Sensitive and Special Products – a rice perspective

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This article examines the prospect of rice being designated as a special or sensitive product and looks at the possible implications this could have under liberalisation of the international rice market. Using an Armington-type model, it was found that the designation of rice as special or sensitive by key countries considerably diminishes the effects of reform, particularly when no concessions are required to be made upon designating rice so. The paper also discusses the criteria that could serve to guide the selection of rice products as sensitive or special.

1. INTRODUCTION

The July 2004 agreed Framework for Establishing Modalities in Agriculture (hereafter referred to as the "July Package") introduces three novel elements to the Market Access pillar aimed at mitigating the impacts of mandatory tariff cuts: (i) "Sensitive Product" (SSP) and (ii) "Special Product" (SPP) exceptions and (iii) a new Special Safeguard Mechanism (SSM). The SPP and SSM pertain to the Special and Differential Treatment provisions for use by developing countries only, while both developed and developing countries can resort to the SSP provision. While the SSM envisages equipping developing countries with a set of new rules to protect themselves against commodity import surges, designating a product as "sensitive" or "special" would provide exemption from the full application of the agreed upon tariff rate cutting formula, thereby facilitating the adoption of more ambitious market access provisions for the rest of agriculture.

This article looks at rice as a potential candidate for designation as an SPP or an SSP and examines the possible implications this could have for reform of the international rice market. In the absence of a final agreement on the modalities that will drive the liberalization process under the WTO Doha Round and on the rules that would govern SPPs and SSPs, crude assumptions had to be made in carrying out the analysis.

2. RICE AND SENSITIVE PRODUCTS

The July Package leaves the market access provisions on SPPs and the SSM largely for subsequent negotiation. It is somewhat more explicit on the broad lines that will guide the selection (para.31) and treatment (Para. 32 to 34) of the SSPs.

2.1 Selecting rice as a sensitive product

Surprisingly, the text fails to state the criteria regarding the nature or characteristics of the products that should guide their selection as sensitive. The lack of such criteria could mean that countries will be free to designate the commodities based on their own set of priorities and without further justification. As a result, the ability of governments to resort to the SSP exception will be constrained by the imposition of a ceiling on

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the number rather than by the nature of the commodities that can be included in the sensitive list.

The bulk of trade in rice is conducted in the form of products listed under the 1006 chapter heading of the Harmonized System Code of Commodity Classification, with a few other rice products classified under other chapters:

1006 Rice
100610 Rice in the husk (paddy or rough)
100620 Husked (brown) rice
100630 Semi-milled or wholly milled rice, whether or not polished or glazed: Parboiled:
100640 Broken rice

110230 Rice Flour
110314 Groats and Meal of Rice

230220 Bran, Sharps, Other Residues of Rice

In certain countries, rice also appears as a component of preparations classified under 190190 (preparations of cereals, flour, starch or milk).

Thus, a country wishing to exempt all forms of rice[2] from the agreed tariff cut formula would have to designate not only those listed under the 1006 heading, but also those classified in the 110230, 110314 , 190190 and 230220 tariff lines.

The July package gives an indication on how "a sensitive product" would be selected, by stipulating that a country "may designate an appropriate number, to be negotiated, of *tariff lines* to be treated as sensitive". It does not specify whether the tariff lines would be defined at the six-digit code (the highest level of product specification common to all countries in the HS international commodity classification developed under the auspices of the Customs Cooperation Council), or would correspond to the individual country tariff lines. The second interpretation would arguably place countries in unequal positions, as their tariff structures may contain tariff lines with 10 or more digit codes. For illustration, the number of tariff lines falling under the 1006 heading, for example, varies from just four in the case of Egypt, to 39 in the European Union.[3] For reference, during the Uruguay Round Negotiations, countries that had carried out tariffication were allowed to identify products that would be subject to the Special Safeguard at the six-digit tariff line level. On the other hand, the calculation of tariff equivalents was made at the four-digit level of the HS, or at the six-digit level, if necessary.

2.2 Treatment of rice as a sensitive product

The July package provides some broad guidelines on the treatment of SSPs, stipulating, in particular, that the designation of a commodity as sensitive would not exempt a country from the obligation to improve "substantially" the market access for that particular commodity. Improvement ought to be through a combination of reduced tariffs and expansion of tariff rates quotas.

Indications are given on how the size of the compensatory MFN based tariff quota expansion will be determined, which should take into consideration the market access forfeited from the non-application of tariff cutting formulae. This could be a non-trivial exercise, especially if the product is defined at the six-digit code level or more, as quotas have to be established for all such products. At the same time, paragraph 33

[2] This is often a case to prevent products entering under tariff "loopholes"
[3] Under the current European tariff structure. The 1006 heading in the WTO tariff schedules of the EU were composed of 5 tariff lines only.

also states that "balance will be found only if the final negotiated result also reflects the sensitivity of the product", meaning that market access requirements should eventually be less stringent for SSPs than for normal products. As a result, it is likely that countries would *not* be asked to increase their MFN tariff rate quota so as to fully compensate partners for not applying the general provisions on market access.

The SSP approach resembles the Special Treatment Clause (ST) of Annex 5 of the Uruguay Round Agreement on Agriculture (URAA), which enabled countries to maintain non-tariff barriers on specific products subject to well defined conditions. One requirement was to open and progressively increase minimum import quotas to an equivalent 8 percent and 4 percent, respectively for developed and developing countries, of base-period consumption by the end of the implementation period. The clause was mostly used to exempt rice from the general market access provisions, as five countries opted for "ST Annex 5" in their rice tariff schedules, namely Japan, the Republic of Korea, the Philippines and Taiwan Province of China. Only one, Israel, resorted to the Clause for other products, i.e. whole milk powder, cheese and sheepmeat. Before the end of the implementation, however, Japan and Israel ceased to apply the Clause and tariffied. In doing so, Japan replaced the "minimum access quota" associated with the Special Treatment Clause with an ordinary "tariff rate quota" in April 1999.[4] Japan's decision to forego the ST Clause on rice can be possibly explained by the high level of tariffs on rice that resulted from applying the Uruguay Round Agreement on Agriculture (URAA) "tariffication" procedures and on retention by the Food Agency of its exclusive rights over rice imported through the tariff rate quota. Thus, as of 2004, only the Republic of Korea, the Philippines and Taiwan Province of China[5] still resorted to the ST Clause and only with respect to rice.

As the grace period for keeping the ST under the URAA expired in 2004, both the Republic of Korea and the Philippines have engaged in negotiations to extend its application. In 2004, the Republic of Korea reached an agreement with other WTO countries allowing it to maintain the rice exemption for another 10 years, till 2014. The Agreement commits the Republic of Korea to a progressive increase[6] in the minimum import quota to an equivalent of 7.9 percent of domestic consumption by 2014, or 409 000 tonnes in milled rice equivalent. This would imply an almost doubling of the minimum access volume of 205 228 tonnes in 2004.[7] Likewise, the Philippines has engaged in negotiations to extend its ST on rice beyond 2004. Under the URAA, the country had agreed to a quota of 240 000 tonnes by 2004, subject to an in-quota tariff of 50 percent.[8] As of October 2005, no agreement had yet been achieved that would enable the Philippines to keep rice under the ST exception.

2.3 What would happen to the Special Treatment Clause under the Doha Round Negotiations?

Annex 5 of the URAA allows countries to negotiate an extension of the ST Clause on expiration. According to paragraph 31 of the July Package, the selection of tariff lines to be treated as sensitive should "take account of existing commitments for these

[4] Tariffication allowed Japan to reduce the rate of expansion of the rice quota from 0.8 to 0.4 percent per year. As a result, by 2000 Japan's tariff rate quota amounted to 682 000 tonnes , in milled rice equivalent, or 7.2 percent of the base national rice consumption. The public Food Agency maintained monopoly rights on imports conducted within the quota. In-quota rice imports were subject to a 0 *ad-valorem* duty, but the Agency retained the right to add a mark-up of up to yen 292 per kilo (US$250 per tonne) on those imports. Out-of-quota tariffs were bound at a specific rate of up to Yen 375 per kilo (equivalent to some US$ 3 300 per tonne in 2005).

