



No. 15 Indicators for the Selection of Agricultural Special Products: Some Empirical Evidence



International Centre for Trade and Sustainable Development

SUMMARY

- ▶ *Indicator analysis is a component of the process of selecting Special Products and needs to be supplemented by stakeholder consultations and to be cognisant of existing trade policy interventions, to ensure that country specific characteristics and policy objectives are fully accounted for.*
- ▶ *The extent of data availability limits the range of indicators that can be used consistently across all developing countries. A particular issue relates to the concordance between data provided on a product basis and that provided within the HS tariff classification system.*
- ▶ *A degree of subjectivity is required in the use of thresholds to determine the selection of potential Special Products on the basis of indicators. Different scales of production render the use of absolute threshold values across different countries meaningless.*
- ▶ *Case studies undertaken by ICTSD and by FAO provide an indication of the types of products most likely to be designated as Special Products, and of the proportion of tariff lines that may be appropriately designated as Special Products.*
- ▶ *Insights from the case studies provide a basis for evaluating proposals aimed at constraining the number and/or types of products that may be designated as Special Products.*

Introduction

At the 2005 WTO Ministerial Conference in Hong Kong, Members agreed that "Developing country Members will have the flexibility to self-designate an appropriate number of tariff lines as Special Products **guided by indicators** based on the criteria of food security, livelihood security and rural development."

Most of the discussion so far on the selection of special products (SPs) has focused on the need to limit self-designation to a specific number or proportion of tariff lines. Existing proposals range from five individual tariff lines (US) to 20 percent of all agricultural tariff lines (G33). In his communication dated 30 April 2007, the Chair of the Agriculture Special Sessions, Ambassador Crawford Falconer (New Zealand), suggested that an appropriate number of SP tariff lines would be between 5 percent and 8 percent of agricultural tariff lines. More recently, however, several WTO Members have expressed willingness to explore how indicators of food security, livelihood security and rural development could be used as a basis for SP self-designation by developing countries.

The FAO and ICTSD have conducted empirical research to try to shed more light on the practical workings of the proposed special products mechanism. In particular, both organisations have undertaken country studies using a wide range of indicators, in an effort to assist developing country governments to identify the products which might most appropriately be designated as 'special'. The results of this practical experience are presented below, in the hope that they may be of assistance

to Members grappling with this complex yet important set of issues.

The choice of indicators

The FAO and ICTSD have both elaborated sets of indicators that have been used by countriesⁱ in the identification and selection of special products. These are summarised in the table belowⁱⁱ. Given the wide overlap in the indicators used, the table adopts the FAO conceptualisation which makes a distinction between the indicators themselves and the different possible ways to measure such indicators in practiceⁱⁱⁱ. Finally, a third column listing the indicators proposed by the G33 at the Jakarta Ministerial Conference in March 2007 has been added for comparison purposes^{iv}.

