

**THE DEVELOPMENT CHALLENGE IN TRADE: SANITARY
AND PHYTOSANITARY STANDARDS**

Submission by the World Bank

I. INTRODUCTION

1. The globalization of food markets and decline in rates of agricultural tariffs has expanded opportunities for economic growth in developing countries. As traditional trade barriers in agriculture have declined, however, technical and regulatory barriers have increasingly become subject to debate, including those associated with sanitary and phytosanitary standards. This paper discusses these issues from a development perspective. The first section briefly outlines trends in agricultural trade and developing country exports. The next section discusses several of the challenges faced by developing countries in implementation of the World Trade Organization (WTO) Agreement on Sanitary and Phytosanitary Standards. The concluding sections describe recent experience in trade-related development assistance of the World Bank in areas of sanitary and phytosanitary standards, as well as an outline of Bank spending on SPS and related standards projects in FY99. New research work underway on standards and trade at the World Bank is also described in this section.

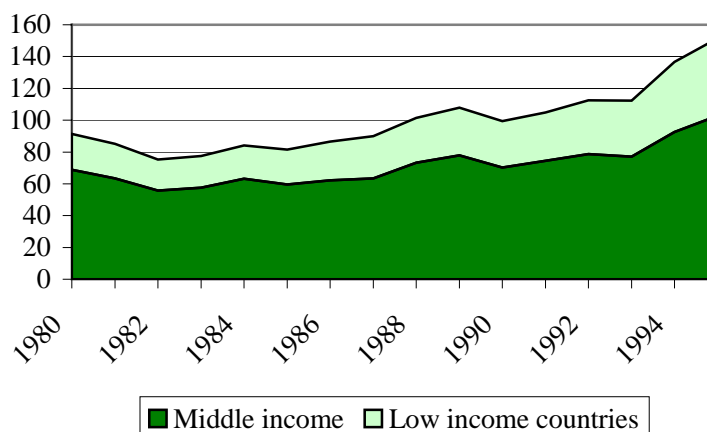
II. TRENDS IN WORLD FOOD EXPORTS

2. Recent trends in the export profile of developing countries is characterized by a growing share of manufactures exports, and declining share of minerals and foods in total exports. While a declining share of mineral exports has been prominent, food exports remain an essential part of trade in developing countries because these countries have comparative advantages in food export stemming from low-cost labour and abundant land for cultivation.

3. Food exports from developing countries have exhibited steady growth since the early 1980's as shown in Figure 1. Medium income countries¹ that include the majority of Latin America, Central and Eastern European States (CEESs), and Asia exhibited strong growth in agricultural trade in the 1990's. Low-income countries, including the majority of Africa and part of CEESs, Latin America and Asia, have gradually increased their exports since the early 1980's. Growth of food exports was as high as 120 per cent in low-income countries between 1980 and 1995, and was greater than 50 per cent in middle income countries. These data illustrate the increasing participation of low-income countries in global trade.

¹ Definition of middle-and low-income countries follows that of the World Bank in 1999.

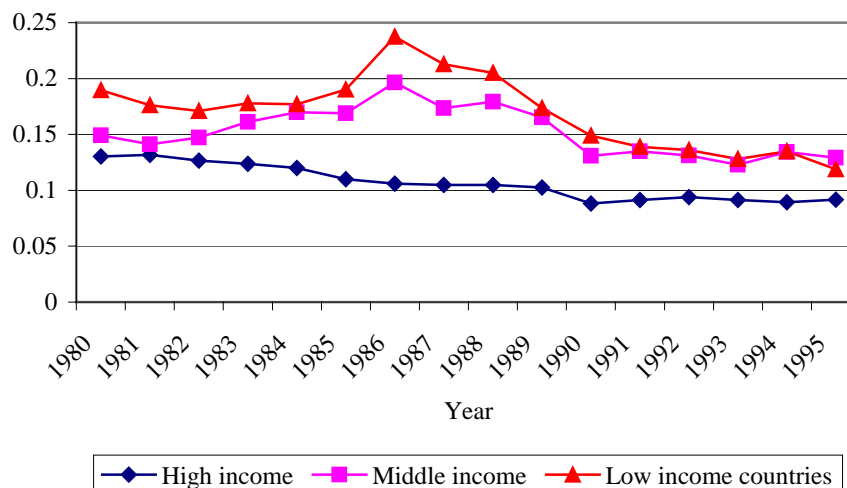
Figure 1. Food exports from developing countries (1995 US\$ million)



Source: World Bank calculations, based on GTAP

4. Figure 2 shows shares of food exports in total exports from 1980 to 1995. The share of food exports in high-income countries has declined consistently from 1981 to 1990, but became stationary from 1990 to 1995. Middle income countries had a peak in share in 1986, but became more stationary in the 1990's. Low-income countries follow a trend similar to that of high income ones. These countries experienced a notable decline toward 1991, however, after a higher peak than that of middle income countries in 1986. The general trend of declining share of food exports reflects the diversification of developing countries away from food exports. (Hertel and Martin, 1999).

Figure 2. Share of food exports in total exports

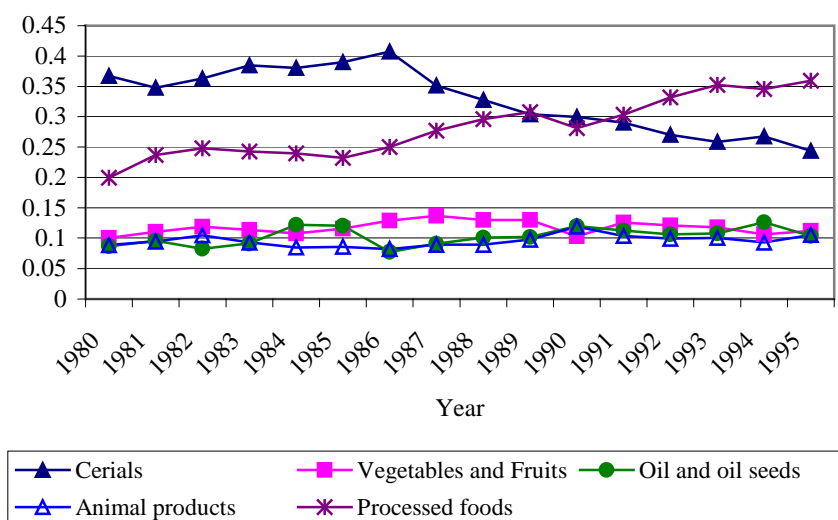


Source: World Bank calculations, based on GTAP

5. Growth is not neutral to subcategories of food exports. Figure 3 shows the time trend of the shares of five groups of food products exported from developing (middle and low income) countries. It indicates that cereals were the most important export until the mid-1980's, but that their importance declined substantially in the 1990's. In contrast, processed foods have increased as a share of total food exports, and have become increasingly important in the 1990's. The diagram suggests that this trend is likely to continue. The share of food products in other categories has remained relatively constant from 1980 to 1995.