[5] Taiwan Province of China has proposed to "tariffy" rice non-tariff barriers in 2003, but the move has not formally been endorsed by the other WTO member countries

[6] The quota is to be raised by 20 347 tonnes per year

[7] The Republic of Korea also agreed to let a larger share of rice imports to be sold in retail outlets.

[8] Out-of-quota tariffs were set at 100 percent.

products". Thus, it could be expected that the agreement reached by the Republic of Korea for a ten-year extension would become an integral part of the Doha Round. If the terms of the agreement with the Republic of Korea are rolled into the Sensitive Products exception, they could even serve as the basis for the future treatment of Sensitive Products in the current negotiations. This could imply an expansion of SSP tariff rate quota to close to 8 percent of base consumption over the implementation period, for developing countries.

For the purpose of this analysis, it could be assumed that the number of SSPs allowed will be large enough to let countries wishing to exempt all forms of rice from the market access provisions to do so. Regarding the future treatment that will be given to the SSPs, the expansion of the minimum access quota to an equivalent of 8 percent of consumption that has been elicited from the Republic of Korea for the continuation of the Special Treatment on Rice could provide a plausible scenario. According to paragraphs 39 and 40 of the July Package, Special and Differential Treatment (SDT) will also be an integral part of the SSPs, implying that developing countries would be eligible to designate a larger number of SSPs and to make fewer concessions on their treatment. Taking this into consideration and using the same approach as in the URAA,[9] it could be taken that developed countries would be required to open a tariff quota equivalent to 12 percent of base domestic consumption.

3. RICE AS A SPECIAL PRODUCT

Alongside sensitive products, the July Package introduces the concept of "Special Product" (SPP) as a supplementary element of flexibility offered to developing countries (and only to them) in the implementation of the modalities on market access. Unlike for SSPs, the text provides some indication on the considerations that should guide the selection of products as "Special", but virtually none on the treatment they will receive.

Regarding the criteria, their selection should be based on "food security, livelihood security and rural developments needs", which will be "further specified during the negotiation phase". Although countries would have the possibility to choose an "appropriate" number of SPPs, unlike for sensitive products, it is not stated that this number will be a matter for negotiation. This could mean that a developing country could designate as many SPPs as it wishes as long as they meet the selection criteria. Limits to the use of the SPP exception would therefore spring from the stringency of the criteria that will be imposed on their selection. So far, however, little is known on how the importance of products for food security, livelihood security and rural development will be assessed.

The contribution by a commodity to total calorie intake could be taken as one of the possible indicators of its importance for food security. According to FAO's estimates, about 20 percent of apparent calorie intake, on average, was contributed by rice in 2000-2002. Rice contribution was higher than average in 33 countries and, in 27 of them, rice contributed more than one fourth, or 25 percent, of total calorie intake, with peaks of over 70 percent for Bangladesh, Cambodia and Myanmar (Table 1). The importance of the crop for food security is evidenced by the development status of the countries listed, as 15 of them are classified as least developed (LDC) and 17 as developing countries.[10]

Rice is also an important source of cash for farmers, contributing to rural livelihoods. This role can be assessed by calculating the contribution of rice to total agricultural output value, which was estimated to exceed 10 percent in 29 countries. This indicator

[9] Concessions required from developing countries were often set to be equivalent to 2/3 of those asked from developed countries.

[10] For the purpose of the analysis, no distinction is made between WTO and non-WTO countries.

T B E 1
Apparent calorie intake and contribution from rice, 2000-2002 average

Countries where rice exceeds 20 percent of calorie intake	Country Development Status	Grand Total	Rice (Milled Equivalent)	Rice Share
		Cal/capita/day	Cal/capita/day	percent
World		**2795**	**567**	**20.3**
Bangladesh	DC	2189	1577	72.0
Cambodia	DC	2059	1445	70.2
yanmar	DC	2880	2002	69.5
Viet am	Developing	2534	1662	65.6
ao DR	DC	2285	1493	65.3
Indonesia	Developing	2912	1469	50.4
adagascar	DC	2061	985	47.8
ierra eone	DC	1926	816	42.4
Thailand	Developing	2453	1038	42.3
hilippines	Developing	2375	1004	42.3
Guinea-Bissau	DC	2101	874	41.6
epal	DC	2443	940	38.5
ri anka	Developing	2388	900	37.7
Timor- este	DC	2812	965	34.3
Comoros	DC	1748	585	33.5
Guinea	DC	2382	769	32.3
enegal	DC	2280	731	32.1
India	Developing	2420	766	31.7
orea D R	Developing	2137	676	31.6
orea Rep. of	Developing	3059	927	30.3
China	Developing	2956	873	29.5
Guyana	Developing	2709	786	29.0
iberia	DC	1997	569	28.5
alaysia	Developing	2891	800	27.7
olomon Islands	DC	2238	615	27.5
Brunei Darussalam	Developing	2855	749	26.2
uriname	Developing	2628	685	26.1
Côte d voire	Developing	2620	597	22.8
Vanuatu	DC	2572	586	22.8
apan	Developed	2783	628	22.5
China acao R	Developing	2498	563	22.5
auritius	Developing	2955	623	21.1
Cuba	Developing	2998	624	20.8

Source: F

tends to overestimate the role of rice in generating cash income, as a large part of output is for self-consumption. On the other hand, it underestimates the importance of rice in the overall economy, as it ignores activities related to rice milling and marketing and other multiplier effects.

It is also relatively easy to assess the importance of rice as a source of export earnings for individual countries. On average, rice is responsible for only a very low share of agricultural export value - less than two percent - mainly because of the small volume of rice exchanged internationally compared with trade in other agricultural products and relative to rice production itself. For a number of countries, however, rice is a major source of foreign exchange (Table 3).

Many other nutritional or economic indicators can be used to assess the eligibility of commodities for their designation as a special product. The ones presented illustrate the strategic role rice plays in many countries. However, it is noteworthy that a number of those identified are LDCs, which will not be required to make tariff reduction commitments.

But the importance governments attribute to a particular commodity and their readiness to benefit from flexibility on market access can also be gauged from the WTO commitments they made with respect to tariffs in the URAA. In particular, products

TABLE 2
Value of agricultural output and contribution from rice, 2000-2002 average[1]

Countries where rice exceeds 10 percent of Agricultural output value	Country Development status	Gross agricultural output value	Gross rice output value	Rice share
		US$ Million	US$ Million	%
World		**1 497 383**	**126 030**	**8.4**
Bangladesh	DC	12 112	7 916	65.4
Cambodia	DC	1 432	848	59.2
yanmar	DC	8 915	4 618	51.8
uriname	Developing	71	36	51.4
ao DR	DC	967	494	51.1
Viet am	Developing	14 936	7 035	47.1
Guyana	Developing	234	99	42.2
Indonesia	Developing	28 871	10 924	37.8
Thailand	Developing	16 432	5 568	33.9
ri anka	Developing	1 934	597	30.9
French Guiana	Developing	17	5	30.3
adagascar	DC	1 936	550	28.4
epal	DC	3 131	889	28.4
hilippines	Developing	11 052	2 742	24.8
India	Developing	145 140	27 251	18.8
ierra eone	DC	273	49	18.0
orea Republic of	Developing	8 517	1 512	17.7
Guinea	DC	976	168	17.2
Timor- este	DC	67	11	16.7
apan	Developed	15 737	2 435	15.5
orea D R	Developing	2 805	421	15.0
iberia	DC	235	31	13.3
Guinea-Bissau	DC	160	20	12.3
China	Developing	324 977	38 344	11.8
ali	DC	1 524	170	11.2
Bhutan	DC	79	9	11.0
Uruguay	Developing	2 083	226	10.8
Dominican Republic	Developing	1 402	144	10.3

[1] Valued at 1999-2001 constant prices.
Source: F

TABLE 3
Export earnings and contribution from rice, 2000-2002 average

Countries where rice exceeds 15 percent of agricultural export earnings	Agricultural Products, Total	Rice	Share
	US$ Million	US$ Million	Percent
World	**422 836**	**6 775**	**1.6**
uriname	62	36	58.6
akistan	1 026	505	49.2
etherlands ntilles	9	3	35.0
Viet am	2 146	672	31.3
Guyana	164	42	25.6
Thailand	7 622	1 616	21.2
yanmar	440	84	19.0
Egypt	638	117	18.4
t Vincent /Grenadines	32	5	17.1
Uruguay	947	158	16.7
India	5 235	858	16.4

