditure, revenue considerations do not appear to be a significant impediment to trade policy reforms. The percentage contribution of trade taxes on agricultural products is at present less than 3 percent of total government revenue. Moreover, a new goods and services tax (GST), scheduled for introduction in mid 1996, is expected to broaden the government’s revenue base.

### 4.2. Domestic support

The URA provisions on domestic support do not seem to present any constraints to Sri Lanka. The existing production subsidies (as we have already discussed) are consistent with these provisions. Subsidy levels are either below the cut-off points and/or justifiable in terms of their “developmental” role.

<table>
<thead>
<tr>
<th>Crop</th>
<th>1st district</th>
<th>2nd district</th>
<th>3rd district</th>
<th>Total of top 3 districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big onion</td>
<td>Matale (42%)</td>
<td>Mahaweli (16%)</td>
<td>Jaffna (11%)</td>
<td>70%</td>
</tr>
<tr>
<td>Chillies</td>
<td>Mahaweli (25%)</td>
<td>An'pura (12%)</td>
<td>Matale (10%)</td>
<td>48%</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Badulla (60%)</td>
<td>N’Eliya (38%)</td>
<td>—</td>
<td>98%</td>
</tr>
<tr>
<td>Red onions</td>
<td>Jaffna (44%)</td>
<td>Batticaloa (12%)</td>
<td>—</td>
<td>56%</td>
</tr>
</tbody>
</table>

4.3. Export subsidies
The Agreement requires subsidies on agricultural exports by developing countries to be reduced to 24 percent in value and 14 percent in tonnage over 10 years in equal annual instalments from the base period 1986–90 or where export subsidies have increased, from 1991–92. However, least developed countries and developing countries whose per caput income is below US$ 1,000 are exempt from export subsidy reduction obligation. In addition, subsidies given by developing countries for reducing the cost of marketing exports of agricultural produce including transport and freight and government mandated internal transport/freight charges on terms more favourable than for domestic shipments are exempted.

Given the present level of per caput income (US$652 in 1994) and significant marketing component in existing export subsidies, Sri Lanka's existing export subsidies easily meet URA provisions without requiring any further policy adjustment.

4.4. Other Uruguay Round commitments
No notification has yet been made by the Sri Lankan government regarding its commitments under the Agreement on Trade-Related Intellectual Property Rights and the Agreement on Sanitary and Phytosanitary Measures. As a developing country, Sri Lanka may postpone the implementation of these WTO Agreements (WTO, 1995). Draft laws are in preparation to incorporate the provisions of the WTO Agreement on Safeguard, Anti-Dumping, and Subsidies and Countervailing Measures in domestic legislation.

V. The Implications for Sri Lanka of Market Access Provisions at the Global Level
The actual tariff lowering effects under tariff bindings finally agreed upon for many commodities are much smaller than originally envisaged. This lack-lustre outcome can be ascribed to three main factors, the choice of 1986–88, when the world prices for many agricultural commodities were the lowest in the decade, as the base period for tariffication, “dirty tariffication practices,” and the ample room provided for the developing countries to escape the disciplines at their own choice (Hathaway and Ingco, 1995).

Sri Lanka's exports generally will benefit only marginally from market access provided by liberalization in other countries. Compared with some other agricultural commodities, trade in tea, Sri Lanka's major agricultural export, had been relatively free of intervention even prior to the URA. Some major developed country importers, in particular, the United Kingdom, the United States and the European Union, had no import duties or other restrictions on bulk or packaged tea. Most of the developing country importers had significant tariff and non-tariff restrictions on tea imports, but most of these countries were not signatories to the URA. In this context, an FAO projection for the world tea trade suggests that the tariff bindings agreed under the URA would stimulate only a 1.4 percent increase in world consumption. The FAO report concludes that “the impact of the Uruguay Round Agreement on the world tea economy is apparently small and despite some increase in demand, world market prices are expected to continue to be mainly influenced by existence of large export availabilities” (FAO, 1995, p. 6).

Natural rubber, the second largest, agricultural export from Sri Lanka does not come under the commodity coverage of the Agreement on Agriculture. There are no direct estimates available for coconut products, judging from estimates by Hathaway and Ingco (1995); for the broader commodity category of oleo-seeds, significant (more than 1 percent) price reductions are expected only in Japan and Australia. These are not important markets for coconut product exports from Sri Lanka. The main market for desiccated coconuts exports from Sri Lanka, the European Union, already has zero tariff and no restrictions. Egypt has also reduced its tariff from 30 percent to 20 percent. Latin American countries provide a small market. The main market for coconut oil and copra is Bangladesh, which being a least developed country has no obligation to reduce tariffs. As for fresh coconuts, the European Union has zero tariff while countries in the Near East, which accounts for 60 percent of exports, are not members of GATT.