Table 1: Comparison of indicators: FAO, ICTSD and G-33

Criteria	Indicators	Measurement	FAO	ICTSD	G-33
Food security	Contribution to nutrition	• Calories per capita per day derived from the product / calories per capita per day derived from all products	X		
		• Share of product in national or regional consumption, as contribution to caloric intake of the population		X	
		• National statutes or regulations identifying key staple products or basket of basic foods based on local preferences or circumstances		X	X
	Self-sufficiency	• Total of product consumed / total of product produced	X	X	X
		• Total of product imported / total of product consumed	X	X	
	Stability in access of the product	• Standard deviation / coefficient of variation of production and price of product	X		
• Degree of price transmission (international vs. domestic)		X			
• Variability in revenue (export) generated by product activity		X			
• Share of (household) total income derived from product activities		X			
• Domestic consumption in the country is significant compared to total world exports; or a significant proportion of total world exports are accounted for by the largest exporting country					X
Product consumption expenditure	• Share of income spent on a particular product at the national or regional levels	X	X	X	
Livelihood security	Employment levels	• Share of employment of the product in total agricultural labour force or in total rural employment (at national or regional levels)	X	X	X
		• Share of labour force employed in product industry in total labour force (or total agricultural labour force) – gender/age distribution of labour force employed in production of the product	X	X	
		• The total (absolute number of) labour engaged in a particular sector in the region or nationally		X	
		• The labour requirement in a particular agricultural sector (no. of workers per day or year needed to produce one tonne of livestock product), multiplied by the total land area dedicated to the product, or the total tonnage production of the livestock product		X	
		• Income from product	X	X	
	Agricultural land / assets product share	• Land acreage planted with product / total land under cultivation (at national or regional levels)	X	X	
		• Farm holdings growing the products / total number of farms	X		
		• Number of heads of livestock in the country / region		X	
	Surges / displacement by imports	• Correlation between imports and domestic production	X		
		• Growth rate of import substitutes / growth rate of competing domestic product	X		
• Vulnerability to import displacement – see also below			X		
Importance in protecting livelihoods of poor and vulnerable groups	• A large share of the product's producers, at regional or national level, are low income, resource poor, or subsistence farmers, including disadvantaged or vulnerable communities and women or a significant proportion of domestic production of the product is produced in disadvantaged regions, including drought-prone, hilly or mountainous regions		X	X	
	• Productivity per worker or hectare of the product,			X	

		at regional or national level, is low compared to average global productivity			
Rural development	Importance in rural agricultural economy	• Product economic activity share in total rural agricultural output (at national or regional levels)	X	X	X
		• A large share of total domestic production at regional or national level is from small farms (under 10ha), or those no bigger than average farm size in the country; or a large share of farms producing the product are small (under 10ha) or no bigger than average farm size in the country concerned		X	X
	Product and rural area growth	• Product growth rates relative to rural area growth rates	X		
	Domestic value-added potential of product	• Potential for value addition and linkages generated by a product (extent to which product is or can be locally processed; share of domestic agricultural intermediate inputs used in non-agricultural sectors; value of goods or services used as inputs)	X	X	X
• A low proportion of the product is processed in the country, compared to the world average; or the product contributes a high proportion to value addition in rural areas, at regional or national level, through its linkages to non-farm rural economic activities, including handicrafts and cottage industries or other forms of rural value addition				X	
	Tariff revenue	• Tariff revenue generated by the product	X	X	X
Trade dimension	Substitutes	• Extent to which imported substitute products could displace local production		X	
	Unfair competition	• Extent to which products have to compete with products that exporting countries have heavily subsidised, through domestic support or export subsidies		X	X
	Current level of protection	• Assessment of the level of tariffs and other measures currently available for a particular product, and how these may be affected in the negotiation of international commitments		X	
	Vulnerability to import displacement	• Assessment of the extent to which local production could withstand competition of low-cost imports (see also above)		X	
				19	22

Sources: Ford et al, 2007; Bernal, 2005; G-33, March 2007

Some particular characteristics of the ICTSD methodology

The studies were undertaken by local researchers with the support of their governments, using national data. This was essential to ensure ownership and to reflect national specificities. The approach taken for the use of indicators in ICTSD country studies is non-cumulative, in the sense that a product does not necessarily have to fulfil all indicators in order to qualify as a special product. Furthermore, given the large differences among the countries studied in terms of the size of the economy, or agro-ecological conditions, no uniform thresholds have been defined for the different indicators proposed. For example, whereas, in Mali, if 100,000 farmers are dependent on income from a particular product, this may suggest it is important from a livelihood security perspective, the same threshold may not be appropriate in the context of China. This has been left to the judgement of local researchers and debated in the context of national stakeholder consultations.