Source: F

that have been earmarked for Special Treatment (ST) or the Special Safeguard (SSG) in the tariff schedules could be considered of special concern to a country. Based on the WTO schedules, 29 countries used the ST or the SSG provisions on rice (Table 4). It is remarkable, however, that many of those that did so hardly produce any rice, a possible

T B E 4
Countries with URAA tariff schedules designating rice as subject to the ST or SSG and/or with rice tariff bound of at least 50 percent

	Ad-valorem Bound rate and SSG/ST status		Ad-valorem Bound rate and SSG/ST status
ngola	55	acedonia	G
ntigua and Barbuda	100	alawi	125
Bangladesh	50	ali	60
Barbados	100	auritania	75
Belize	110	exico	G
Benin	60	oldova	G
Brazil	55	orocco	162 G
Brunei	50	ozambique	100
Bulgaria	G	amibia	G
Burkina Faso	100	icaragua	60 G
Burundi	100	iger	50
Cameroon	80	igeria	150
Chad	80	akistan	100
China	65 G	anama	90
Colombia	189 G	eru	68
Congo	55	hilippines	T
Costa Rica	G	Romania	120 G
Dominica	150	Rwanda	80
Ecuador	57	eychelles	80
El alvador	G	ierra eone	50
European Union	G	outh frica	G
Gabon	60	ri anka	50
Georgia	G	t. itts and evis	95
Ghana	99	t. ucia	130
Grenada	100	t. Vincent and the Grenadines	130
Guatemala	90 G	waziland	G
Guyana	100	witzerland	G
Haiti	66	Taiwan rov. of China	T
Hungary	57 G	Tanzania	120
India	80	Thailand	52 G
Indonesia	160	Togo	80
amaica	100	Trinidad and Tobago	100
apan	G	Tunisia	60 G
enya	100	Uganda	80
orea, Rep. of	T	United tates	G
uwait	100	Uruguay	55 G
yrgyz Republic	G	Venezuela	122 G
esotho	200	Zambia	125

indication they view rice imports as a possible, indirect, source of market disruption for substitutable locally-grown cereals or starchy crops. However, because only countries that had tariffied their trade barriers could mark tariff lines with SSG, the latter cannot be taken as the sole indicator of the importance of a product for a particular country. It was therefore taken that products assigned levels of bound tariffs above 50 percent could also be tagged as SPPs or SSPs. Based on the ST or SSG indication and/or the high tariff rate criteria, where "high" is defined as exceeding 50 percent, 76 countries resulted as likely contenders for choosing rice as either sensitive or special.

The above discussion brings to the fore another issue of relevance to the SSP and SPP that developing countries will have to confront if they wish to exempt a product from the general provision on market access. Indeed, as it appears unlikely that they would be allowed to label a commodity both as special and sensitive, they may have to choose which of the two designations to give. The choice will depend on the relative treatment each set of products will have to comply with and on the maximum number of SSPs or SPPs countries will be allowed to designate. For the purpose of this paper, SSPs and

SPPs were assumed to face similar treatment, but developed countries were granted smaller concessions than developing countries on the opening of SSPs markets.

4. QUANTIFYING THE IMPACTS OF DESIGNATING RICE AS A SPECIAL/ SENSITIVE PRODUCT IN GLOBAL TRADE LIBERALIZATION

The impact of designating rice as a special or sensitive product under global trade reform is assessed using the Global Simulation Model (GSIM).[11] GSIM provides a modelling strategy for the partial equilibrium analysis of global trade policy changes. GSIM is a static, deterministic, single commodity bilateral trade model driven by export supply and bilateral import demand equations. Imports and exports are assumed to be a function of the world price after taking into account relevant bilateral trade taxes or subsidies. Since tariffs are bilateral and differ from country to country, changes in tariffs lead to changes in relative prices that drive differential changes in imports from various sources. Elasticities of substitution (the so-called Armington elasticities) determine the extent to which changes in relative prices lead to switches in the source of imports. The model solves numerically to find market clearing prices such that global imports equate to global exports. A fuller explanation of the model structure is provided in the annex to this paper.

Because the partial equilibrium approach ignores other products that may be substitutes in consumption or production, losses and gains are potentially overestimated, as transfers of resources to or from other sectors are ignored. However, the approach has the useful advantage of allowing for a relatively rapid and transparent analysis of a wide range of trade policy issues with a minimum of data and computational requirements.

4.1 Modelling rice in the GSIM framework

Data and key assumptions are as follows:

- Geographical Coverage: The model pre-selected 40 countries and regions, listed in Table 5, on the basis of their importance for the international rice economy.
- Trade Data: Bilateral trade flow data are derived from the exports-by-source-and-destination database maintained by FAO and refer to the period average 2002-2004. Values are obtained by multiplying trade quantities by the world prices of indica (Thai 100%B) and japonica (USA No.2 Medium Grain) respectively. Countries with no bilateral exports cannot become exporters. For example, Egypt cannot start exporting to Japan no matter how relative prices change. Nor can exports from an initial exporting country be totally eliminated.
- Elasticities: Rice exports from each country are treated as a distinct product. Consequently, the elasticities are in a bilateral 'Armington' form, which determine the extent to which changes in relative prices lead to a switch in the source of imports. The greater the elasticity, the greater is the switch from one source to the other, implying greater product homogeneity. The bilateral specification allows a distinction between: (i) domestic and imported rice; (ii) imported rice from different sources; and (iii) rice of different varieties. It is customary that the elasticity of imports from one source vis-à-vis another source has twice the value of that between domestic and imported rice (these elasticities are assumed to be 10 and 5, respectively). This reflects the notion that imported rice is seen as quite distinct from domestically produced rice but imports from different sources are much more substitutable. In addition, a relatively low substitutability (a value of 1) between the different varieties of rice, namely indica and japonica is assumed.

[11] GSIM was developed by Joseph Francois of the Tinbergen Institute and CEPR and H. Keith Hall of the US International Trade Commission. A complete description of the model (version 3.0) employed in this paper can be found in Francois and Hall (2003).

T B E 5
Countries/Regions specified in the model

Bangladesh	yanmar	igeria	Uruguay*
Cambodia	akistan*	enegal	ther at. mer.& Caribb.
China*	hilippines	outh frica	United tates*
Taiwan rov. of China	audi rabia	ther ub- aharan. frica	ther . merica
India*	Thailand*	exico	EU25)
Indonesia	Viet am*	Cuba	ther Europe
Iran, Islamic Rep.	ther sia	rgentina*	ustralia*
apan	Egypt*	Brazil	ther ceania
orea Rep. of	ther . frica	Colombia	Russian Federation
alaysia	Côte dvoire	Guyana*	ther CI

* et exporter

The composite elasticities of demand and supply are taken from Agricultural Trade Policy Simulation Model (ATPSM).

Policies included are as follows:

- Tariffs: Bilateral bound and applied tariff rates are employed in the model with binding 'overhang' captured through differentials in the two rates. Applied tariffs are taken from the GTAP database version 6.5, while bound tariffs are taken from ATPSM, which in turn draws on the WTO IDB database. Tables 6 and 7 show the bound and applied rates used in the model, respectively. Upon comparing both tables, it should be noted at this early stage that substantial binding overhang exists in several key importing countries, which could limit the impacts of reform.
- TRQs: Import quotas are modelled by keeping them fixed. This is done, for example, by setting the elasticity of import demand to zero. If the quota allocation between exporters is not fixed – first come first served or licenses on demand, for example – changes in tariffs may lead to a change in the mix of export shares. The model allows for this if the Armington elasticities are positive. If the quota is allocated historically, this is modelled by setting the relevant Armington elasticities to zero. If the quota is increased but the exporters' shares are maintained, the elasticity of demand is non-zero while the Armington elasticities remain at zero. All importers are assumed to capture the import quota rents and these accrue to government revenue. Furthermore, there is no switching between in-quota and out-quota tariffs.
- Export Subsidies: EU rice export subsidy expenditure amounts to € 36.8 million, equivalent to US$50.86 million. This is divided over the value of EU exports of US$74.47 million to give an export subsidy equivalent of 60 percent. This ignores the reality that subsidies are applied to a WTO maximum volume of subsidized exports of 133 400 tonnes. Likewise, export subsidy expenditure by the United States, of US$2.4 million, is allocated across the country's total exports of US$18 million, giving an average subsidy of 0.26 percent.
- SSP/SPP: The importance placed by a single country on rice and the likelihood that it designates rice as an SSP or SPP was gauged through the following rule: *countries with bound tariffs equal to at least 50 percent and/or countries having already assigned a SSG or ST clause to rice in their current WTO schedules*. Table 8 provides a list of potential rice SSP/SPP designating countries, assumed in the model. Note that Bangladesh and Cambodia would have been candidates to designate rice so, but were not included in the list because of their "Least developed country" status, which will exempt them from undertaking tariff reduction commitments.