Among the minor agricultural exports, Sri Lanka's main market is the European Union (EU) where Sri Lanka benefits from a GSP tariff of 7 percent. The reduction of the MFN rate by the EU from 35 to 23 percent may have adverse impact on imports from Sri Lanka because of the reduction in the preference margin. The other minor agricultural exports are exported either to developed country markets where the pre-URA tariffs were either zero or develop-
ing countries who are not signatories to the agreement. The net effect would therefore be largely neutral.

On the import side, the effect of URA on world rice prices has been estimated to be virtually zero. The most significant price increase that has been estimated for Sri Lanka's import products relates to wheat. The reductions in production and price supports in major producing countries are predicted to increase world wheat prices by 3.8 percent between now and 2005 according to Hathaway and Ingco (1995). However, this is a very small increase relative to the magnitude of price variability historically experienced by the commodity.

References


Low, Patrick and Alexander Yeats (1995), “Nontariff Measures and Developing Countries: Is the Uruguay Round
Round leveled the playing Field?,” World Economy 18(1): 51–70.


Chapter 1

1 This was proposed in 1991 as the agricultural agreement and contained more significant reductions in distortions than finally agreed.

2 The 18 country studies and the methodology are given in Schiff and Valdés, 1992.

3 The effects of indirect taxation through industrial protection and currency overvaluation are incorporated in these studies by adjusting downward most of the domestic-to-border price ratios, which are originally based on direct price comparisons. See, for example, Tyers and Anderson (1992, p. 213, footnote 10).

Chapter 2

1 For a review of these earlier models, see Goldin and Knudsen (1990).

2 The usual disclaimer statement prevents associating two of these models to Organizations. The results of the 1993 version of the RUNS model were published as an OECD/World Bank study (Goldin, Knudsen and van der Mensbrugghe, 1993) while a disclaimer applies to its rerun with the UR provisions (Goldin and van der Mensbrugghe, 1995) reviewed here. Similarly, the model used to assess the UR effects by the GATT in 1994 (GATT, 1994) was the same CGE model by François, McDonald and Nordstrom (1995) reviewed here, to which a disclaimer applies.

3 This follows an analytical approach used in measuring the components of agricultural protection. See, for example, Annex III of OECD (1995).

4 The tariff levels used in the WFM are base tariff equivalents shown in the country Schedules, weighted by domestic base period consumption of 6 digit HS commodities to form overall tariffs at the level of the primary product (e.g. wheat). The reductions applied to these tariffs were also based on the ones contained in the country Schedules (discussed later in section 3.2).

5 To see this, write the transmission equation as $P_d = a + (1+t)P_w$, where $a$ includes the first four terms. For $P_w=100$ and $t=0.2$, the elasticity of price transmission is 1 only for $a=0$. It is less than one in all other cases, i.e. 0.75 for $a=40$, 0.60 for $a=80$ and 0.55 for $a=100$. Thus, the effect of assuming perfect price transmission in the presence of other wedges in the equation would be to overstate domestic price changes.

6 The base period varied according to the scenarios analyzed by RUNS, i.e. 1982–93 for RUNS I and 1991–93 for RUNS III.

7 Thus, where the price wedge shows positive protection in the base case, this implies a reduction in import tariffs or reduction in export subsidies; where the wedge shows taxation of the sector, this implies a reduction in import subsidy or a reduction in export tax.

8 Constraints on expenditures on subsidized exports were not imposed in the WFM model.

9 This would have the effect of reducing domestic price and hence production. However, the extent of such reduction in production would depend on the elasticity of supply. It is not clear from the model whether additional constraints in terms of volumes and values were imposed as per the Uruguay Round commitments.

10 Some assessments have also been made on the impact of the agreement on trade in services, e.g. Brown et al. (1995), but their results are tentative, at best, due to lack of basic data.

11 Meaning that international prices are transmitted into domestic markets and domestic supply and demand, and hence trade, respond to them. In addition, for non-OECD countries, the ATPSM disregards changes in border policy measures such as tariffs and subsidies in both scenarios.

12 Goldin et al (1993) present several simulation results which show that price effects resulting from multi-sectoral liberalization are typically dampened compared to those from agricultural liberalization alone, in part due to shifts in consumption away from agricultural to manufactured products, thereby causing a relative decline in the price of agricultural goods (compared to a partial liberalization scenario).