6. The growth of processed food exports is being driven, in part, by the increased use of processing technologies in developing countries. Developing countries have leveraged their comparative advantage in low-cost labor in the processing stage, and as a result, have become increasingly competitive in international markets.

Figure 3. Food exports from developing countries by category in 1995



Source: World Bank calculations, based on GTAP

7. Major regional destinations for exports are determined by several factors: geographical and political proximity, difference in comparative advantage, and degree of trade barriers, among others. In developed countries, intra-regional trade accounts for the largest share of the flow of tradable goods. This does not necessarily hold for developing countries. In particular, agricultural production is driven by physical and climatic factors that vary geographically. Furthermore, food production in developing countries is subject to physical and climatic factors where biochemical technologies to cope with adverse production environments are not well advanced. This may result in specialization in fewer categories of exportable food products. Moreover, this type of constraint may affect similar product categories of food exports in countries with similar geographic conditions.

8. Table 1 presents trade flows by value in 1995 by regions of the world. The numbers in parentheses indicate the share of exports that went to each region, as a per cent of total exports in that region. The regions in the first column are origins of export of food products, and the regions in the first row are destinations for these products. The data indicate that West Europe and the rest of high-income countries are the major export destinations for developing countries. Furthermore, West Europe is the major destination of exports from the Middle East and Africa, with a share of 57 per cent compared to only 16 per cent of intra-regional trade in this region. High-income Asian countries, Australia, New Zealand and North America are major destinations of middle and low-income countries in Asia. These high-income countries and West Europe are almost equally important markets for Latin America.

Table 1. Food exports by destination regions in 1995 (1995 US\$ million)

	West Europe	Rest of high-income countries	Middle-East and Africa	Asia	Latin America	Rest of the world	Total
West Europe	152,348 (0.74) ¹	16,609 (0.08)	13,545 (0.07)	4,944 (0.02)	3,832 (0.02)	13,781 (0.07)	205,059 (1.00)
Rest of high income countries	13,432 (0.13)	48,867 (0.47)	8,647 (0.08)	19,318 (0.19)	9,602 (0.09)	3,077 (0.03)	102,943 (1.00)
Middle-east and Africa	14,855 (0.57)	3,123 (0.12)	4,031 (0.16)	1,985 (0.08)	298 (0.01)	1,576 (0.06)	25,868 (1.00)
Asia ²	9,030 (0.15)	26,218 (0.44)	5,312 (0.09)	15,039 (0.25)	982 (0.02)	3,341 (0.06)	59,922 (1.00)
Latin America	17,969 (0.33)	17,421 (0.32)	3,955 (0.07)	3,830 (0.07)	9,073 (0.17)	1,844 (0.03)	54,092 (1.00)
Rest of the world	7,919 (0.41)	2,935 (0.15)	1,263 (0.07)	2,232 (0.11)	256 (0.01)	4,817 (0.25)	19,422 (1.00)

Source: World Bank calculations, based on GTAP.

¹Inside parentheses are shares in total value of exports from a given region.

²Excluding Hong Kong, Japan, South Korea and Taiwan, which are included in the rest of high income countries.

III. RIGHTS AND OBLIGATIONS IN THE SPS AGREEMENT: SELECTED ISSUES FOR CONSIDERATION IN A DEVELOPMENT CONTEXT

A. THE SPS AGREEMENT

9. A principal objective of the SPS Agreement is "adoption and enforcement of sanitary and phytosanitary measures in order to minimize their negative effects on trade". This Agreement, in particular, elaborates rules for the application of the provisions of Article XX of GATT 1994 which relate to the use of sanitary or phytosanitary measures, as well as rules for applying SPS measures even in cases where Article XX of the GATT is not invoked. It recognizes the rights of importing countries to implement these measures, but it states importing countries' obligation to provide scientific justification for basing rules. It also states Member's obligation to establish enquiry points and provides opportunities for response to those that notify the intent to promulgate new SPS measures.

10. Rules are based on sanitary and phytosanitary protections to human, animal, and plant life. In order to avoid the use of SPS measures for protection of domestic industries, the Agreement emphasizes that all such measures should be based on scientific justification or on risk assessment. All signatories are encouraged to adopt internationally recognized standards but are free to apply stricter standards. International standards are developed by several organizations, including the Codex Alimentarius Commission, the International Office of Epizootics (IOE), and international and regional organizations operating within the framework of the International Plant Protection Convention (IPPC).

11. The SPS Agreement also states that each Member should ensure that at least one enquiry point exists which is responsible for the provision of answers to all reasonable questions from interested Members as well as for the provision of relevant documents. Notifications are to be submitted to other Members through the SPS Committee.

B. THE IMPORTANCE OF ENQUIRY POINTS AND NOTIFICATIONS

12. As table 2 shows, despite the obligation to establish enquiry points, as of 1999, only 76% of middle and low income Members had established enquiry points under the SPS Agreement. This contrasts with 92% of high income Members.