4.2 Scenarios

To assess the impact of trade reforms in the context of SSP/SPP, six hypothetical scenarios are analysed, including three derived from the Harbinson proposal, which

TABLE 6

Initial Bilateral Bound Tariffs (%)

Importing country (right) Exporting country (down)	Bangladesh	Cambodia	China	Taiwan Prov. of China	India	Indonesia	Iran, Islamic Rep. of	Japan	Korea Rep. of	Malaysia	Myanmar	Pakistan	Philippines	Saudi Arabia	Thailand	Viet Nam	Other Asia	Egypt	Other N. Africa	Côte d'Ivoire	Nigeria	Senegal	South Africa	Other Sub-Saharan. Africa	Mexico	Cuba	Argentina	Brazil	Colombia	Guyana	Uruguay	Other Lat. Amer. & Caribb.	United States	Other N. America	EU(25)	Other Europe	Australia	Other Oceania	Russian Federation	Other CIS
Bangladesh																																								
Cambodia																																								
China						160		645	1000	38						15			94	15	60	30		10	15							6	6		42	12			10	19
Taiwan rov. of China																																								
India	163					160				38		14	50		30		25				60			7							13	3			15			10	13
Indonesia																																		54					
Iran Islamic Rep. of																																							
apan	5					160												2						13								4		91	33				
orea Rep. of	2					160																					10				8	10		89					20
alaysia						160		645																								8							
yanmar																				15	60	30																	
akistan	163		59		78	160				38	10				52		14	20	94	15	60	30		7	36			55				10	3			8			10	15
hilippines						160												4																38	20				
audi rabia																																							
Thailand	163		59	561	78	160			1000	38	10	100						20	94	15	60	30		11	36	40	35	55				22	6		93	15			10	15
Viet am	2		59			160				38									94	15		30		6	20	40		55							21	17				10
ther sia	2		4			160		645				14												2	1							5		65	13				
Egypt				561						38									94							40								9					
ther . frica																		1	94													4		54	7			10	13
Côte d voire																				11																			
igeria																					60																		
enegal																						11																	
outh frica																																							
ther ub- aharan. frica					60																60			9															
exico																																36							
Cuba																										13													
rgentina																		25								40		55				21			14				
Brazil																										40			189			24	6	96					
Colombia																															8			25					
Guyana																																		13					
Uruguay																		2							36	40	35	55			55	22		54				10	
ther at. mer.& Caribb.																		21						10				55			2		30	4				3
United tates	163		59	561	80	160		645	1000	38		100	50		52		5	20		15	60	30		8	36	40	35	55	189	100	55	18		73	7			10	10
ther . merica								645										3						15							17		78	44			10	
EU(25					14			645				9	50					63	94					10	3			13	189		10	12	4		6			10	10
ther Europe													50					6													92		19	20				6
ustralia						160		645									7	16						15								4		66	28		78	10	
ther ceania																	19																					
Russian Federation																		25																91	13				
ther CI																		7																					9

T B E 7

Initial Bilateral Applied Tariffs (%)

Importing country (right) Exporting country (down)	Bangladesh	Cambodia	China	Taiwan Prov. of China	India	Indonesia	Iran, Islamic Rep. of	Japan	Korea Rep. of	Malaysia	Myanmar	Pakistan	Philippines	Saudi Arabia	Thailand	Viet Nam	Other Asia	Egypt	Other N. Africa	Côte d'Ivoire	Nigeria	Senegal	South Africa	Other Sub-Saharan. Africa	Mexico	Cuba	Argentina	Brazil	Colombia	Guyana	Uruguay	Other Lat. Amer.& Caribb.	United States	Other N. America	EU(25)	Other Europe	Australia	Other Oceania	Russian Federation	Other CIS
Bangladesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
China	0	0	0	0	0	5	0	645	1000	0	0	0	0	0	0	15	0	0	94	11	60	11	0	10	15	0	0	0	0	0	0	6	6	0	42	12	0	0	10	19
Taiwan rov. of China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
India	5	0	0	0	0	5	0	0	0	0	0	14	50	0	30	0	25	0	0	0	60	0	0	7	0	0	0	0	0	0	0	13	3	0	0	15	0	0	10	13
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	0	0	0	0
Iran Islamic Rep. of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
apan	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	13	0	0	0	0	0	0	0	0	4	0	91	33	0	0	0	0
orea Rep. of	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	8	10	0	89	0	0	0	0	20
alaysia	0	0	0	0	0	5	0	645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
yanmar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	60	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
akistan	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	14	0	94	11	0	11	0	7	0	0	0	0	0	0	0	10	3	0	0	8	0	0	10	15
hilippines	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	20	0	0	0	0
audi rabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thailand	0	0	0	561	0	5	0	0	1000	0	0	0	0	0	0	0	0	0	94	11	60	11	0	11	0	13	0	14	0	0	0	22	6	0	93	15	0	0	10	15
Viet am	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	94	11	0	11	0	6	20	13	0	0	0	0	0	0	0	0	21	17	0	0	0	10
ther sia	2	0	4	0	0	5	0	645	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	5	0	65	13	0	0	0	0
Egypt	0	0	0	561	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	9	0	0	0	0	0
ther . frica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	94	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	54	7	0	0	10	13
Côte d voire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
igeria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
enegal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
outh frica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ther ub- aharan. frica	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
exico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0
Cuba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rgentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	13	0	0	0	0	0	21	0	0	0	14	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	189	0	0	24	6	0	96	0	0	0	0	0
Colombia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	25	0	0	0	0	0
Guyana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0
Uruguay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13	0	0	0	0	0	22	0	0	54	0	0	0	10	0
ther at. mer. & Caribb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	10	0	0	0	0	0	0	0	2	0	0	30	4	0	0	0	3
United tates	0	0	1	561	80	5	0	645	1000	0	0	0	50	0	0	0	5	18	0	11	60	11	0	8	1	13	11	9	189	0	0	18	0	0	73	7	0	0	10	10
ther . merica	0	0	0	0	0	0	0	645	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	15	0	0	0	0	0	0	0	17	0	0	78	44	0	0	10	0
EU(25	0	0	0	0	14	0	0	645	0	0	0	9	50	0	0	0	0	63	94	0	0	0	0	10	3	0	0	13	189	0	10	12	4	0	0	6	0	0	10	10
ther Europe	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	92	0	0	19	20	0	0	0	6
ustralia	0	0	0	0	0	5	0	645	0	0	0	0	0	0	0	0	7	16	0	0	0	0	0	15	0	0	0	0	0	0	0	0	4	0	66	28	0	78	10	0
ther ceania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russian Federation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	13	0	0	0	0
ther CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

T B E 8
Countries assumed to designate rice as sensitive or special product

Brazil	Indonesia	akistan
Taiwan rov. of China	apan	hilippines
China	orea Rep. of	outh frica
Colombia	exico	Thailand
Cuba	igeria	United tates
EU(25	ther sia	Uruguay
Guyana	ther at. mer. & Caribb.	Viet am
India	ther ub- aharan frica	

deals with cuts in tariffs based on tiered approach, with differential treatment for developing countries.[12]

The six different scenarios are:

(i) *Free Trade*: zero tariffs, zero export subsidies, no LDC or SSP/SPP exemptions

(ii) *Free Trade with SSP/SPP subject to partial reform*: as under scenario (i) but developed countries that designate rice as SSP are required to reduce tariffs by 50 percent, while developing countries that designate rice as SSP/SPP are required to reduce them by 33 percent (in the spirit of the "two-thirds of developed country commitments' rule negotiated under the URAA). LDCs are exempted from any trade reform

(iii) *Free Trade with SSP/SPP excluded from trade reform*: as under scenario (i) but LDCs and countries that designate rice as SSP/SPP are exempted from any trade reform.