The ICTSD methodology also emphasises the need to apply indicators not only at the national

level, but also at the level of provinces or departments. This is essential to capture products which might play a crucial role at the sub-national level, but for which might not be recommended for SP designation on the basis of national statistics alone. For example, although in Sri Lanka potatoes are not a critical source of livelihood, in the Uva province they represent the primary source of agricultural employment. In this region of the country, 86 percent of the population works in smallholder agriculture, and immediate alternative employment opportunities are scarce.

The list of indicators provided was used as a guide more than a strict methodology. Due to a lack of data availability, most studies have only been able to test a small number of indicators. In practice this tends to underestimate the total number of SPs. Second, the absence of uniform thresholds and the need to undertake analysis at the sub-national level implied that the authors of the studies had to take subjective decisions to include or exclude certain products. Finally, while the application of indicators provided countries with

a list of potential SPs, it did not help them to prioritise and rank the products thus identified.

The ICTSD methodology does not provide a “one size fits all” approach to rating products that have been identified as potential special products. Several studies have used a matrix approach by allocating different weights to the various indicators used, or have simply added the total score found for each product under the different indicators (see Bridges Monthly, Year 9, September – October 2005). To assist in this rating process, the methodology also provides an additional set of ‘filters’ which seek to take into consideration the trade dimension of SPs and help countries prioritise their lists for the purpose of WTO negotiations. This includes the extent to which substitute products could displace local production (such as rice or wheat imports displacing traditional crops such as sorghum or cassava); the extent to which products face unfair competition from imports that are heavily subsidised; the extent to which tariffs and other measures currently protect the products in question and the likelihood of this being affected in the course of current trade negotiations; and the extent to which products may be able to withstand competition from low-cost imports.

Finally, this process was complemented by national consultations involving relevant ministries, the private sector, farmers groups, consumers, academia and civil society to finalise the selection and prioritisation process. This “qualitative” approach, involving all relevant stakeholders, is an important complement to the quantitative research findings. Government policy-makers may have to make difficult decisions to balance the needs and aspirations of different national interest groups: a discussion of this kind is an important tool for assisting them to do so.

Some particular characteristics of the FAO methodology

The main objective of the FAO country case study approach was to assist the nine African and Caribbean countries in which it was used in the identification of products that might be considered as SP. The use of indicators was a component of a process of identification that drew upon stakeholder consultations, reviews of trade policy objectives and analyses of current trade policy use. The approach was applied with some variation across countries in the set of indicators used (determined largely by national relevance and data availability), in the process of prioritizing products on the basis of indicators (level and use of thresholds), in the nature of stakeholder involvement, and in the use of agriculture and trade policy documents.

- **Indicator analysis**

In the majority of case studies the following sub-set of nine indicators were used: (i) product share in calorie intake, (ii) the domestic self-sufficiency rate, (iii) variability in production, (iv) share in area harvested, (v) growth in imports, (vi) product displacement by imports, (vii) share in production, (viii) import dependency and (ix) production growth rate. There was some variation in the set of indicators used. For example, in a number of

studies, the contribution to tariff revenue was included as an indicator of rural development.

However, the greatest differences in the approach adopted across countries related to the use of thresholds for inclusion of a product, i.e. the value that a product would need to exceed on an indicator to be included on an SP list. In some countries, specific values were assigned to each indicator. For example products falling in the 90th percentile for indicators of the share in production, share in area harvested and share in calorie intake were selected. For the growth in production and imports, products that exhibited an average annual growth rate over the period of at least 3 percent were selected. In other countries different values were used: for example, products with a contribution to total per capita calorie intake exceeding 0.35 percent. In other countries, the “thresholds” were simply set to ensure that the top thirty ranked products on the basis of each indicator qualified for further consideration⁵.

The criteria for qualification also varied across countries in terms of the number of indicator thresholds that a product would need to exceed in order to be listed as an SP. In some countries the list included those products that exceeded the thresholds on at least three of the nine indicators, but in others it was only two. In addition, in some studies, a degree of flexibility was applied for products that exceeded less than two or three indicator thresholds if there was some *a priori* justification for their inclusion. In country B for example, condensed whole milk was included: this was a sensitive product in a trade agreement, but only exceeded one indicator threshold.

