

**IMPLEMENTATION OF URUGUAY ROUND COMMITMENTS:
THE DEVELOPMENT CHALLENGE**

Republic of Lebanon

Office of the Minister of State for Administrative Reform

Center for Public Sector Projects and Studies

(C.P.S.P.S.)

by

J. Michael Finger and Philip Schuler

Abstract:

At the Uruguay Round, developing countries took on unprecedented obligations not only to reduce trade barriers, but to implement significant reforms both of trade procedures, e.g., import licensing procedures, customs valuation, and of many areas of regulation that establish the basic business environment in the domestic economy, e.g., technical, sanitary and phytosanitary standards, intellectual property law. Implementing such reforms are investment decisions in that implementation will require purchase of equipment, training of people, establishment of systems of checks and balances, etc. This will cost money, and the amounts of money involved are substantial. Based on Bank project experience in the areas covered by the agreements, an entire year's development budget is at stake in many of the least developed countries.

Least developed country institutions in these areas are weak, and would benefit from strengthening and reform. However, our analysis indicates that the WTO obligations reflect little awareness of development problems and little appreciation for the capacities of least developed countries to carry out the functions that SPS, customs valuation, intellectual property, etc. regulations address. The content of these obligations can be characterized as the advanced countries saying to the others, *Do it my way!*

We touch at the beginning on another important point. Because of their limited capacity to participate in the Uruguay Round negotiations, the WTO process has generated no sense of "ownership" of the reforms to which WTO membership obligates them. From their perspective, the implementation exercise has been imposed in an imperial way, with little concern for what it will cost, how it will be done, or if it will support their development efforts.

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1. INTRODUCTION

Many developing countries have successfully used international trade as a vehicle for development. A number of others however have been left behind. The WTO Ministerial Declarations of 1996 and of 1998 expressed concern over this "marginalization" of "least-developed countries and certain small economies" in the international trading system and asked the international community to make a particular effort to help them to take advantage of opportunities offered by the international trading system.

At the Uruguay Round, developing countries took on unprecedented obligations not only to reduce trade barriers, but to implement significant reforms both on trade procedures (e.g., import licensing procedures, customs valuation) and on many areas of regulation that establish the basic business environment in the domestic economy (e.g., technical, sanitary and phytosanitary standards, intellectual property law).

This paper is about the latter commitments. We point out that they are investment decisions in that implementation will require purchasing of equipment, training of people, establishment of systems of checks and balances, etc. This will cost money and the amounts of money involved are substantial. Based on Bank project experience in the areas covered by the agreements, an entire year's development budget is at stake in many of the least developed countries.

Least developed country institutions in these areas are weak, and would benefit from strengthening and reform. However, our analysis indicates that the WTO obligations reflect little awareness of development problems and little appreciation of the capacities of the least developed countries to carry out the functions that SPS, customs valuation, intellectual property, etc. regulations address.

We touch at the beginning on another important point. Because of their limited capacity to participate in the Uruguay Round negotiations, the WTO process has generated no sense of "ownership" of the reforms to which WTO membership obligates them. From their perspective, the implementation exercise has been imposed in an imperial way, with little concern for what it will cost, how it will be done, or if it will support their development efforts.¹

¹ We do not present this perspective as a reason to avoid implementation. The countries would be worse off without reform. We provide it instead as a guide to where help is needed to make implementation effective in the countries that as of now have no sense of ownership of the WTO system.

WHOM WE ARE TALKING ABOUT

As to the developing countries we have in mind, like the WTO Ministers in their 1996 Declaration, our concern focuses on the countries that are being marginalized. What we will argue will apply particularly to these countries – generally, the least developed countries – rather than to those developing countries that have already established themselves as major trading economies and active members of the WTO diplomatic community. Throughout the paper we will use the term, “least developed countries,” to refer to all countries that are struggling to use the international trading system effectively – a list of countries approximated by the United Nations official list of least developed countries, but not necessarily identical to that list.²

WHAT WE ARE TALKING ABOUT

Our analysis is based on World Bank project experience in customs reform, SPS, and intellectual property regulation. In each of these areas we reviewed Bank experience with three questions in mind:

1. What are the development problems in this area?
2. Does the WTO agreement correctly diagnose the development problems?
3. Does the WTO agreement prescribe an appropriate remedy?