(iv) *Harbinson*: Harbinson-type tariff cuts, zero export subsidies, no LDC or SSP/SPP exemptions

(v) *Harbinson with SSP/SPP subject to partial reform*: as under scenario (iv) but countries that designate rice as SSP/SPP are required to make 50 percent of their Harbinson commitments. LDCs are exempted from any trade reform.

(vi) Harbinson with SSP/SPP excluded from trade reform: as under scenario (iv) but LDCs and countries that designate rice as SSP/SPP are exempted from any trade reform.

Consensus in the current negotiations may converge towards the scenario (v) type of reform, the other scenarios therefore serve to establish the limits of the impacts of trade liberalisation. A shortcoming of the model concerning "concessions on minimum access" is that simulating TRQ expansion (an explicit provision in the July package pertaining to the treatment of SSP/SPP) is not straightforward. To circumvent this shortcoming, an approximation to raising TRQs is assumed to be captured by deepening the tariff rate cuts (namely, 50 percent of the Harbinson commitments).

4.3 Results

A summary of the results at the global level is provided in Table 9 and impacts at the national level are detailed in Tables 10 to 15.

[12] Developed countries 3 band reduction formula:
- if tariff greater than 90 percent: reduction of 60 percent with a minimum 45 percent
- if tariff greater than 15 percent and less than or equal to 90 percent:: reduction of 50 percent with a minimum 35 percent
- if tariff less or equal to 15 percent: reduction of 40 percent with a minimum 25 percent

Developing countries 4 band reduction formula
- if tariff greater than 120 percent: reduction of 40 percent with a minimum 30 percent
- if tariff greater than 60 percent and less than or equal to 120 percent: reduction of 35 percent with a minimum 25 percent
- if tariff greater than 20 percent and less than or equal to 60 percent: reduction of 30 percent with a minimum 20 percent
- if tariff less than 20 percent: reduction of 25 percent with a minimum 15 percent

T B E 9
Summary of results (scenarios ordered by degree of market opening)

	FREE TRADE	FREE TRADE	FREE TRADE
		concessionary SSP/SPP	no concessionary SSP/SPP
	(i)	(ii)	(iii)
	<----------US$ million (change)---------->		
roducer urplus	159	33	8
Consumer urplus	3708	1422	25
Tariff Revenue	-3073	-846	-146
ubsidy ayments	50	9	26
Net Welfare Effect	**842**	**618**	**-86**
	<----------% (change)---------->		
Import Prices	**-10.86**	**-3.51**	**-0.82**
Export Prices	**2.78**	**0.38**	**0.15**
Output	**-0.95**	**-0.46**	**0.11**
Trade	**11.82**	**3.87**	**-0.27**
	HARBINSON	**HARBINSON**	**HARBINSON**
		concessionary SSP/SPP	no concessionary SSP/SPP
	(iv)	(v)	(vi)
	<----------US$ million (change)---------->		
roducer urplus	37	17	5
Consumer urplus	1524	763	-36
Tariff Revenue	-881	-390	-51
ubsidy ayments	7	16	27
Net Welfare Effect	**687**	**405**	**-56**
	<----------% (change)---------->		
Import Prices	**-3.05**	**-1.43**	**-0.03**
Export Prices	**0.37**	**0.23**	**0.10**
Output	**-0.48**	**-0.25**	**0.08**
Trade	**3.94**	**1.80**	**-0.53**

As expected, the largest impacts are observed under the free trade scenario, where trade expands markedly and global consumers on average benefit from a near 11 percent fall in import prices. The increase in trade would be filled mostly by traditional rice exporting countries, but their export prices would rise only marginally. The fall in import prices boosts consumer surplus, more than compensating for the decline in tariff revenue and leading to an accumulated global welfare gain of US$842 million. On the other hand, 20 out of the 40 countries/regions included in the analysis lose in terms of welfare under free trade, mainly reflecting losses in consumer surplus arising from higher prices. Examples of countries facing large losses include India and China, even if they face marginal price increases, as the price effects are magnified by the large consumption in those countries. Consumers in those countries in which initial protection was the highest, e.g. Japan, Taiwan Province of China, the EU(25) and Nigeria are the major beneficiaries of trade liberalization and are responsible for fuelling much of the trade expansion.

Moving along the reform spectrum, the pure Harbinson scenario yields smaller gains. Consumer prices fall more moderately and exporting nations have only marginal benefits to reap. In all scenarios, producers are little affected by reform. Despite minor changes in output, which are mostly negative, producer prices rise slightly, leading to very small gains in producer surpluses.

The impact of SSP/SPP on global trade liberalisation is noteworthy. If the set of countries in Table 8 were indeed to designate rice for differentiated treatment, it is evident that the benefits of trade reform would be severely undermined. Under the free trade or Harbinson scenarios, changes in the global market are insignificant even if these countries were to make concessions to improve market access on SSP/SPP. At the extreme, if such countries were permitted to exclude rice from any trade reform, i.e. no concessions, simulations reveal that net global welfare would actually decline.

T B E 10

Summary of Effects: Free Trade Scenario with no SSP/SPP or LDC Exemptions

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	102	-11	0	91	-2	-2	0	19	
Cambodia	0	1	0	0	0	0	0	0	-28	-24
China	1	-208	0	0	-206	1	0	0	-23	32
Taiwan rov. of China	-15	801	-286	0	500	-94	-102	-25	179	-121
India	18	-481	0	0	-463	2	2	1		31
Indonesia	0	100	-9	0	92	-1	-1	0	28	
Iran Islamic Rep. of	0	-19	0	0	-19	3	3	2	-6	
apan	-4	1248	-1016	0	228	-30	-6	-2	39	-24
orea Rep. of	5	508	-570	0	-56	-21	5	-1	35	-76
alaysia	0	-11	0	0	-11	2	2	1	-3	
yanmar	0	-27	0	0	-27	1	1	0		33
akistan	15	-36	0	0	-21	3	1	1		11
hilippines	0	181	-31	0	150	-7	-7	-2	11	
audi rabia	0	-6	0	0	-6	3	0	0	1	
Thailand	65	-120	0	0	-55	3	0	1		8
Viet am	1	-6	0	0	-5	0	-1	0		0
ther sia	0	151	-49	0	102	-4	-5	-1	-13	
Egypt	-8	42	0	0	34	-3	-4	-1		-14
ther . frica	0	61	-53	0	8	-52	-90	-30	9	
Côte d voire	0	43	-39	0	4	-11	-14	-1	9	
igeria	0	747	-521	0	226	-48	-56	-7	78	
enegal	0	20	-23	0	-2	-9	-14	-2	7	
outh frica	0	-6	0	0	-6	3	5	2	2	
ther ub- aharan. frica	0	193	-193	0	-1	-8	-10	-1	8	
exico	0	-15	-1	0	-16	8	11	7	1	
Cuba	0	42	-37	0	5	-13	-18	-3	7	
rgentina	1	-8	0	0	-6	3	-1	1	-19	-19
Brazil	0	-20	-8	0	-28	1	1	0	0	83
Colombia	0	5	-1	0	4	-1	-1	-1	-7	
Guyana	-4	6	0	0	3	-8	-8	-4		-19
Uruguay	13	-8	0	0	4	4	1	1		7
ther at. mer.& Caribb.	-1	169	-76	0	92	-11	-11	-4	44	102
United tates	75	-164	-5	7	-87	7	-1	7	17	46
ther . merica	0	-5	0	0	-5	7	0	0	5	
EU(25	-23	409	-103	43	325	-34	-32	-21	69	-36
ther Europe	0	8	-12	0	-4	-7	-12	1	-1	
ustralia	2	-11	0	0	-9	9	-7	5	9	69
ther ceania	16	-2	0	0	13	3	3	1	1	5
Russian Federation	0	9	-4	0	4	-3	-3	-2	2	
ther CI	0	12	-23	0	-11	-4	-4	1	-10	
Global	**159**	**3708**	**-3073**	**50**	**842.5**	**-10.86%**	**2.78%**	**-0.95%**	**11.82%**	**11.82%**