- **Stakeholder involvement**

In a number of the studies, the choice and use of indicators was guided by stakeholders. For example, in one country, a product’s contribution to government revenue ranked highest, followed by its value-added and employment creation potential, so these indicators were incorporated. In some cases, household surveys and stakeholder meetings were conducted to capture information at a more disaggregated level. This assisted in giving a geographical balance to national level data in which the importance of a product could be masked in national averages. In one case study, the differences in the regional importance of products were significant; in one district, more than 93 percent of all production is accounted for by sugarcane. In another district, corn and poultry make up more than 72 percent of all production. In a particularly poor district, corn accounted for more than 62 percent of all production.

- **Review of current trade policy**

The initial lists compiled on the basis of indicator analysis and stakeholder dialogue were compared with national lists of ‘protected’ products i.e. sensitive product lists in trading agreements, products for which agreed levels of duties in the context of a regional trading arrangement could not be waived, etc. Such products were also included in the analysis towards identifying a list of possible special products. A product’s current trade policy flexibility was also taken into account. For instance,

relevant products with low levels of current tariff flexibility which may be affected by further tariff reductions in the WTO Doha Round negotiations were added to the initial list.

Findings of the ICTSD series of country studies

The series of ICTSD country studies, carried out in collaboration with local researchers in fourteen developing countries, are summarised in table 2 below. The main findings suggest that an appropriate number of special products would probably range from six to twenty (see Figure 1 below). On average, the products identified as special products represent roughly 10 percent of agricultural tariff lines (although this varies widely from 3 to 20 percent). However, Figure 2 shows that out of the fourteen studies undertaken by ICTSD, only five have identified a number of SP tariff lines below the 8 percent envisaged as a maximum by Ambassador Falconer.

In total, the fourteen studies identified more than forty different product categories as SPs. While several of them are specific to one or two countries, fourteen products are common to at least one third or more of the studies (see Figure 3). These products include chicken, milk and dairy products, rice, sugar, bovine and pork meat, corn, potatoes, sheep and goat meat, wheat, vegetable oils, tomatoes, onions and garlic, and beans and peas. Chicken is the most commonly identified product, being recommended as a potential SP by

all the ICTSD studies, and is followed by dairy products (identified in twelve studies out of fourteen), rice and sugar (identified in eleven studies).

The share of trade represented by special products has also been a controversial issue. In 2006, the WTO Secretariat calculated that designating 20 percent of tariff lines as special products could allow two unnamed developing countries to shield as much as 98.4 and 94 percent of the total value of their respective farm imports from Doha Round tariff cuts. In practice, however, if the selection of special products is genuinely based on food security, livelihood security and rural development indicators, the percentage of market share that they represent would likely be considerably lower. This is confirmed by the ICTSD studies, which found that, on average, the SPs selected account for less than one quarter of the value of total agricultural imports (See Figure 4 below). Again, these figures show a lot of variation among the different studies. In several instances, only a few products accounted for the bulk of the volume of imports of SP products. In one of the studies, for example, the selected SPs accounted for 63.5 percent of average agricultural imports over a period of six years. However, this figure would be reduced to 18 percent if one takes out the top three SPs identified in this country. In this particular case, imports of those three commodities had increased at a rate of 68 percent over the last six years and are likely to continue growing at a fast rate with or without SP flexibilities.