“Appropriate” in the third question refers both to correct identification of the problem and to recognition of the capacities (resource constraints) of the least developed countries.³

STRUCTURE OF THE PAPER

In the next section we will explain how implementation of such obligations differs from implementation of more traditional market access commitments such as tariff reduction or elimination of quantitative restrictions. In sections 3 and 4 we look briefly at least developed countries’ participation in the Uruguay Round negotiations. In section 3 we point out that this participation, or lack thereof, has left these countries with no sense of ownership of the commitments they have undertaken. In section 4 we point out that in the Uruguay Round market access negotiations, the developing countries received no more than they gave – this in response to the possible criticism that implementation of the reforms we review here is what the developing countries owe for what they received in the market access negotiations. Sections 5, 6 and 7 present our examination of the challenges developing countries will face in implementing their obligations on customs valuation, sanitary and phytosanitary standards and intellectual property regulation. In each area we outline basic WTO obligations and we examine how implementation might be managed so that it best helps the least developed countries to use trade as a vehicle for development. Our conclusions are in the final section.

2. THE SCOPE OF “IMPLEMENTATION”

² Like the WTO Ministers, we offer no precise list of the countries who share the problems we address.

³ To take a brisk 30-minute walk every day would not be a good prescription for a paraplegic.

The initial focus of the GATT was to remove bad policies: the excess of trade restrictions that built up during the world recession of the 1930s and the war years of the 1940s. While considerable political courage and diplomatic skill were needed to make the necessary decisions, implementing them, e.g., changing the tariff rates, required no more than the stroke of a minister's or a legislature's pen. A lot of money will flow in different directions because of tariff cuts, but it costs nothing to cut the tariffs.

More is involved in the implementation of WTO rules on customs valuation, intellectual property rights and SPS than the simple removal of bad policies. Implementation is about creating infrastructure, about creating the institutions that facilitate economic activity. Intellectual property rights implementation, for example, will, like tariff reductions, cause money to flow in different directions. But it costs money to implement IPR. Implementation involves investment: purchase and installation of equipment and procedures, training of staff, etc.

To provide specificity to this point and to provide an indication of the scope and cost of investments that may be involved in implementing Uruguay Round commitments, we will review (primarily) World Bank experience with customs reform, with application of sanitary and phytosanitary standards, and with installation of systems of intellectual property rights. One of the lessons that emerges from this review is that the scope of what the WTO regulates is narrower than the scope of what must be done to make development sense out of implementation. For example customs valuation versus customs reform – it helps little to change customs valuation procedures if containers still stay on the dock for 60 days.

3. THE URUGUAY ROUND GENERATED NO LEAST DEVELOPED COUNTRY “OWNERSHIP” OF THE RULES

“Ownership” of the rules is an important element in the functioning of any system of rules; particularly important in systems such as the WTO, where the central organization has limited power to enforce. Building among members a solid sense of ownership of such rules begins with participation in establishing them — for WTO rules, with effective participation in the WTO negotiations in which the rules were agreed.

The African Economic Research Consortium has conducted an evaluation of sub-Saharan African countries' participation in the rules making exercises of the Uruguay Round and has found that this participation was minimal. These countries lacked the capacity to engage substantively on the wide range of issues that the Uruguay Round included. The AERC evaluation identified weaknesses at three levels:

1. Geneva delegations were small and lacked persons with the technical backgrounds needed to participate effectively. A competent diplomat without the backing of a technical staff was not an effective delegation.⁴

⁴ Of 65 developing country GATT/WTO members when the Uruguay Round began, 20 did not have delegations in Geneva. Of the 20, 15 were represented from embassies in other European cities, and 5 by delegations based in their national capitals. Furthermore, developing country delegations were notably smaller than those of the industrial countries. In 1987, when the Uruguay Round began, the

2. Links between WTO delegations and the government at home were not developed. There was a lack of established process to involve the relevant ministries with issues that were being negotiated in Geneva, e.g., health and agriculture ministries with negotiations on sanitary and phytosanitary standards, the customs agency with the customs valuation negotiations.
3. Stakeholders, e.g., the business community, were minimally involved.