T B E 11

Summary of Effects: Free Trade Scenario with SSP/SPP and LDC Exemptions

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	-1	0	0	-1	0	0	0	0	
Cambodia	0	-1	0	0	-1	0	0	0	-2	0
China	0	-49	0	0	-49	0	0	0	-2	10
Taiwan rov. of China	0	-4	-2	0	-5	0	1	0	-1	-4
India	0	-4	0	0	-4	0	0	0		0
Indonesia	0	-6	0	0	-7	0	0	0	-2	
Iran Islamic Rep. of	0	-2	0	0	-2	0	0	0	0	
apan	0	-6	0	0	-5	0	0	0	0	1
orea Rep. of	0	-3	2	0	-1	0	0	0	0	1
alaysia	0	-1	0	0	-1	0	0	0	0	
yanmar	0	-3	0	0	-3	0	0	0		4
akistan	0	-1	0	0	-1	0	0	0		0
hilippines	0	-8	-1	0	-9	0	0	0	-1	
audi rabia	0	0	0	0	0	0	0	0	0	
Thailand	7	-14	0	0	-6	0	0	0		1
Viet am	1	-8	0	0	-6	0	0	0		1
ther sia	0	-7	0	0	-6	0	0	0	0	
Egypt	-2	11	0	0	9	-1	-1	0		-4
ther . frica	0	60	-53	0	7	-51	-88	-29	16	
Côte d voire	0	52	-39	0	13	-13	-17	-2	8	
igeria	0	-3	1	0	-3	0	0	0	0	
enegal	0	-1	0	0	-1	0	0	0	0	
outh frica	0	-1	0	0	-1	0	0	0	0	
ther ub- aharan. frica	0	-1	0	0	-2	0	0	0	0	
exico	0	-1	0	0	-1	1	1	0	0	
Cuba	0	-1	0	0	-1	0	0	0	0	
rgentina	0	0	0	0	0	0	0	0	0	1
Brazil	0	-2	0	0	-2	0	0	0	0	1
Colombia	0	0	0	0	0	0	0	0	-1	
Guyana	0	0	0	0	0	-1	-1	0		-1
Uruguay	0	0	0	0	0	0	0	0		0
ther at. mer.& Caribb.	0	-4	0	0	-4	0	0	0	-1	-1
United tates	2	-10	0	7	-1	0	0	0	0	1
ther . merica	0	0	0	0	0	0	0	0	0	
EU(25	-2	27	-14	19	29	-2	-1	-2	-13	-94
ther Europe	0	4	-12	0	-8	-3	-6	2	-3	
ustralia	0	0	0	0	0	0	0	0	-1	0
ther ceania	1	0	0	0	1	0	0	0	0	0
Russian Federation	0	9	-4	0	4	-4	-4	-2	1	
ther CI	0	4	-23	0	-19	-1	-6	1	-4	
Global	**8**	**25**	**-146**	**26**	**-86.1**	**0.82%**	**-0.15%**	**-0.11%**	**-0.27%**	**-0.27%**

T B E 12

Summary of Effects: Free Trade Scenario with LDC exempted and concessions on SSP/SPP

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	-20	0	0	-20	0	0	0	-3	
Cambodia	0	2	0	0	2	0	0	0	-9	-9
China	1	-84	0	0	-83	0	0	0	-6	15
Taiwan rov. of China	-5	226	6	0	227	-29	-32	-8	53	178
India	4	-97	0	0	-93	0	0	0		6
Indonesia	0	-10	0	0	-11	0	0	0	-2	
Iran Islamic Rep. of	0	-4	0	0	-4	1	1	0	-1	
apan	-2	588	-357	0	229	-15	-3	-1	18	-11
orea Rep. of	0	188	-188	0	-1	-8	0	0	0	-8
alaysia	0	-2	0	0	-2	0	0	0	-1	
yanmar	0	-10	0	0	-10	0	0	0		12
akistan	2	-6	0	0	-3	0	0	0		2
hilippines	0	59	6	0	65	-2	-2	-1	3	
audi rabia	0	-1	0	0	-1	1	0	0	0	
Thailand	18	-33	0	0	-15	1	0	0		2
Viet am	-2	11	0	0	9	0	0	0		-1
ther sia	0	67	-6	0	62	-2	-2	0	-1	
Egypt	-5	23	0	0	18	-2	-2	-1		-8
ther . frica	0	61	-53	0	7	-51	-89	-30	14	
Côte d voire	0	50	-39	0	12	-13	-17	-1	9	
igeria	0	232	-156	0	75	-16	-19	-2	25	
enegal	0	-2	0	0	-2	1	1	1	0	
outh frica	0	-2	0	0	-2	1	1	0	0	
ther ub- aharan. frica	0	4	-2	0	3	0	0	0	-1	
exico	0	-6	0	0	-6	3	5	3	0	
Cuba	0	-2	-4	0	-6	1	0	2	-1	
rgentina	0	-3	0	0	-2	1	0	0	-6	-6
Brazil	0	-18	0	0	-18	1	1	0	-5	23
Colombia	0	2	1	0	3	0	0	0	-2	
Guyana	-1	2	0	0	1	-2	-3	-1		-6
Uruguay	4	-3	0	0	1	1	0	0		2
ther at. mer.& Caribb.	0	52	-20	0	31	-3	-3	-1	13	34
United tates	24	-56	-2	7	-27	2	-1	2	7	16
ther . merica	0	-2	0	0	-2	2	0	0	1	
EU(25	-12	198	9	2	197	-17	-16	-11	35	-12
ther Europe	0	7	-12	0	-6	-5	-9	2	3	
ustralia	1	-4	0	0	-4	4	-4	2	7	31
ther ceania	5	-1	0	0	5	1	1	0	0	2
Russian Federation	0	9	-4	0	5	-4	-4	-2	1	
ther CI	0	9	-23	0	-14	-3	-6	1	-4	
Global	**33**	**1422**	**-846**	**9**	**617.6**	**-3.51%**	**0.38%**	**-0.46%**	**3.87%**	**3.87%**

T B E 13

Summary of Effects: Harbinson Proposal Scenario with no SSP/SPP or LDC exemptions

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	-19	0	0	-19	0	0	0	-3	
Cambodia	0	1	0	0	1	0	0	0	-8	-8
China	0	-65	0	0	-64	0	0	0	-7	10
Taiwan rov. of China	-6	277	-4	0	268	-36	-39	-10	65	193
India	3	-91	0	0	-87	0	0	0		6
Indonesia	0	-11	0	0	-11	0	0	0	-3	
Iran Islamic Rep. of	0	-4	0	0	-4	1	1	0	-1	
apan	-2	715	-464	0	249	-18	-3	-1	22	-10
orea Rep. of	2	191	-182	0	11	-8	2	0	13	-28
alaysia	0	-2	0	0	-2	0	0	0	-1	
yanmar	0	-9	0	0	-9	0	0	0		10
akistan	1	-3	0	0	-2	0	0	0		1
hilippines	0	48	5	0	53	-2	-2	-1	3	
audi rabia	0	-1	0	0	-1	1	0	0	0	
Thailand	18	-33	0	0	-15	1	0	0		2
Viet am	-2	9	0	0	8	0	0	0		-1
ther sia	0	58	-4	0	54	-2	-2	0	-2	
Egypt	-3	14	0	0	11	-1	-1	0		-5
ther . frica	0	21	-18	0	3	-19	-33	-8	2	
Côte d voire	0	-3	-3	0	-6	1	1	1	0	
igeria	0	245	-165	0	80	-17	-20	-2	26	
enegal	0	-2	0	0	-2	1	1	1	0	
outh frica	0	-2	0	0	-2	1	1	0	0	
ther ub- aharan. frica	0	6	-2	0	4	0	0	0	-1	
exico	0	-7	0	0	-7	4	5	3	0	
Cuba	0	-2	-4	0	-6	1	1	2	-1	
rgentina	1	-3	0	0	-2	1	0	1	-7	-7
Brazil	0	-20	0	0	-20	1	1	0	-5	25
Colombia	0	2	1	0	3	0	0	0	-2	
Guyana	-1	1	0	0	1	-2	-2	-1		-4
Uruguay	5	-3	0	0	2	2	0	0		3
ther at. mer.& Caribb.	0	53	-21	0	31	-3	-3	-1	14	37
United tates	28	-64	-1	7	-31	3	-1	3	7	17
ther . merica	0	-2	0	0	-2	3	0	0	2	
EU(25	-14	233	-2	0	216	-20	-18	-12	46	8
ther Europe	0	0	-5	0	-4	0	-1	2	2	
ustralia	1	-5	0	0	-4	4	-5	3	9	38
ther ceania	6	-1	0	0	5	1	1	1	0	2
Russian Federation	0	3	-1	0	2	-1	-1	-1	1	
ther CI	0	-3	-11	0	-14	1	-1	1	-8	
Global	**37**	**1524**	**-881**	**7**	**687.1**	**-3.05%**	**0.37%**	**-0.48%**	**3.94%**	**3.94%**