Table 2. Summary of ICTSD's country study findings

Countries	Barbados, China, Ecuador, Fiji, Honduras, Indonesia, Kenya, Nicaragua, Pakistan, Papua New Guinea, Peru, Philippines, Sri Lanka, Vietnam
Most common products	Chicken, milk and dairy products, rice, sugar, bovine and pork meat, beef, corn, potatoes, sheep and goat meat, wheat, vegetable oils, tomatoes, onions and beans
Average no. of products identified as SPs	12.4
Study with the highest no. of products	20
Study with the lowest no. of products	6
Average no. of tariff lines (at 6 digit level) *	75
Study with the highest no. of tariff lines	147
Study with the lowest no. of tariff lines	21
Average % of agricultural tariff lines (6 digit)*	10.3%
Study with highest % of tariff lines	20%
Study with lowest % of tariff lines	3%
% of total value of agricultural imports**	24.1%
Study with highest %	63.5%
Study with lowest %	6.3%

* This excludes Fiji and PNG for which data have been collected at the 4 digit level

** This excludes Kenya, Pakistan and Fiji for which these data are not available yet. Data represent averages over a period of 3-9 years depending on the study

Figure 1. ICTSD country studies: number of product categories identified as SPs

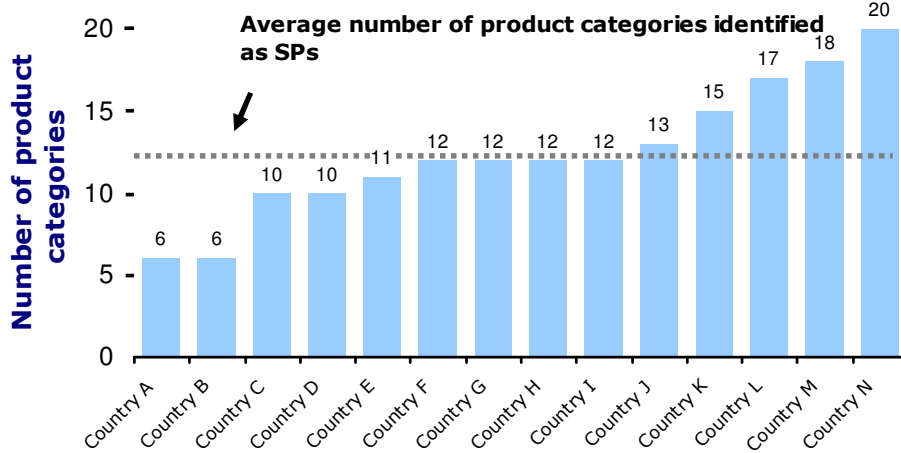
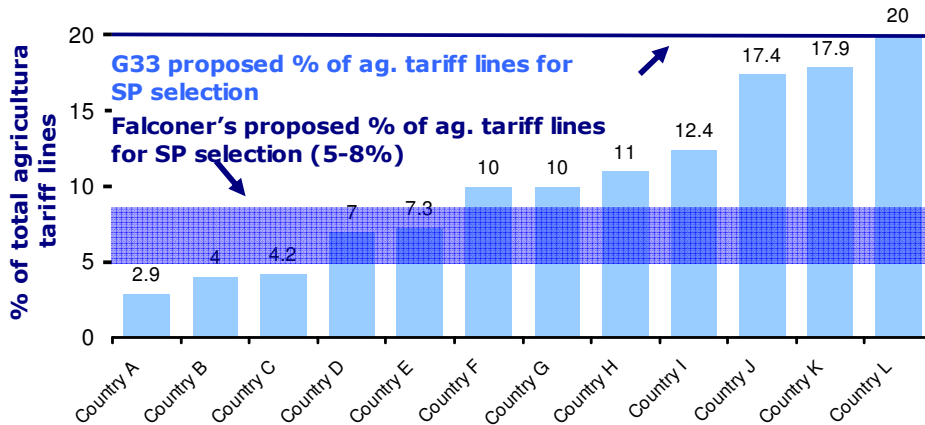


Figure 2. ICTSD country studies*: SPs as a % of total agricultural tariff line (6 digit)



* This excludes Fiji and PNG for which data is only available at the 4 digit level.