Table 2: The total number of countries that have established enquiry points for SPS measures

	Middle and low income countries		High income countries	
1995	78	49 (63%)	34	28 (82%)
1999	98	74 (76%)	36	33 (92%)

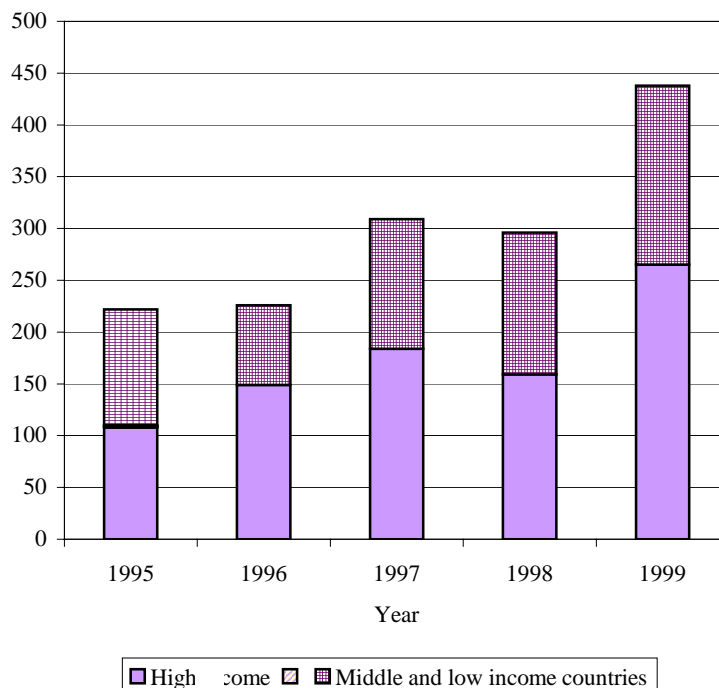
Source: World Bank calculations as based on WTO data.

13. The data on notifications under the SPS Agreement is also noteworthy. The growing number of notifications based on the SPS Agreement supports the increasing application of SPS measures in trade. The increase is due likely to both increased concern about food, animal and plant safety and the expansion of world trade. The total number of notifications based on the SPS Agreement submitted to WTO during a given year doubled in the last five years from 220 in 1995 to 438 in 1999 as shown in Figure 4. Since SPS measures normally remain valid once enacted, the cumulative number of active SPS measures has grown even faster. Figure 4 also indicates that the number of notifications based on the SPS Agreement generally increases both in high income and middle and low-income countries.

14. Since developed countries have greater resources overall to devote to food, animal and plant safety standards, it is reasonable to find a greater number of notifications from developed country Members. Submissions from developing country Members, however, have also increased from 1995 to 1999.²

² The number of notification from the middle and low-income countries in 1995 outweighs that in 1996, but Mexico submitted 100 notifications in 1995. This is nearly half of the total number for middle and low-income countries.

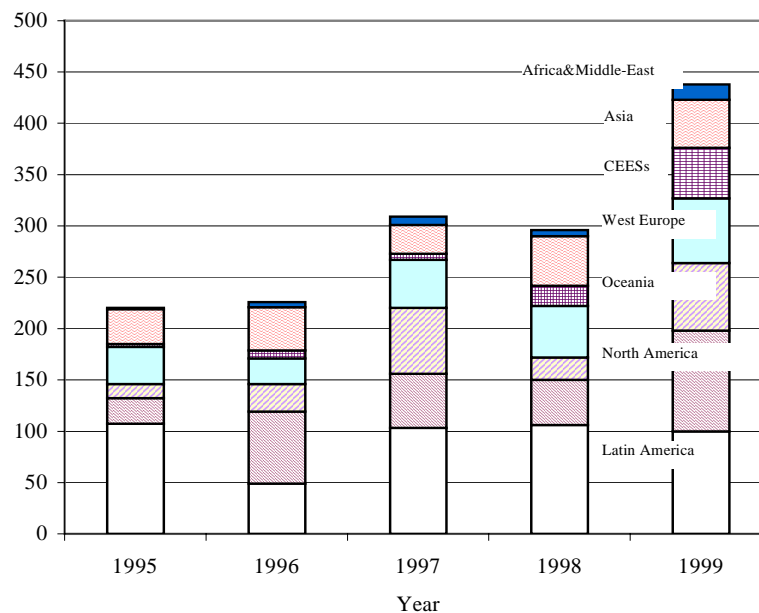
Figure 4. Number of notifications based on the SPS Agreement by income groups



Source: World Bank calculations, based on GTAP.

15. Figure 5 illustrates the decomposition of the number of notifications submitted to the WTO by region. Latin America exhibits a high share among developing countries. This may be due, in part, to the establishment of the Southern Cone Common Market (Mercosur) in 1994 and Mexico's entry into the North American Free Trade Agreement (NAFTA). North America shows a growing trend both because developing countries have increased exports to these high-income regions and because these regions have become increasingly aware of safety of imports from developing countries. The number for CEES has rapidly grown toward 1999, reflecting growing intra-regional trade and trade with West Europe. Asia's share is modest and notifications from Japan and Korea constituted nearly half of the Asian total in 1999. Africa and the Middle East have been far behind the other regions.

Figure 5. The number of notifications based on the SPS Agreement by regions



Source: World Bank calculations, based on GTAP.

Note: Oceania includes Australia, New Zealand and Fiji.

C. HARMONIZATION AND EQUIVALENCE

16. The need for a more specific understanding of the implementation of certain provisions of the SPS Agreement involving developing countries has increased (G/SPS/W/93). This is particularly so with respect to the concepts of risk analysis, appropriate level of protection, equivalence and disease-free areas. While Members are required to submit concrete examples of the process of harmonization according to the Committee's provisions adopted in 1997, only three developing country Members have submitted examples of trade problems by May 1999 which are thought to be related to the use, non-use or absence of international standards. The WTO SPS review (G/SPS/12), points out the importance of governments of developing country Members establishing a systematic approach to examine their internal needs and ability to comply with proposed standards and of their active participation in the standard-setting process. The review also describes reasons of inability of developing country Members to progress in the harmonization process. Their argument rests on the insufficient time frame for developing country Members to comment on notifications.