T B E 14

Summary of Effects: Harbinson Proposal Scenario with SSP/SPP and LDC Exemptions

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	0	0	0	0	0	0	0	0	
Cambodia	0	-1	0	0	-1	0	0	0	-1	0
China	0	-18	0	0	-18	0	0	0	-1	3
Taiwan rov. of China	0	-3	-2	0	-4	0	0	0	-1	-3
India	0	-1	0	0	-1	0	0	0		0
Indonesia	0	-4	0	0	-4	0	0	0	-1	
Iran Islamic Rep. of	0	-1	0	0	-1	0	0	0	0	
apan	0	-4	0	0	-5	0	0	0	0	1
orea Rep. of	0	-2	1	0	-1	0	0	0	0	1
alaysia	0	-1	0	0	-1	0	0	0	0	
yanmar	0	-1	0	0	-1	0	0	0		1
akistan	0	0	0	0	0	0	0	0		0
hilippines	0	-6	-1	0	-6	0	0	0	0	
audi rabia	0	0	0	0	0	0	0	0	0	
Thailand	4	-8	0	0	-4	0	0	0		1
Viet am	1	-5	0	0	-4	0	0	0		0
ther sia	0	-4	0	0	-4	0	0	0	0	
Egypt	-1	4	0	0	3	0	-1	0		-1
ther . frica	0	20	-17	0	3	-18	-32	-7	5	
Côte d voire	0	0	-3	0	-4	0	0	0	0	
igeria	0	-2	0	0	-1	0	0	0	0	
enegal	0	0	0	0	0	0	0	0	0	
outh frica	0	0	0	0	0	0	0	0	0	
ther ub- aharan. frica	0	0	0	0	0	0	0	0	0	
exico	0	-1	0	0	-1	0	1	0	0	
Cuba	0	0	0	0	0	0	0	0	0	
rgentina	0	0	0	0	0	0	0	0	0	0
Brazil	0	-1	0	0	-1	0	0	0	0	1
Colombia	0	0	0	0	0	0	0	0	-1	
Guyana	0	0	0	0	0	0	0	0		1
Uruguay	0	0	0	0	0	0	0	0		0
ther at. mer.& Caribb.	0	-3	0	0	-4	0	0	0	-1	0
United tates	1	-8	0	7	0	0	0	0	0	1
ther . merica	0	0	0	0	0	0	0	0	0	
EU(25	-2	26	-13	20	30	-2	-1	-2	-12	-89
ther Europe	0	-3	-4	0	-7	2	4	3	-3	
ustralia	0	0	0	0	0	0	0	0	-1	0
ther ceania	1	0	0	0	1	0	0	0	0	0
Russian Federation	0	3	-1	0	2	-1	-2	-1	1	
ther CI	0	-9	-11	0	-20	3	-2	1	-6	
Global	**5**	**-36**	**-51**	**27**	**-55.5**	**-0.03%**	**0.10%**	**0.08%**	**-0.53%**	**-0.53%**

T B E 15

Summary of Effects: Harbinson Proposal Scenario with LDC exempted and concessions on SSP/SPP

	WELFARE ($US million)					OTHER				
	Producer surplus	Consumer surplus	Tariff revenue	Change in subsidy payments	Net welfare effect	Change in Overall Consumer Prices	Change in Overall Export Prices	Change in Output	Change in Imports	Change in Exports
	A	*B*	*C*	*D*	*E= A+B+C+D*	*percent*	*percent*	*percent*	*percent*	*percent*
Bangladesh	0	-9	0	0	-9	0%	0%	0%	-1%	
Cambodia	0	1	0	0	1	0%	0%	0%	-5%	-5%
China	0	-38	0	0	-38	0%	0%	0%	-4%	6%
Taiwan rov. of China	-3	131	14	0	142	-17%	-19%	-5%	31%	130%
India	2	-44	0	0	-42	0%	0%	0%		3%
Indonesia	0	-6	0	0	-7	0%	0%	0%	-2%	
Iran Islamic Rep. of	0	-2	0	0	-2	0%	0%	0%	-1%	
apan	-1	344	-181	0	162	-9%	-2%	0%	10%	-5%
orea Rep. of	0	111	-113	0	-1	-5%	0%	0%	0%	-4%
alaysia	0	-1	0	0	-1	0%	0%	0%	0%	
yanmar	0	-4	0	0	-4	0%	0%	0%		5%
akistan	0	-1	0	0	0	0%	0%	0%		0%
hilippines	0	22	4	0	25	-1%	-1%	0%	1%	
audi rabia	0	-1	0	0	-1	0%	0%	0%	0%	
Thailand	10	-19	0	0	-9	0%	0%	0%		1%
Viet am	-1	4	0	0	3	0%	0%	0%		0%
ther sia	0	33	-1	0	32	-1%	-1%	0%	0%	
Egypt	-2	10	0	0	8	-1%	-1%	0%		-3%
ther . frica	0	21	-17	0	3	-18%	-33%	-7%	4%	
Côte d Ivoire	0	-2	-3	0	-5	0%	0%	0%	0%	
igeria	0	119	-80	0	40	-8%	-10%	-1%	13%	
enegal	0	-1	0	0	-1	0%	1%	0%	0%	
outh frica	0	-1	0	0	-1	0%	1%	0%	0%	
ther ub- aharan. frica	0	4	-1	0	3	0%	0%	0%	0%	
exico	0	-4	0	0	-4	2%	3%	2%	0%	
Cuba	0	-1	-2	0	-3	0%	0%	1%	0%	
rgentina	0	-2	0	0	-1	1%	0%	0%	-3%	-3%
Brazil	0	-10	0	0	-10	0%	0%	0%	-3%	13%
Colombia	0	1	1	0	2	0%	0%	0%	-2%	
Guyana	0	1	0	0	0	-1%	-1%	0%		-2%
Uruguay	2	-2	0	0	1	1%	0%	0%		1%
ther at. mer.& Caribb.	0	25	-10	0	15	-2%	-2%	-1%	6%	18%
United tates	14	-35	0	7	-14	1%	0%	1%	4%	9%
ther . merica	0	-1	0	0	-1	1%	0%	0%	1%	
EU(25	-8	127	16	8	144	-11%	-9%	-7%	17%	-36%
ther Europe	0	-1	-4	0	-5	1%	2%	2%	1%	
ustralia	1	-3	0	0	-2	2%	-2%	1%	4%	18%
ther ceania	3	0	0	0	3	1%	1%	0%	0%	1%
Russian Federation	0	3	-1	0	2	-1%	-1%	-1%	1%	
ther CI	0	-6	-11	0	-17	2%	-2%	1%	-6%	
Global	**17**	**763**	**-390**	**16**	**404.8**	**-1.43%**	**0.23%**	**-0.25%**	**1.80%**	**1.80%**

5. CONCLUSIONS

Rice has been a major source of contention in the past round of multilateral trade negotiations, as several countries objected to the opening of their rice market because of its possible negative consequences on food security, livelihood of farmers and the environment. A way out of the ensuing stalemate was found with the incorporation into the final URAA of the Special Treatment Clause, often referred as the "Rice Clause", which allowed countries to maintain non-tariff barriers on products subject to well defined conditions.