13 By contrast, average protection level was relatively low for most developing countries during 1991–93 and relatively high during 1982–93 period.

14 The explanation for the substantial price differences between the two RUNS simulations (due to different base periods) also helps to explain, in part, differences in price changes between RUNS and other models as well, as will be seen below.

15 As said earlier, by 1991–93, the degree of liberalization was much advanced in these developing regions.
This was emphasized earlier. Also note that if tariffs are set at very high levels, prohibiting trade altogether, the transmission is zero. See Colman (1992) on price transmission.

Similarly, developing countries had the option to select bound tariffs for those commodities for which they did not have a bound rate in the past. Often these selected bound tariffs were much higher than actual unbound tariff levels in the base period, but not necessarily higher than their tariff equivalent in the base period.

Technically, under such cases even an increase in tariff rates would be possible and still not violate the letter of the Agreement on Agriculture.

These differences appear conspicuously in the various partial and economy-wide liberalization simulations reported in Goldin et al. (1993).

In reviewing the size of the UR impact at the global level, it is important to note that many countries did not participate in the UR and thus UR-related policy changes were not applied to them. They, however, may account for a substantial share of the global trade (e.g. about 22 percent for both wheat and coarse grains).

Six countries of the Region are represented separately in the WFM: Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.

In the UR, jute, kenaf and allied fibres are covered by the Agreement on Textiles and Clothing, and not by the Agreement on Agriculture.

Under other scenarios, reflecting assumptions such as imperfect competition, increasing returns to scale and capital growth, the maximum income gains from full reforms for this Region ranged between 2 percent (US$7 billion) in the MRT model and 4.5 percent (US$15 billion) of base GDP in the FMN model.

According to a decomposition reported by the MRT model, the negative effect for this Region is mostly due to reductions in subsidized exports and not from other areas of reforms modelled (e.g. tariffication, domestic support reduction).

Chapter 3

1 The statistics in this paragraph are reported in or derived from World Bank (1996), World Development Report, Annex Tables.
period. The annual AMS estimates for Pakistan up to 1993/94 in the study Qureshi (1996) also follow economic logic rather than the GATT rules. The Pakistan AMS estimates would be positive and large for the later years if the correct GATT rules had been applied. As noted previously, India is at least partly protected against such a result by overstated base period reference prices.

Including the capital cost of irrigation in the canal irrigation subsidy increases the total subsidy rate to slightly more than 10 percent in India, and would probably increase it much more in Sri Lanka, owing to the massive expenditure on the Mahaweli irrigation scheme. This accounted for over half of Sri Lanka's total government expenditure in the mid 1980s and still accounted for over 20 percent in 1994. But there are of course many conceptual and practical difficulties in measuring this subsidy, and also in charging farmers for canal irrigation.

A number of previously unrestricted products were in fact added to India's restricted list in its April 1, 1997 Export-Import Policy, but it was implied that the justification for these new restrictions are the GATT provisions on health, safety and security, rather then Article XVIII:B.

Understanding on the Balance-of-Payments Provisions of the General Agreement on Tariffs and Trade 1994. Among other things, this states that "Members confirm their commitment to announce publicly, as soon as possible, time-schedules for the removal of restrictive import measures taken for balance-of-payments purposes".

On this see Finger (1993) and Hoekman (1995).

Chapter 8

1 It should be noted that WTO Members which have reserved the right to invoke the special agricultural safeguard as indicated in their Schedules, are entitled to levy additional customs duties in excess of the bound tariffs under Article II:1(b) of the General Agreement, subject to the provisions of Article 5 of the Agreement on Agriculture.

2 Developing country Members, other than those which were Parties to the Tokyo Round Agreement on Import Licensing Procedures, may delay the application of the last two criteria for up to two years from the date of WTO Membership.

The interpretative note to paragraph 2 of Article III states: "A tax conforming to the requirements of the first sentence of paragraph 2 would be considered to be inconsistent with the provisions of the second sentence only in cases where competition was involved between, on the one hand, the taxed product and, on the other hand, a directly competitive or substitutable product which was not similarly taxed."

Chapter 10

1 See FAO "The Rice Market in the EEC" CCP:RI 94/CRS 2, also prepared by the author, which examines in greater detail the changes in the import regime of the EC (12) as a result of the Uruguay Round of Multilateral Trade negotiations.