D. SOUND SCIENCE AND RISK ASSESSMENT

17. The SPS Committee encourages the initiative of international organizations to work on guidelines on risk analysis, including on relevant terminology, facilitating Members' compliance with obligations under the Agreement. Such organizations include Codex, OIE, IPPC, Food and Agricultural Organization (FAO), and World Health Organization (WHO) (G/SPS/12). While a relatively good progress in mutual recognition on risk assessment has been found among developed country Members, establishment of risk assessment bodies in developing countries tends to lag behind. Along with the development of these international guidelines, the initiative of developed country Members in disseminating the guidelines is essential. G/SPS/R/14 outlines development efforts related to risk assessment. An SPS seminar was held in Chiang Mai, Thailand, on 3-6 February 1999, under the Asian/European Trade Facilitation Action Plan, with a focus on technical

risk assessment, and technical assistance. Australia was reported to have been actively involved in capacity building support for Oceanian, Asian and African developing country Members. Such effort includes in-house training for quarantine officials, and assistance in the development of diagnostic facilities, and pest and disease surveillance.

E. DISPUTE SETTLEMENT

18. The WTO Dispute Settlement Body entertained 25 disputes that referenced the SPS and TBT Agreements. Of those 25 cases, 9 are currently at the consultation stage of the dispute resolution process, 2 are presently before panels, 7 have been settled, and 7 have been ruled upon by the panel and appellate body. Eighteen disputes concerned agriculture, more than any other sector. Four of those, WT/DS12, WT/DS14, WT/DS61, and WT/DS72, referenced the TBT Agreement, but not the SPS Agreement. This is due to the fact that the measures being challenged in each case did not involve the application of a sanitary and phytosanitary measure.

F. KEY DEVELOPMENT CHALLENGES: THE CASE OF SUB-SAHARAN AFRICA

19. Sub-Saharan Africa (SSA) is one of the least developed regions in the world. GDP per capita totaled \$510 in 1999, which followed South Asia's \$430, which was the lowest among 6 developing regions in the world (World Bank, 1999). Thirty-eight out of 50 SSA countries fell into the lowest income group of the World Bank's classification in 1999. Their traditional major agricultural exports include cocoa, coffee, cotton, sugar, groundnuts, tea, tobacco, rubber and bananas. But the share of these products in total agricultural exports declined from 75 per cent in 1980-1989 to 71 per cent in 1990-1997, reflecting the downward trend of world raw food prices and the emerging food processing sectors (Oyejide et al, 2000). Processed foods that exhibited a notable growth include vegetable and animal oils, flour, processed cereals and tobacco (Oyejide et al). SSA countries have successfully expanded market shares of their processed food exports in Europe. The growth of the food-processing sector can be a logical transition to the industrialized stage, realizing their comparative advantage in food production and relatively moderate requirement for technological capacity.

20. Oyejide et al, points out that West Europe's SPS measures are more concentrated in the processed food categories than in the raw food categories. Given this context, the SPS Agreement is likely to hamper further growth of processed food exports in SSA. SSA countries have been reluctant to comply with SPS measures. Only 15 SSA countries out of 32 WTO Member from SSA established enquiry points by the end of 1999. It is also natural to find their lax regulation on trade in terms of SPS measures. Only 41 SPS-related notifications were submitted to WTO by SSA countries between 1995 and 1999, which is less than three per cent of the global total (=1,489) in the same period.

21. According to Oyejide et al's survey of SSA, the Centre for Food Economic Research's (CeFER) multi-regional survey of SSA, North Africa, Middle-East and South Asia, and other SPS-related studies including the World Bank-funded research projects, the following development challenges are to be highlighted:

- (a) Improvement of production methods - grain growing and harvesting technique, livestock feeding, slaughtering and milking technique;
- (b) Improvement of transportation and storage methods - transportation time, and artisanal technique and sanitation of storage facilities;
- (c) Improvement of access to compliance resources - assistance by technical experts and information resources and laboratory and quarantine stations;

- (d) Improvements in access to international negotiation, establishment of enquiry points and contact points in WTO to promote developing countries' participation in multilateral negotiations;
- (e) Balancing scale economy and benefits from market liberalization - balanced development of centralized quality control systems and competitive market systems for export;
- (f) Compensation for lost market access due to SPS measures - quantification of trade impact of SPS measures.

G. IMPLEMENTATION ISSUES

22. The impact of SPS measures on developing countries is important for several reasons, when viewed from a development perspective: (1) SPS measures can limit market access while their economy mostly relies on agricultural exports, (2) developing countries have limited technology and financial resources to comply with the standards, and (3) limited access to information, which prevents effective engagement in international debate.

23. The SPS Agreement emphasizes the importance of broad range of development assistance through aid from developed countries. It notes that developing country Members may encounter special difficulties in complying with the sanitary or phytosanitary measures of importing Members, and as a consequence in access to markets, and also in the formulation and application of sanitary or phytosanitary measures in their own territories.

24. It is important to understand the difficulties of developing countries in complying with sanitary or phytosanitary measures. Such assistance may be, inter alia, in the areas of processing technologies, research and infrastructure, including in the establishment of national regulatory bodies, and may take the form of advice, credits, donations and grants, including for the purpose of seeking technical expertise, training and equipment to allow such countries to adjust to, and comply with, sanitary or phytosanitary measures necessary to achieve the appropriate level of sanitary or phytosanitary protection in their export markets. The following section outlines work of the World Bank in support of upgrading systems related to sanitary and phytosanitary standards, with a particular emphasis on trade-related projects in these areas in FY99.

IV. RECENT WORLD BANK ASSISTANCE IN SANITARY AND PHYTOSANITARY STANDARDS

25. Over the past decade the World Bank has funded a number of projects aimed at enhancing the implementation of sanitary and phytosanitary regulations in developing countries. Focusing on the narrow objective of meeting stringent SPS standards in the global market could be very costly if it was not done within a general development framework that generates sufficient benefits to offset such costs. Most projects implemented by the Bank have integrated SPS objectives within more general goals of ensuring food security, increasing agricultural productivity and protecting animal and plant health. As a result, benefits generated by these projects in the form of increased crops, increased access to international markets and reduced losses in animal and plants out-weighed the costs of compliance with SPS standards.

26. Within these projects, achieving SPS-related objectives often required, depending on the specific goals of the project, upgrading veterinary services, building laboratories and quarantine stations, as well as training facilities and quality control equipment. Projects have also included components such as certification of disease-free and pest-free zones and training staff and providing equipment for SPS-related research.