Figure 3. Most common SPs: products identified in at least 30% or more of ICTSD country studies

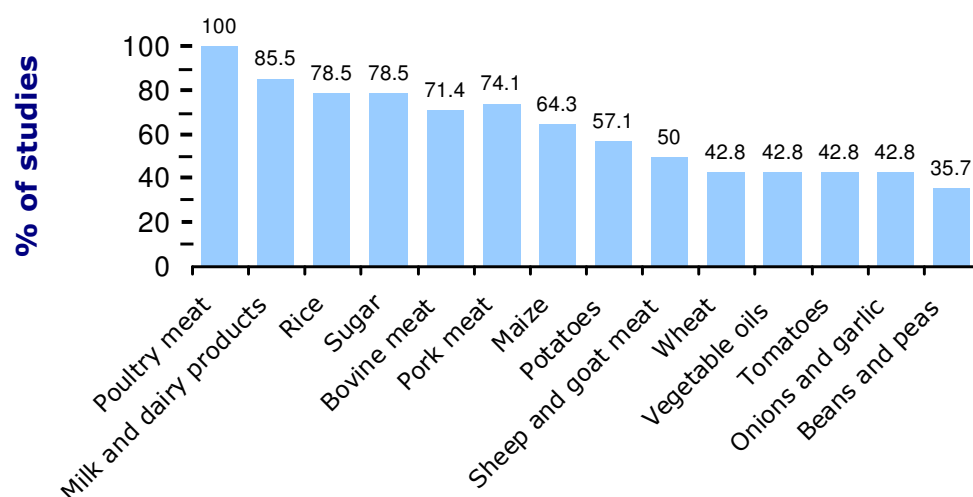
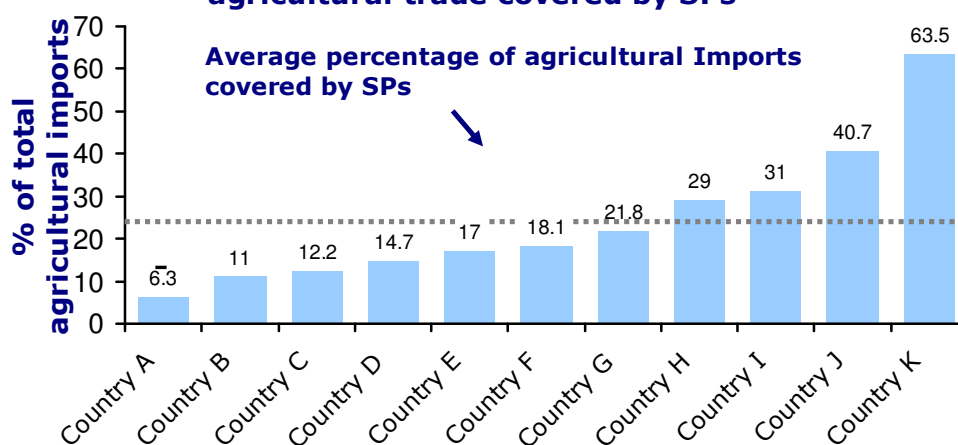


Figure 4. ICTSD country studies*: % of agricultural trade covered by SPs



*This figure only refers to countries where such data was available. This includes Barbados, China, Ecuador, Honduras, Indonesia, Nicaragua, Papua New Guinea, Peru, Philippines, Sri Lanka and Vietnam. Data represents averages over a period of 3-9 years depending on the study.

Findings of the FAO series of country studies

As explained above, while the indicator analysis played a role in guiding the identification of potential SPs, it is clear that it can only form part of the process. It should not be misrepresented as having determined which products qualify for SP designation and which do not. To gauge the impact that the indicator analysis alone might play in the overall process, the number of products selected in a straight application of the nine indicators and using a qualifying criteria of exceeding at least three “thresholds” (ranking in the top 30 products) can be compared with the number selected under the more comprehensive approach. In all cases the straight application provides a much smaller percentage of tariff lines than the more comprehensive approach. For example, in one country, only 6 percent of tariff lines were selected on the basis of the indicator analysis alone, but this increased to 23.5 percent of the country’s tariff

lines where indicators were used as part of the a more comprehensive approach to guiding the selection.