An indicator of the lack of involvement by sub-Saharan countries is that, of all the written proposals, comments, etc. circulated at the WTO during the Uruguay Round negotiations, less than 3 percent were submitted by sub-Saharan countries.⁵ These delegations' efforts in the Uruguay Round were principally aimed at defending special and differential treatment:

- on rules, that different rules should apply to countries at different stages of development – phased-in implementation became an eventual rendition;
- on market access, to defend preferences that sub-Saharan countries enjoyed.⁶

Ogunkola concludes that “[w]hile the participation of Africa has been limited by the capacity to negotiate, the ratification of the agreement and the single undertaking clause made the implementation of the agreement almost non-negotiable.”⁷

The reasoning behind this point:

- The alternative available at the end of the Tokyo Round – to sign some agreements but not others – was taken away.
- Countries that chose to remain GATT members but opted not to accept the Uruguay Round package that was incumbent on WTO members would have been discriminated against – they would not be owed the new obligations that WTO members accepted at the Uruguay Round.⁸

EU had in Geneva a delegation of 10, EU Member States' delegations included an additional 57 persons. The US delegation numbered 10, the Japanese, 15. Only 12 developing countries had delegations of more than three persons. The larger ones: Korea, Mexico and Tanzania, 7 each; Brazil and Indonesia, 6 each; Thailand, Hong Kong and Egypt, 5 each. Of the 48 least developed countries, 29 are WTO members, but only 11 of these maintain delegations in Geneva. As of January 1999, 6 least developed countries were negotiating accession to the WTO, another 6 were observers, not negotiating accession.

⁵ Ogunkola, p. 3.

⁶ *ibid.*

⁷ “Single undertaking” here means that each member was expected to take on all obligations, that the codes approach of the Tokyo Round, in which each member could opt to sign some codes and not sign others, was not available. John Croome, who served in the GATT/WTO Secretariat throughout the Tokyo and Uruguay Rounds, has pointed out in correspondence that “single undertaking” initially referred to the members voting on all parts of the agreement as a whole, i.e., that the outcome of the tariff negotiations would not be put up for approval separately from the outcome of the subsidies negotiations. As the negotiations progressed, the meaning of “single undertaking” expanded to include the “no country can opt out of any part” meaning.

⁸ Because the Tokyo Round codes were part of the GATT, the GATT nondiscrimination obligation (Article I) required that code signatories apply the codes in their dealings with non-signatories as with signatories, i.e., non-signatories were entitled to the benefits of a code without accepting the obligations.

- To the negotiators, the diplomatic value of becoming a WTO member weighed heavily.

Result: there came forward in these countries no sense of ownership of the implied reforms. To least developed country negotiators, the reforms were imposed by the major trading countries. The government agencies that must implement the rules blame the large countries and their own negotiators. To them, the rules were imposed by the major trading countries over the weakness of their own negotiators. Among stakeholders, the losers have been agitated, e.g., interests that previously secured protection from the application of customs procedures, or standards. But the process of making the rules has not rallied the potential winners, e.g., traders who would save money from improved customs operations, producers who might be able to export if standards were upgraded to an international level. Given these attitudes, it is difficult to rally support for implementation. At each level, implementation is viewed as something that will help someone else,⁹ the urge is to do the minimum to get by. Attempts to force implementation through the WTO dispute settlement mechanism would likely reinforce the impression that the WTO rules are imperially imposed from the outside, for the benefit of the outside.

TRIPS, the customs valuation agreement, the SPS agreement and several others suggest that developed country members furnish technical assistance to developing country members that so request it. This provision however is not a binding commitment; in effect, the developing countries have taken on bound commitments to implement in exchange for unbound commitments of assistance to implement.

4. IMPLEMENTATION OF RULES VS. MARKET ACCESS: WHAT THEY GAVE FOR WHAT THEY GOT?

Implementation of these rules, some have argued, is what the developing countries owe for the Uruguay Round market access concessions they got from the industrial countries, particularly in agriculture, textiles and clothing.

One can respond to this assertion in several ways. First of all, it does not nullify the ownership argument above. Even if, in the mercantilist ethic of the GATT/WTO, the least developed countries owe this implementation, we still have the ownership problem—the process by which these obligations were taken on has not helped to build the domestic politics to implement them.

Second, what the industrial countries gave in agriculture and in textiles-clothing is still more a promise than a reality. In Annex A where we summarize an earlier review of the Uruguay Round market access negotiations, we report that in textiles-clothing, the industrial countries have committed themselves to liberalization, but with delayed delivery. The details of the textiles-clothing agreement, we document, will allow the industrial countries to delay almost all of the removal of MFA-sanctioned quantitative restrictions until 2005. In agriculture, the agreed change of form of protection from

⁹ An African food scientist remarked to me in conversation, “They want us to adopt the SPS agreement so that we will import more chickens from them.”