A. SPS-RELATED PROJECTS AND THEIR COMPONENTS

27. As outlined in Finger and Schuler, 1999, the World Bank has funded a number of projects related to SPS measures over the past decade. These have included goals of compliance with SPS measures as outlined in the SPS Agreement. SPS-related funding has been mainly channelled through four specific types of development projects:

(a) Projects related to food processing and quarantine facilities

China, 1993-2000, animal and plant quarantine component of Agricultural Support Service Project;

Turkey, 1992-1999, modernize laboratories and residue control- component of Agricultural Research Project.;

Russia, 1992-1995, improve food processing facilities, disease control, component of Rehabilitation Loan;

Poland, 1990-1995, food processing facilities modernization component of Agro-industries Export Development Project.

(b) Animal related projects

Brazil, 2000-2004, Animal and Plant Health Protection Project which will be discussed later in detail;

Hungary, 1985-1991, slaughterhouse modernization component of Integrated Livestock Project;

Madagascar, 1980-1988, livestock vaccination component of Rural Development Project.

(c) Projects related to crop production

Brazil, 2000-2004, Animal and Plant Health Protection Project;

Vietnam, 1994-1997, pest management component of Agricultural Rehabilitation Project;

Algeria, 1988-1994, Locust Control Project.

(d) General agricultural projects

Argentina, 1991-1996, general agricultural Export Reform Project.

B. THE BANK'S TRADE-RELATED ASSISTANCE AND SPS IN FY99

28. The World Bank is currently reviewing trade-related assistance in fiscal year 1999. Estimates show that trade-related assistance by the World Bank; include trade facilitation related to adoption of international standards; technical assistance and training, has received between 23-30 per cent of the Bank's total spending on both policy adjustment and project lending in FY99. This totaled approximately \$28.994 billion. Of trade-related funding, policy lending accounted for about 25-30 per cent of total policy spending which totaled \$15.449 billion. Similarly, the share of trade in project lending represented approximately 23 per cent of the total amount of project loans in FY99, approximately \$13.5445 billion.

29. The World Bank has also funded projects that help support the ability of developing countries to comply with SPS standards in such areas as regulatory reform, customs modernization, and other projects. Total funding for projects that are directly or indirectly related to SPS have amounted to \$412.15 million; that represents approximately 5.1 per cent of total funding for trade-related projects in FY99.

Figure 6. Profile of Bank Lending in Fiscal Year 1999

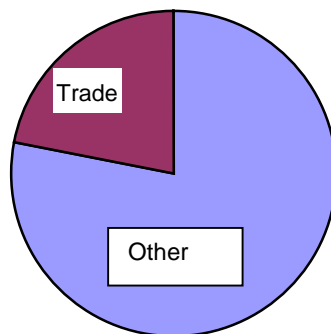
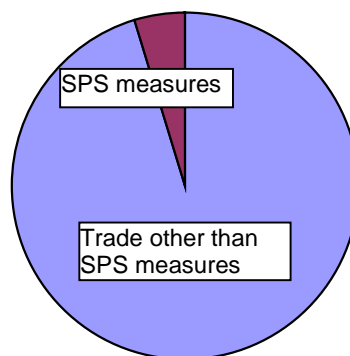


Figure 7. Profile of Bank Trade-Related Lending, Fiscal Year 1999



30. In addition, in FY99 the Bank has spent \$610.7 million on modernization of customs infrastructure and simplification of custom procedures. Though not directly linked to SPS measures, modernization of customs may improve countries' ability to verify whether their imports meet SPS related standards, creating incentives for their trading partners to meet such standards. Additionally, modernization of customs and quarantine stations, for the purpose of controlling the quality of imported goods, will most likely have a spill over effect on local manufacturing and its ability to comply with SPS standards. The expertise and the knowledge base generated to handle imported goods could also be used locally to improve quality of local products. Therefore, modernization of customs can be considered an indirect, but important channel through which the Bank has supported developing countries' efforts to comply with SPS standards.

31. Below is an outline of the Bank's SPS-related spending for fiscal year 1999.

Table 3. Estimated Bank Lending Related to SPS - FY99 (Million US Dollars)

	Structural Adjustment	Investment Lending	Total		
1-Improve sanitary systems	0	93	93	Direct SPS-related Projects	
2-Investment in standards	24	2.2			Total Direct and Indirect
3-Assist in adopting standards	24	0	319.15	Indirect SPS projects	412.15
4-Government	268.95	0			Total with Customs
5-Customs	573.8	36.9	610.7	Custom	1022.85

Source: Database of World Bank trade-related assistance, FY99.

¹ Upgrading sanitation systems, quarantine, etc. to support trade in agricultural products.

² Investment in standards infrastructures, metrology, calibration, laboratory accreditation systems, testing, certification programmes, and other mechanisms.

³ Assist firms to adopt/comply with international standards, including implementation of quality standards programmes.

⁴ Government regulatory reform projects, health, safety, environmental regimes across industry sectors.

⁵ Reduction of red tape in customs clearance; simplification of export/import procedures; modernization of customs infrastructure.

C. OVERVIEW OF WORLD BANK SPS - PROJECTS IN FISCAL YEAR 1999

32. Of the various SPS-related projects funded by the World Bank last year, Brazil's Animal and Plant Health project and Morocco's Fisheries project, have enhancing SPS measures in their respective countries as a primary objective.