2 Four reference prices will be set, for husked and milled Indica and husked and milled Japonica. For Japonica husked rice, the tariff will be the “intervention buying-in price” for rice (which is 90 percent of the intervention paddy rice and is in fact the price that farmers will get), increased by 88 percent, minus its reference import price. For milled Japonica, it will be the “buying-in price” increased by 167 percent (to take into account the milling cost), minus its reference import price. For Indica varieties, the import duty on husked rice will be the “intervention buying-in” price (94 percent of the intervention price) increased by 80 percent minus its
reference import price; for milled Indica rice it will be the “buying-in price” increased by 163 percent, minus its reference import price.

3 In September 1994, the United States resumed its Export Enhancement Programme for rice, reinforcing it in spring 1995. Thailand followed suit embarking in November on a more extensive programme of export subsidies on rice, with further reinforcement in March 1995.

4 In Thailand, these problems are real. Measures have been initiated by the Government in recent years to reduce rice plantings. Moreover, land for cultivating rice has been reduced because of the encroachment of the urban and industrialised sector, and the outward migration of farm labour as earnings from rice production are no longer comparable to those from industry.

5 A more comprehensive analysis of the major policy issues arising from future world rice market prospects in year 2000 is found in the document “Supply and Demand for Rice in the Medium and Longer Term” IRC:94/4 prepared by Chan Ling Yap for the International Rice Commission.

6 See IRC:94/4 op.cit.

Chapter 13

1 The lack of investment on land improvement and the want of biological and adaptive research are important reasons why yields in a number of crops are low. Such a farming system with low productivity is said to be tightly constrained by technology, where the achievement distribution is near the economic ceiling. Very little relative increase in output can be expected from changes in economic policy or from aggressive extension agents. This appears to be true of oilseeds, pulses, sugarcane, maize. Agricultural pricing policies of the government of Bangladesh having long avoided overly intrusive interventions, economic incentives are relatively neutral for farm goods (especially if we abstract from the still high rate of industrial protection). This will be corroborated later when we show that agriculture has been subjected to low rates of nominal protections generally. Given productivity levels in many agricultural production fields tightly constrained by technology, relative real prices for several classes of farm goods have stayed high consistently, showing some prima facie sings of “the lack of positive supply response.”

2 The integration of national rice markets is significantly more advanced in Bangladesh, as measured by the price risk over seasons, than can be said for non-cereal crops (Mahmud et al, 1993). The surpluses from rice production tend more readily to be deployed in seeking growth of rice output than in output of non-rice crops. The fact of the price variability also keeps the interest of institutional creditors, never very strong, at a low ebb.

3 A good deal of imports from India, most of which are not officially recorded, comprise farm goods; the above percentage for farm imports would therefore appear to be an understatement relative to exports. This is because Bangladesh does not have much comparative advantage in exporting unofficially to India, in farm goods.

4 While this is the conventional wisdom of a large number of studies (Rahman, 1995; Mahmud et al, 1993), with India being the comparator, rice became clearly importable is a finding being highlighted by recent spawnings of market chairs in the case of rice. Critics may well point out the
fragmentary nature of the price quotas and market transactions that are at issue here.

5 This is not to say that Pakistan, of which Bangladesh's historical pre-cursor was a part, had not agreed to any binding on agricultural goods. On the contrary, Pakistan was a founding contracting member of the GATT.

6 Some developed countries, for example the EU, has circumvented the requirement that initial bound tariffs are to be less than the nominal protection coefficient prevailing during 1986–88. This gives rise to the problem of dirty tariffication, where bound tariffs exceed implicit protection during the base period. This means that by 2001, the end of the tariff reduction period, bound tariffs may exceed the rate of implicit protection prevailing before the Uruguay Round was ratified. Of course this does not mean that the realized protection rates, which depend upon other factors as well, will perforce be higher. It is important to note this caveat at this juncture because it shows that there is some pressures within all countries, developed ones included, that work towards high binding decisions.

7 There is some skepticism whether tariff binding has much deterministic influence on the pricing policies of canalizing enterprises. The decision by any country to bind tariffs on a given good at low or even zero levels does not necessarily translate into any amlock over the import or domestic pricing policies of the canalizing agency. Even if Bangladesh were not to be covered by any waiver in this context, it is quite likely that it would be under no GATT compulsion to further liberalize the trade controlled by the STEs.

Chapter 14

1 Parts II and III of this paper draw heavily from Pursell and Sharma (1996).

2 Controls on the interstate movement of grains were in theory given up in 1978, but in practice some have remained. The periodic bottling up of wheat during the north west harvest was implemented by the Central government with the cooperation of the respective state governments, and involved physical controls including road blocks, limiting the railway wagons supplied by Indian Railways, and official pressure on traders to not bid against FCI in regional markets. Similar controls on interstate movements of some agricultural products by some state governments exist, but in the aggregate they are less important than the wheat controls abandoned in 1992/93.