Similarly, in Belize (Ford et al, 2007) applying the indicators at the disaggregated level through a household survey resulted in forty seven products being identified as Special Products. This resulted in one hundred and two tariff lines being identified as opposed to thirty seven tariff lines (corresponding to twenty products) at the national level. Variation in terms of percentage of tariff lines that are designated as SPs also depends on the HS level at which they are declared. For example, a country may identify a number of products which have different eight digit level tariff lines, but fall under the same six digit tariff line. In one country, if all 83 tariff lines identified as Special Products at the eight digit level are declared by the country at the HS six digit level, the total falls to 70 lines.

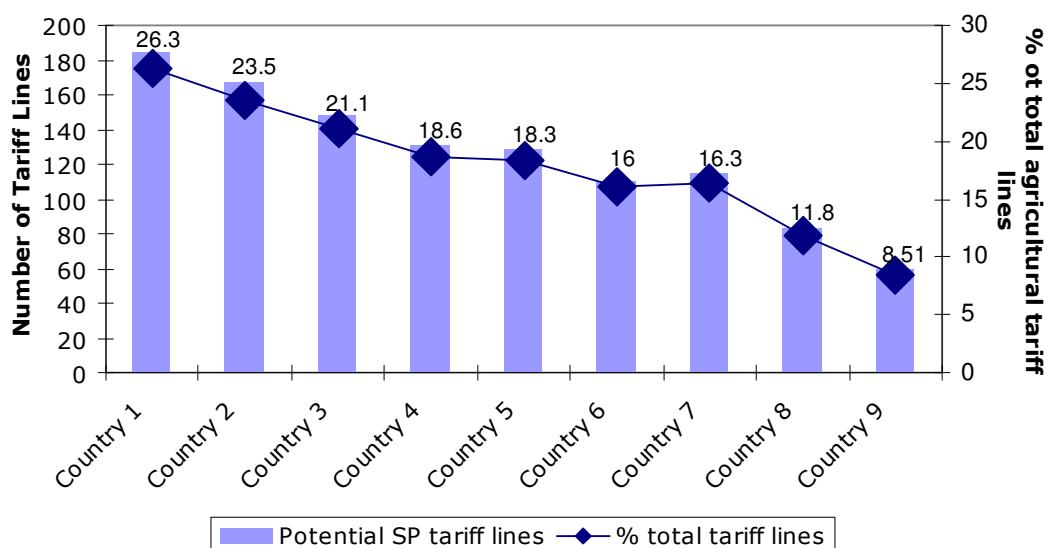
With these qualifiers in mind, Figure 5 depicts the range of potential tariff lines and their value as a proportion of total HS6 lines^{vi}, identified in the nine case study countries. The average proportion of tariff lines selected across the nine countries was 17.8 percent. However, the proportions tended to be lower in the Caribbean than in the African studies, with the proportion of tariff lines selected ranging from 8.5 percent to 18.6 percent in the Caribbean countries, but from 16 percent to 26.3 percent in the African studies. The higher values in the African studies contribute to an average proportion of tariff lines identified as SP that is significantly higher than the average across the ICTSD case studies.

Although sensitivity analyses were not conducted to determine the impact of the use of different threshold values, these can have significant effects. There will obviously be variation in the resulting number of tariff lines as special products selected on the basis of an indicator analysis (depending on the threshold levels and how these are used). For instance, if the indicators applied in one country changed to include products qualifying under at least one indicator (as opposed to three), the number of products selected would jump from 22 to 148. In another country, the same change resulted in an increase from 58 to 73 products. Similarly, if the threshold level for tariff revenue was decreased from US\$ 100,000 to US\$ 50,000, in one country, the number of tariff lines selected under this would increase from nineteen to thirty-nine

Amongst the most commonly selected products, livestock products (including bovine meat, pigmeat, sheep meat, poultry products and dairy products), vegetable and root tubers and preparations based on vegetables and on cereals featured prominently in the Caribbean studies. Livestock and vegetable products were also regularly selected in the African case study countries, along with grains and beverages. This set of products is broadly similar to the set identified in the ICTSD studies.