33. Below is a brief discussion of each project.

Brazil's Animal and Plant Health Protection

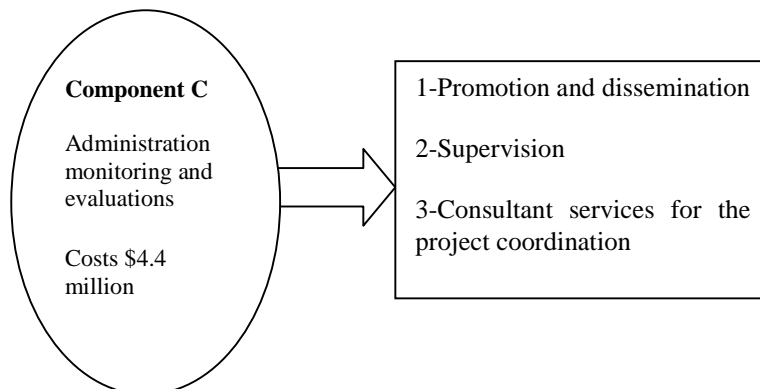
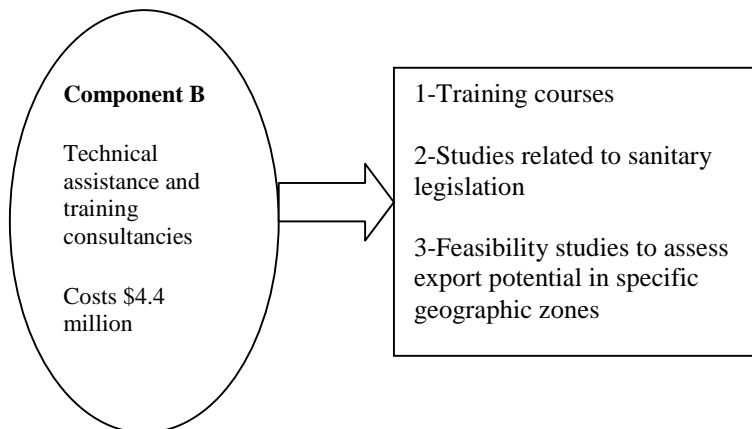
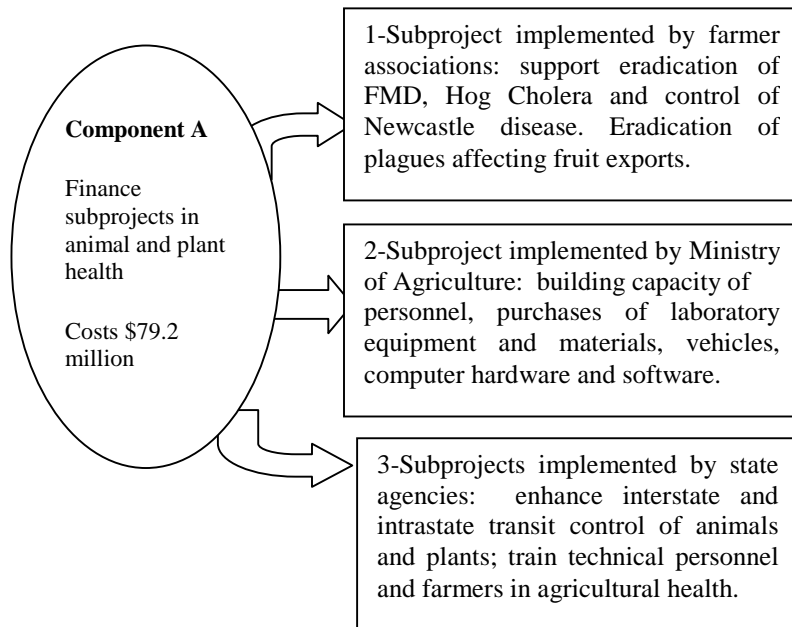
34. The Brazilian agriculture sector represents 11 per cent of the country's GDP or nearly 40 per cent when agro-industry is included. With the largest cattle herd world-wide, Brazil's beef exports do not exceed 5 per cent of total production. One of the main challenges that have been affecting the sector's competitiveness in global markets is sanitary and phytosanitary measures. The Animal and Plant Health project is aimed at strengthening Brazil's agriculture sector's competitiveness through improving sanitary and phytosanitary conditions.

Project components

35. The project, which will be implemented over four years starting this year, consists of three components:

- (a) Animal and plant health: this component will include (1) promoting systematic FMD vaccinations campaigns; (2) establishing or improving sanitary and phytosanitary transit control posts; (3) financing agricultural health education campaigns; and (4) improving monitoring and surveillance systems.

- (b) Technical assistance and training and consultancies; this component will cover training courses and evaluations on export potentials for certain areas
- (c) Administration, monitoring and evaluation of the project.



Expected Benefits of the Project

36. The project will be implemented in 14 states that currently account for the bulk of Brazil's agricultural exports and also are areas with the greatest potential for agricultural export expansion. Over two thirds of Brazil's cattle and swineherds are located in these states.

37. According to the project's implementation plan, cattle vaccination rate, for instance, will increase from its current rate of 85 per cent to 95 per cent by the end of the project. Also, 174 new fixed and mobile posts for animal and plant inspection should be operating at the end of the project. Additionally, the project will include training more than 1100 professional staff in animal and plant sanitary defense.

38. The Net Present Value (NPV) of costs incurred under the project is \$ 139.2 million, while the NPV for benefits sums to \$398.8 million.

The Morocco Pilot Fisheries Development project

39. Morocco's fisheries sector plays a key role in the country's economy. Morocco is Africa's largest fish producer and the leading producer and exporters of sardines. Yet the sector faces numerous challenges ranging from improving the resource's management to increasing the sector's competitiveness through improving the fish product quality.

40. The Pilot Fisheries Development project, with a cost of 5 million dollars, is designed to address these issues. The project includes two components:

- (a) Institutional development including supporting the government in strengthening its ability to manage and develop the fishing sector.
- (b) Pilot marketing chain development: upgrading the fishing fleet, improving landing conditions, and improving marketing and processing conditions. Improving processing conditions is particularly important in helping Morocco's fisheries sector in meeting SPS standards.

Expected Benefits of the Project

41. The main benefits of the project will be in three areas: (1) enhanced quality control and port infrastructure management; (2) higher quality fish and improved productivity for the processing industry in higher value added; and (3) development of a more competitive fish processing sector which is better oriented to export markets.