3 For more details see Gulati and Sharma (1994).

4 This estimate depended on how input subsidies were measured, particularly the irrigation subsidy.

5 The extent of taxation would work out to be much higher, if one considers only the value of output of those crops for which this analysis has been carried out.

6 The implicit nominal protection of sugarcane varies considerably with the wide swings in world sugar prices. In the late 1980s and 1990s the industry was on average disprotected, but was heavily protected during most of 1970s and during the 1980s up to 1987.

7 The recent trends in exports reinforce these arguments. In fact, agriculture has turned out to be a star performer in terms of exports. With the tremendous increase in exports, the export basket of agricultural products has also diversified in the recent years. From tea and mate, which formed nearly 40 percent of agricultural exports from India in 1960's, exports have diversified to cashew kernels and spices to fish and fish preparations, oil cakes, rice, fruits and vegetables and processed foods.

8 The performance of agricultural exports from India remained subdued in the past because of reasons like (i) adverse terms of trade, (ii) over valued exchange rate of rupee, (iii) the external trade in most of the agricultural commodities was and in many cases still is subjected to various controls; and (iv) adhocism in the export policy.


11 For a detailed analysis of these issues see "Subsidy Syndrome in Indian Agriculture" by Ashok Gulati and Anil Sharma (1995).

12 For a description and analysis of the Uruguay Round agricultural agreements see Ingco (1995). Among other things, she points out that most developed countries, and especially the EU, effectively cheated on the requirement that the initial bound tariffs should not exceed the actual price differences ruling during 1986–88. The resulting "dirty tariffication", with initial bound tariffs for major commodities well in excess of implicit protection during this period,
means that the bound tariffs in 2001 at the end of the tariff reduction period, will exceed actual protection levels prevailing before the Uruguay Round was ratified. But this does not mean that the realised protection will necessarily be higher.

13 Ghee is an Indian type of butter oil made from cream extracted from cow or buffalo milk.

14 It may be mentioned here that UPOV 1991 (International Union for Protection of New Varieties of Plants) is more stringent as compared with UPOV 1978. In UPOV 1991 the breeder’s exemption has been taken away completely and farmer’s exemption has been made optional.

15 Dr M.S. Swaminathan as quoted in The Economic Times, January 1, 1996.

16 Personal communication.

17 State Trading enterprises are defined as: “Governmental and Non-Governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through their purchases or sales the level or direction of imports or exports.”

18 Hoekman, 1995 (page 36).

19 An exception was Cash Compensatory Support (CCS) subsidies paid on oilmeal exports during the 1980s. The CCS subsidies were abolished by the 1991/92 reforms.

Chapter 15


3 For details see Nepal Agricultural Perspective Plan, 1995.


Chapter 16

1 Import controls include specific conditions (which include taking special permission for imports from various ministries as well as satisfying specification standards prescribed by the government), health and safety, negative list (i.e. items in this list cannot be imported), and import by the Trading Corporation of Pakistan.


Chapter 17

1 For a detailed listing of these charges see WTO, 1995, Table IV 7 (p. 47).

2 The difference between the gazetted rate and the actual rate may be due to the operation of tariff exemptions and waivers and the deterrent effects of high tariffs on trade in the relevant items.

3 A significant share of the subsidy is captured by higher income groups. Based on an analysis of the household expenditure survey, the World Bank has estimated that only about 8 percent of the Rs. 5 billion subsidy projected for 1995 would be captured by the poorest 20 percent of households (ADB, 1995, p. 114). There have also been reports of a shortage of 450 gram bread at the controlled price as bakers shifted to different sized loaves or products to avoid price control (‘Bakers make “Mokery” of controlled price of bread’, Daily News, 1 June 1995, p. 4).

4 The original investment agreement (signed in 1982) between the company and the Foreign Investment Advisory Committee of Sri Lanka provided for maintaining a fixed domestic price (which was most of the time two to three times higher than the world market price) for sugar. The agreement was renegotiated in 1992 to provide for maintaining a minimum efficiency ex-factory price through tariff adjustment.

5 At present about 20 percent of domestic demand is met by domestic production (MFPEANAI, 1995).

6 It should be noted that these estimates capture the structure of protection as at the end of 1993. Given the tariff reductions since 1993, they invariably overstate the degree of protection.

7 By that date, Sri Lanka’s tariff binding on industrial imports, also at 50 percent, covered only about 11 percent of the relevant product lines.

8 International treaties and laws are subject to ratification by Government. International legislation cannot be cited directly in Sri Lankan courts.