Since 1994, many countries have reformed their rice policy regimes. Nonetheless, rice is still considered by many as a strategic product that cannot be treated as other agricultural commodities, reviving the notion that some form of "Special Treatment" for rice is needed also in the current Round of MTN if more ambitious market opening objectives are to be achieved for agriculture in general.

The draft "July package" responded by introducing the Sensitive Product (SSP) and Special Product (SPP) concepts, but gave little indication on their number, conditions for selection and treatment. Nonetheless, assuming that the two product exceptions will be retained in the final agreement on agriculture, they are expected to be used extensively for rice. However, much will depend on the degree of the dispensation and on the compensatory provisions that will have to be fulfilled when designating SPPs or SSPs.

Ultimately, only few countries may eventually resort to the two product exceptions, because many of the most important rice players are classified as least developed countries and therefore, exempted from tariff cut obligations. Moreover, several developed and developing countries for which rice is important already apply tariff rates well below the WTO MFN bound levels, a signal that they may not fiercely oppose cuts to their bound rates. Indeed, because of large differentials between bound and applied tariffs (the so-called "binding overhang") in major importing countries, little effect would be observed under trade liberalization unless the reduction in bound rates is deep enough to eliminate the gap between bound and applied tariff rates.

On the other hand, even minor players in the rice economy may be tempted to designate rice as SSP or SPP, along with wheat, maize and other grains, to limit concessions on market access for the whole cereal sector. This was the case in the URAA, where rice was made eligible for the SSG even by countries where it did not appear to be a strategic crop. As far as SSPs and SPPs are concerned, the risk of abuse of the two exceptions is expected to be reduced through the imposition of limits to their number or through the stringency of the criteria that the products will have to meet.

As for the analysis of trade liberalization in rice, involving SSPs and SPPs, gross assumptions had to be made in the absence of precise information regarding the modalities that will govern the selection and treatment (extent of the cuts and duration of the implementation) of SSPs and SPPs in the market access pillar. Both were handled in a similar fashion for modelling purposes, but a more demanding treatment by developed than by developing countries was assumed. The model ignores reforms falling under the domestic support pillar.

The impacts of the various trade reform scenarios vary directly according to the degree of market opening. Under free trade, with no LDC, SSP or SPP exceptions, trade expands substantially, driven by a marked fall in duty-paid import prices. Welfare gains mainly accrue to consumers and compensate for losses of government revenue, while gains to producers are relatively modest. The designation of rice as special or sensitive by key countries diminishes the size of those effects, with virtually all impacts vanishing when no market opening at all is required for such products. A similar pattern holds true under the Harbinson scenarios, although the effects are much weaker, as could be expected, than under free trade.

Beyond the indications of the model, which are subject to many qualifications, there are other important considerations that should guide the selection of products as sensitive or special, including individual countries' overall development and income distribution objectives. For instance, the likelihood that consumers rather than producers will be the major beneficiaries of reform could run counter to the attempts of many developing countries to enhance rural livelihoods and to reduce the gap between urban and rural incomes. The loss in tariff revenue arising from trade liberalization could also become a major constraint in several developing countries, further jeopardizing the pursuit of their development goals.

REFERENCES

Francois, J. & Hall, K.H. 2003. Global simulation analysis of industry-level trade policy, version 3.0, mimeo. World Bank, Washington.

ANNEX

MODEL STRUCTURE

A basic assumption is product heterogeneity, which is consistent with the Armington (1969) approach to product differentiation at the national level. Because policies are often imposed bilaterally, and possibly differ from country to country, changes in policies lead to changes in relative prices that drive differential changes in imports from various sources. As developed in the GSIM framework, this means that imports are imperfect substitutes for each other.

To begin, the demand for imports, M, of commodity i in country v from country r is a function of the internal price of the commodity from country r within country v, $P_{(i,v),r}$; the external price of the commodity from other sources, $P_{(i,v)s\,r}$; and the aggregate expenditure on imports of commodity i in country v, $y_{i,v}$:

$$M_{(i,v),v} = f\left(P_{(i,v),v}, P_{(i,v)s,v}, y_{i,v}\right) \tag{1}$$

Differentiating (1) and making use of relationships from demand theory, the cross-price elasticity of demand $\eta_{(i,v),(r,s)}$ can be derived:

$$\eta_{(i,v),(r,s)} = \theta_{(i,v),s}\left(\varepsilon_m + \varepsilon_s\right) \tag{2}$$

and also the own-price elasticity of demand, $\eta_{(i,v),(r,r)}$:

$$\eta_{(i,v),(r,r)} = \theta_{(i,v),r}\varepsilon_m - \sum_{s,r}\theta_{(i,v),s}\varepsilon_s = \theta_{(i,v),r}\varepsilon_m - \left(0 - \theta_{(i,v),r}\right)\varepsilon \tag{3}$$

where $\theta_{(i,v),r}$ and $\theta_{(i,v),s}$ are expenditure shares on imports, ε_m is the composite elasticity of demand and ε_s is the elasticity of substitution within other sources.

Price linkage equations relate the internal price $P_{(i,v)\,r}$ to world price $P^*_{i,r}$, by way of an import tariff, $t^m_{(i,v),r}$, and any export subsidy, $s^x_{i,r}$:

$$P_{(i,v),r} = \left(+ t^m_{(i,v),r} - x^x_{i,r}\right)P^*_{i,1} \tag{4}$$

Export supply $X_{i,r}$ is defined as a function of the world price and any production subsidy $s^q_{i,r}$:

$$X_{i,r} = f\left(P^*_{i,r}, s^q_{i,r}\right) \tag{5}$$

By differentiating (1), (4) and (5), it is possible to obtain expressions for the response by imports, exports and internal prices to changes in tariffs and world prices:

$$\begin{aligned} M'_{(i\ )} &= \eta_{(i\ )(\ \ )}P'_{(i\ )} + \sum \eta_{(i\ )(\ \ )}P'_{(i\ )} \\ X'_{i} &= \varepsilon_{(i\ )}\left(P''_{i} + {}'_{i}\right) \\ P'_{(i\ )} &= \left(+ P''_{i}\right)\cdot\left(\left(T_{(i\ )}\right)\left(T_{(i\ )}\right)\right)\left(\left(S_{(i\ )}\right)\left(S_{(i\ )}\right)\right) - \end{aligned} \tag{6}$$

where $T_{(i,v),r} = \left(\hat{} + x^{S}_{(i,v),T}\right)$ and $\left(S_{(i,v),r}\right)_j = \left(\hat{} + x_{(i,v),r}\right)_j$, $j = 0,1$ is time period.

Global market clearing assumes:

$$
\begin{aligned}
& M'_{ir} = X'_{ir} \Rightarrow \\
& \varepsilon_{(ir)}\left(P'^{/}_{ir} + s'^{q}_{ir}\right) = \sum M'_{(i\ )} = \sum \eta_{(i\ )(\ \ )} P'_{(i\ )} + \sum \sum_{s} \eta_{(i\ )(\ \ )} P'_{(i\ )} \\
& \qquad = \sum \eta_{(i\ )(\ \ )} \left(+ P'^{/}\right) \cdot \left(\left(T_{(i\ )}\right) / \left(T_{(i\ )}\right)\right) \cdot \left(\left(S_{(i\ )}\right) / \left(S_{(i\ )}\right)\right) - \\
& \qquad + \sum \sum_{s} \eta_{(i\ )(\ \ )} \left(+ P'^{/}\right) \cdot \left(\left(T_{(i\ )}\right) / \left(T_{(i\ )}\right)\right) \cdot \left(\left(S_{(i\ )}\right) / \left(S_{(i\ )}\right)\right) -
\end{aligned}
\tag{7}
$$

The reduced-form system in (7), which only includes as many equations as there are exporters, is then numerically solved for the set of world (exporter) prices. On obtaining a global set of equilibrium prices, national results can be back-solved for along with the calculation of welfare measures.