V. THE WORLD BANK'S TRADE-RELATED WORK ON STANDARDS, REGULATIONS, AND TECHNICAL BARRIERS

42. The World Bank's work on trade is a central part of the organization's mission in development and poverty reduction.³ Trade has been an important engine for economic development. Efforts to better integrate developing countries into the world economy and trading system which rests on the WTO framework in ways that accelerate growth is critical. As part of the work toward this goal, the World Bank supports trade policy reform and implementation of Uruguay Round commitments by developing countries. The work programme on trade specifically focuses on commitments within the context of development, for example projects to support public sector reform

³ For a recent overview of the Bank's trade work see document WT/TF/COH/S/1.

or infrastructure and facility modernization that increases health, safety, or environmental goals. In addition, along with the Bank's partners in the Integrated Framework for Least Developed Countries' Trade Development, efforts are underway to more closely tie capacity building and development objectives with advantages of deeper integration into the world trading system. The World Bank's trade-related initiatives are also supported by a programme of research. The focus of the Bank's trade research, given changes in the nature of barriers to trade and success of the multilateral system in addressing traditional measures, now includes issues in new trade areas, such as those related to standards and regulation.

43. A more detailed understanding of the economic, institutional, and policy aspects of standards, technical regulations, and trade is central to the Bank's new work agenda. These issues are of particular importance to developing countries, as they seek to strengthen industrial performance, increase agricultural production, and expand opportunities in world trade markets. In order to expand understanding of these issues, the World Bank launched new work on international standards, technical regulations, and trade policy in November 1999. The overall goal of an initial three-year series of initiatives centers on (1) increased understanding of the quantitative significance of standards and regulations as barriers to trade, and (2) analysis of trade policy aspects of government technical regulations, with particular emphasis on these issues for developing countries.⁴

44. The tentative programme outline includes the following deliverables in policy research and empirical data analysis over the period November 1999 - November 2002:

45. Development, implementation, and dissemination of results of a study to quantify the degree to which mandatory government technical regulations impact international trade flows. This part of the project constitutes a major element of the overall work programme. The first part of the task involves survey work to create a new database at the World Bank on voluntary standards and technical regulations (product testing, certification, and laboratory accreditation requirements). The database will be used to produce a report which outlines estimates of the trade distorting effect of selected standards for certain products circulating in world markets. This will include case studies of agricultural products and manufactured goods.

46. The empirical work by the Bank on standards will provide a unique contribution to determining the aggregate economic impact of differences in technical requirements across national boundaries and costs associated with divergent government requirements. Most importantly, the empirical data gathered will provide an important new foundation for policy decision-making on trade issues related to regulation and standards. The research work began with sponsorship of a workshop on "Quantifying Non-Tariff, Technical Barriers to Trade: Is This Possible?" (27 April 2000). The session provided background for the research framework and methodology for empirical analysis of the impact of standards on trade. Topics explored included: (1) what is known about the trade-distorting effect of standards and technical regulations, (2) current state of measurement tools and models to determine the economic cost of trade-distorting regulation, (3) best practice in survey design to collect data on standards and regulation, and (4) data and analytical needs of policymakers in non-tariff barriers.

47. The Bank is currently developing a survey to collect data on costs of complying with government technical regulations, including costs of testing, certification, and laboratory accreditation to specific regulatory requirements in selected products and markets. Research results will be analyzed and a final report will be prepared summarizing results of the data analysis. It is anticipated

⁴ The standards work at the Bank is being supported in part through a Trust Fund to support World Bank managed projects on Trade Policy Development established by the United Kingdom's Department of International Development (DFID).

that research results and other material will be disseminated through trade courses and other activities sponsored by the World Bank Institute.

48. Policy research and analysis (working paper series) on voluntary standards, government regulation, and their relationship to trade and export competitiveness. This part of the project seeks to provide new research results and policy recommendations relevant to developing countries on regulation and standards. This includes issues under discussion at the World Trade Organization and other trade fora, including work of the Asia Pacific Economic Cooperation (APEC), among other regional dialogues. A focus of the work on trade policy options centers on the standards and technical barriers agenda of the WTO, including the Second Triennial Review of the TBT Agreement. Disciplines in the SPS Agreement, with particular emphasis on WTO disciplines and developing country interests, will also be analyzed.

49. The Bank's work also seeks to provide targeted analysis of the impact of voluntary standards on export competitiveness and development, such as the impact of ISO 9000 on trade performance of developing countries. Finally, through dissemination of working papers and best practice information, the project seeks to support capacity-building efforts on trade policy issues relevant to standards and technical barriers among developing countries researchers and policymakers.

50. Research papers and reports on the following topics are under consideration for development by the Bank:

- (a) What are the most appropriate trade tools to reduce global technical barriers, including relative costs and benefits of differing models such as Mutual Recognition Agreements (MRAs)? How can developing countries benefit from continued efforts to liberalize trade through reductions in technical barriers?
- (b) What are the key priorities for developing countries at the WTO in standards and technical barriers to trade, including implementation and capacity building needs? How can the TBT Agreement be strengthened through the Second Triennial Review of the TBT Agreement? How successful has the SPS Agreement been and what are the most important challenges in reducing trade distorting effects of technical barriers in agriculture?
- (c) How successful have voluntary standards, such as ISO 9000 (quality) been in increasing quality and export competitiveness in small and medium-sized firms in developing countries?
- (d) What are the most critical needs in developing countries in modernization of regulatory and standards systems to support expanded trade opportunities and how best can those needs be met?
- (e) How successful have regional trade agreements in the Asia Pacific and elsewhere been in facilitating trade through reductions in technical barriers to trade, in particular for developing country participants?

51. A major element for dissemination of research results and information on the trade aspects of standards and regulation will be use of the World Bank website.⁵ A new standards home has been developed to centralize information on the project, disseminate results of policy working papers, new

⁵ This website is operational at: <http://www.worldbank.org/wbiep/trade/Standards.html>

research by experts outside the Bank, and other information. A seminar series on "Standards, Regulation, and Trade" has also been established at the Bank as a way to further broaden understanding of the linkages between standards, trade policy, and development.