The FAO analysis also investigated the potential impact of proposals tabled by Malaysia and Thailand on the type and number of tariff lines that countries could designate as special products. The proposals differ in their effect on the different case study countries. In one country, 22 percent of the identified tariff lines would be eliminated as a result of the more stringent aspects of these proposals, but another country would not be able to designate almost 70 percent of its identified tariff lines. Whilst the differential impact is in part a result of the products selected, the source of a country's imports also matters. Where a country sources a high proportion of its imports from a developed country on the basis of its proximity and the fact that countries tend to trade heavily with their immediate neighbours (for example Mexico sourcing imports from the US), it will be less affected than a country sourcing primarily from developing countries (for example, Swaziland sourcing its imports from South Africa).

Figure 5: Findings of FAO Country Studies



Some considerations on data availability

In many countries, data was not necessarily available for all of the indicators identified. This may contribute to an underestimation of the actual number of SPs. For this reason, the findings for each indicator have to be seen as contributing towards an overall process of identification in any particular country.

While some countries' trading partners may be inclined to favour the use of publicly-available data in the selection of special products, the experience of conducting country studies on these issues suggests that such data, even when publicly available, rarely exists in any centralised location. For this reason, the FAO studies started with a base set of nine indicators on which national level data was available from FAOSTAT. However, it is clear from the case study applications that this restricted set of indicators could only play a role in a more comprehensive approach to SP identification. More often, data will need to be collected from a variety of sources, including various government departments and ministries.

Finally, it should be noted that the trade policy information is generally expressed at the HS tariff line level while the indicator data is usually collected at a product level. Product level data therefore needs to be converted into the associated tariff lines with the help of the description contained in the HS nomenclature. This process can give rise to certain anomalies. For example, in the FAO database from where product related data is generally obtained, a single product "Crude Materials" which includes products ranging from animal air to soaps, corresponds to 18 tariff lines at the HS 6 level. Conversely, different products specified within FAOSTAT will often have an identical tariff line. For example, tropical fruits such as mango, guava etc have the same tariff line. Therefore there is not a one to one correspondence between the product level data and the HS nomenclature: this can result in either an overestimate or underestimate of the number of tariff lines identified in the indicator analysis.

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ⁱ The FAO case studies comprised nine Caribbean and African countries. The fourteen ICTSD case studies were undertaken in Asia, Africa, the Caribbean, Latin America and the Pacific

ⁱⁱ This table only provides a general summary of those indicators. Readers are encouraged to refer to the original texts for precise details and nuances which cannot be captured in this format.

ⁱⁱⁱ The ICTSD methodology also uses a series of cross-cutting indicators aimed at identifying the intended beneficiaries of SP flexibilities (e.g. defining the income level, the geographical distribution of poverty or the production capacity of small holders). Such indicators have been integrated under one or other of the criteria in the table above to facilitate the comparison. Additional cross cutting indicators such as those related to the 'trade dimension' are included separately as an additional category of indicators.

^{iv} It has been observed that the case studies may have provided a good opportunity to apply the G33 indicators. The main reason that this approach was not undertaken was that the process of determining appropriate indicators in advance of the case study application was initiated before the initial set of G33 indicators were proposed.

^v For each indicator, the top thirty products generally accounted for more than 75 percent of the total activity reflected by the indicator (Ford et al, 2007)

^{vi} In all cases the total number of HS6 tariff lines was taken as 705. In some countries, not all possible lines are used and so some values may be underestimated

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