NTBs to tariffs has been implemented, but reduction of protection is still to be agreed. The industrial countries at the Uruguay Round reduced the level of protection on a smaller percentage of their agricultural imports than of their industrial imports, and tariffs on agricultural products remain significantly higher than those on industrial goods. Agriculture is part of the "built-in agenda" – the Uruguay Round agreement includes a provision to undertake in 2000 further negotiations on agriculture protection. These however will be negotiations, in which countries that agree to concessions will expect reciprocal concessions. Unlike in the textiles-clothing agreement, there is no bound commitment in the agriculture agreement to implement future liberalization.

A final and perhaps the major point here, in the tariff negotiations developing economies' tariff cuts covered the same percentage of imports as industrial country cuts, and developing country cuts were actually deeper. Within the mercantilist calculus of concession-for-concession, the developing countries received no surplus in the market access negotiations that they should feel obligated to pay back in the rules negotiations.

5. CUSTOMS VALUATION

Article VII, the GATT article on customs valuation, provides that, in principle, customs value should be based on actual value. Actual value, in turn, is to be based on the price at which the product or like merchandise is sold under competitive conditions in the ordinary course of trade.

Under Article VII, a number of different valuation practices were accepted, e.g., basing customs valuation on the price of competing domestic products.

The Uruguay Round Customs Valuation Agreement establishes the transactions value of the shipment in question as the primary basis for customs value. Supporters of the agreement see it bringing two improvements:

1. Increased predictability for traders – they will be able to calculate before-hand their customs liability,
2. Control over the use of inflated customs values to restrict imports.

We will point out in this section that customs valuation is only one part of the customs process. Given the initial situation in many least developed countries (which we will briefly characterize) changing the valuation process without overall customs reform is not likely to improve the predictability of the customs process, nor would it mitigate significantly the possibility of using the customs process as a non-tariff barrier.

DEVELOPING COUNTRIES' CUSTOMS PRACTICES AND PROBLEMS

Customs practices in many least developed countries differ significantly from those in place in the more advanced trading nations. The differences are often differences in basic concept, not just differences of detail or efficiency.

Use of reference prices

Traders can evade exchange controls by overvaluing import shipments; they can evade customs duties and excise taxes applied at the border by undervaluing shipments. Rather than establishing the control and information systems necessary to identify actual transaction value, many governments have based customs value on schedules of reference prices, reference prices based sometimes on domestic prices (e.g., those established by local producers associations) on prices in major exporting countries, or on more abstract minimum or normal values. Use of such reference prices effectively converts ad valorem rates into specific rates (e.g., a tariff with two columns—ad valorem rate, unit value).

While inflating reference prices does provide a means for providing protection for domestic production, overstatement and unpredictability are not intrinsic features of such valuation systems, nor is discretionary application by customs administrators. Reference prices can be publicly posted, and international prices (at least for commodities) can provide an objective standard for establishing their value.

Physical Control

Effective customs administration has both physical and administrative dimensions. Physical control is about keeping track of what passes into and out of the country. In many poorer countries, traditional smuggling—goods sneaked across the border away from recognized ports—is a significant problem. At a duty rate of 50%, the duty on the number of televisions one person can transport on a bicycle-jitney can come, in a poor country, to a year's wages. Where physical control systems are poor, smuggling need not involve clandestine overland trails or secret moonlit beaches. Goods often move through ports without coming under the supervision of customs authorities.

Administrative Processes

Customs processes in poorer countries exhibit many interacting weaknesses—excessive procedures (re international guidelines) that are not codified, poorly trained officials, a civil service system that does not pay a living wage and depends on officials receiving side-payments for performing their functions, ineffective provision for appeal.

Bert Cunningham, in an assessment of several least developed countries considering customs reform, observed that systems and procedures appeared to have evolved to maximize the number of steps and approvals – to create as many opportunities as possible for negotiation between traders and customs officials. Procedures were not codified, not even a schedule of current tariff rates was available. There was thus no objective basis for limiting what an official might demand, no basis for a trader to know what was expected at each step, and no basis for appeal to a higher authority that he/she had satisfied requirements, even if there had been provision for such appeal. Internal operational audit was impossible, there was no possibility of, much less incentive for, voluntary compliance.

It should be evident from this introduction to customs problems in poorer countries that valuation is only an inch in the whole yard of customs operations that need improvement.

REFORM EXPERIENCE IN DEVELOPING AND TRANSITION ECONOMIES

We present in this section a review of customs reform projects in several countries. This review reinforces one of the arguments we made in the previous section, that needed reform is much broader than valuation reform. The section in addition provides information on how much customs reform costs.

Tanzania

Customs consultant Bert Cunningham prepared a report to the Tanzanian Revenue Authority proposing a comprehensive reform of Tanzanian customs procedures.¹⁰

Cost. \$8-10 million over three years. This would cover technical assistance, training, refurbishment of buildings, new equipment, and computerization.