52. A series of workshops and a conference in 2002 to enhance dissemination of the research and policy recommendations from this part of the work programme is also under consideration. With additional resources, the Bank would also develop educational tools (lecture notes, teaching aids and handbook) and sponsorship of training seminars on international standards and best practice in standards and regulatory reform, including assistance to developing countries. The goal of this part of work would be to provide direct assistance from the Bank to developing countries on international standards development systems, information on programmes available for modernization of standards infrastructure, and other topics related to understanding the role of standards in development. The papers, training material, and other output from this work would be made available through research papers, and content also disseminated through the World Bank Institute, and other organizations such as the WTO, International Organization for Standardization (ISO), and educational institutions in developing countries. Additional funding is being sought to implement this part of the work programme.

53. It is anticipated that throughout the initial three year project, staff will also be available to support Bank operations in areas of international standards, education on best practice in standards and regulatory reform, including assistance on trade policy related to regulation and standards. The work on standards will include close collaboration with the World Bank Institute.

VI. A NEW WORLD BANK PROJECT ON SUB-SAHARAN AFRICA

54. The United States has approved funding for the Bank to support research and capacity building on trade, regulation, and standards in Sub-Saharan Africa. The project centers on the following objectives:

- (a) Development of five country-specific action plans to expand access to and use of international standards in Sub-Saharan Africa. This will be accomplished through assessments of the specific impacts of standards and technical regulations on trade in the region,
- (b) Identification of specific infrastructure and capacity needs in Sub-Saharan Africa, including public and private sector capabilities in standards to support expansion of export opportunities and successful participation in the World Trade Organization (WTO),
- (c) Design of a pilot network in the region, based on the five action plans, to expand access to international standards and the region's ability to implement WTO obligations in the TBT and SPS Agreements.

55. The World Bank work relates to critical trade policy challenges and development needs in standards which heretofore have been largely unexplored and not addressed in the context of Sub-Saharan Africa. The central objectives of the Bank's project relates directly to obligations of membership in the World Trade Organization which encourage participation in the development of international standards and their use, as appropriate, as a basis for domestic technical regulations. Developing countries, including those in Sub-Saharan Africa, have expressed increasing concerns that such standards may not reflect their development and trade needs, in the absence of their "effective participation".

56. Moreover, the TBT and SPS Agreements foresee the prevention and removal of trade barriers through harmonization on the basis of international standards. Although a number of developing countries have expressed concern that implementation of WTO obligations is contingent on their ability to effectively participate in the process, there has not been a systematic analysis conducted of the nature of the barriers to effective participation by developing countries, nor of how best to ensure fulfilment of these WTO obligations, in regard to their special interests and needs.⁶

57. There are a number of concrete examples of problems confronted by countries in Sub-Saharan Africa in standards and technical barriers, as they relate to WTO obligations on use and application of international standards. These are based on the fact that investments needed to implement WTO obligations exceed government capital expenditure budgets and annual development resources in most developing countries.

58. As part of the work by the Bank in the Integrated Framework programme, for example, Uganda and Tanzania have noted the important need for assistance on technical regulations and standards in regard to WTO obligations in the TBT and SPS Agreements.⁷ During preparations for the WTO Ministerial in Seattle in November, several members from Sub-Saharan Africa outlined the critical and unmet needs in international standards.

59. Five countries in Sub-Saharan Africa will be identified for case studies and action plans. The five countries will represent a range of development challenges and geographic diversity in the region. The World Bank has extensive networks of contacts and resident missions in the region which will be directly involved in work conducted in the case studies.

60. Empirical research and data gathering on standards (goods and agricultural products) and regulatory systems in Africa will be conducted in the five countries. Special emphasis will be placed by the Bank team and African partners on an assessment of current and anticipated use of international standards, based on analysis of key relationships between standards, export competitiveness, and trade in Sub-Saharan Africa. Detailed information and analysis would be gathered through survey instruments of the challenges to and participation in standards development activities by Sub-Saharan Africa. Survey work would be undertaken with local research partners in the region.

61. Existing mechanisms for information exchange within the region will be also be evaluated, along with participation in international standards development, the use of standards domestically as a basis for mandatory technical regulations and identification of infrastructure needs. Public sector agencies with responsibilities over regulatory affairs and standards, as well as private sector standards organizations in the region will also be included in these surveys. In addition, detailed study of the capacity of public institutions and private sector organizations to access, absorb, and maintain information on relevant international standards will also be performed.

62. The analysis will focus specifically on areas of projected high export potential for the region. It is anticipated that standards could affect costs and production activities in all sectors, though in the context of Sub-Saharan Africa, emphasis would likely be placed initially on examining sectors such as agriculture, processed foods, labour-intensive manufacturers (apparel, chemicals, pharmaceuticals,

⁶ A number of Sub-Saharan African members of the WTO detailed problems in the area of standards related to implementation of WTO commitments, including Zambia, Zimbabwe, Tanzania, Kenya, Nigeria, and Uganda. Additional details are outlined in "The Post-Seattle Agenda of the WTO in Standards and Technical Barriers to Trade," John S. Wilson, World Bank (mimeo) 2000.

⁷ Detailed information regarding needs assessments in the Integrated Framework is available at www.lcds.org/index.htm

etc.) Finally, assessment of Sub-Saharan Africa's experience in success and failure to implement multilateral trade obligations in the WTO Agreements specified above would be undertaken.

63. Based on the assessments outlined above, detailed action plans for strengthening access and use of international standards which support WTO obligations in each of the five countries identified will be completed. These action plans will include specific information, data, and recommendations on:

- (a) key international standards critical to export competitiveness in the countries;
- (b) necessary infrastructure modernization and domestic capacities to absorb information on standards to meet WTO obligations; and
- (c) long-term benchmarks for assessing future progress in meeting development and trade objectives related to international standards. There will be wide dissemination of the results of the action plans in the region, including via the World Bank Institute, workshops, and other direct channels.

64. In addition to the five action plans, the project will produce a report which outlines a pilot design for a new "Standards Access Africa" network to deliver information, data, and expertise on international standards tied to WTO obligations. It is anticipated that this network would utilize the World Bank's distance learning network and infrastructure. (The network when implemented in subsequent years would provide a centralized source for information and training on voluntary international standards and related government technical regulations relevant to Sub-Saharan African exports.) It is anticipated that when implemented, the World Bank would maintain the database and incorporate it into activities of the Bank, including the Bank's Global Distance Learning Network (GDLN).

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