Scope. The reform proposal includes:

- *Computerization* – including ASYCUDA (the UNCTAD computerized customs system), and systems for warehouse inventory control, and statistical reporting.
- *Valuation procedures* – phase out the Brussels Definition of and adopt the WTO system (based on transaction prices).
- *Cargo controls* – speed up processing and eliminate fraudulent or incorrect valuation.
- *Building refurbishment* – refurbish customs buildings necessary to house ASYCUDA.
- *Administrative reforms* – establish a new division responsible for customs valuation and tariff classification, recruit and train staff, establish appeals tribunal, reduce discretion exercised by customs officers.
- *Screenings for drug interdiction.*
- *Legislative reforms* – rewrite laws, formally accede to the Harmonized System Convention, increase transparency.

Central and Eastern Europe

The European Union has been assisting ten of the formerly socialist countries in Central and Eastern Europe with institutional reforms through its Phare Program.

Cost.¹¹ The total budget allocated for Phare customs modernization in the ten candidate countries is 90 million ecus for 1990-97, of which 70 million has been contracted (at a \$/ecu rate of 1.2, this is approximately \$108 million and \$84 million).

Computerization	42.74
Equipment	6.85
Training	13.77
Management	2.35
Other	4.54
Total Contracted (million ecus)	70.25

¹⁰ Bert Cunningham, "Tanzania: Strategy and Action Plan to Reform Customs Administration," June 1996.

¹¹ Pricewaterhouse Coopers, "Evaluation of the DG 1A Programmes: Phare Customs Programmes," December 1998. URL: http://europa.eu.int/comm/dg1a/evaluation/phare_customs/index.htm [Accessed June 16, 1999.]

Scope.

- *Computerization* – Establish computerized customs declarations systems in all countries.
- *Anti-Smuggling Equipment* – Provide laboratory and detection equipment for drug interdiction and other anti-smuggling efforts. Equipment ranges from x-ray equipment and gas chromatographs to communications equipment.
- *Management and Staff Training* – Train staff in basic management, customs procedures and computer operations; establish staff training schools.
- *Legal Reforms* – EU candidates must adopt the EU customs code. Phare assistance funded translation of laws, training to (re-)write laws in conformance with EU codes, and conduct public information campaigns.

World Bank Projects

A number of World Bank projects contain components assisting countries with customs reform through staff training and modernizing customs procedures. These customs reform components are designed to support the projects' broader development objectives (such as increasing export capacity or fiscal reform). Below are three examples.

Country	Project description	Cost
Armenia, 1993-1997	Draft new customs law, train staff, and computerize procedures – component of an institution building project	\$1.604 million
Lebanon, 1994-2001	Train staff, introduce new tariff classification, computerize procedures – component of a revenue enhancement and fiscal management project	\$3.82 million
Tunisia, 1999-2004	Computerize and simplify procedures – component of an export development project	\$16.21 million

To sum up this section, the reforms we have reviewed cover some sixteen major categories of activities ranging from rewriting legislation through training in auditing procedures, physical security in customs warehouses, to policing of smuggling and of traffic in illicit drugs. Various of these components involve a cost in the neighborhood of \$10 million per country.

VALUATION UNDER THE WTO CUSTOMS VALUATION AGREEMENT

Not only does the Uruguay Round customs valuation agreement address only a part of the customs process, the valuation process it prescribes presumes an administrative environment that does not exist in many of the least developed countries.

Key elements in the agreement

The agreement prescribes a hierarchy of valuation methods.

1. Transaction value of the imported merchandise – the price actually paid or payable for the specific shipment. The agreement provides a list of items (add-ins) that must be included in the price actually paid or payable, e.g., packing costs, cost of tools, dies and moulds provided by the buyer. The agreement permits tariffs to be based on either c.i.f. or f.o.b. values. National law must specify which, a country's practice can not vary from shipment to shipment.
2. Transaction value of identical merchandise – sold for export to the same country of importation at or about the same time – for which a transaction value can be determined.
3. Transaction value of similar merchandise. Add-ins and take-outs adjust for the merchandise not being identical to the merchandise in the shipment in question.
4. Deductive value based on the price at which the merchandise or identical or similar merchandise is sold in the importing country to an unrelated buyer. Appropriate add-ins and take-outs are to be applied, particularly if the merchandise has received further processing, been divided into smaller lots, etc., before it is re-sold.
5. Computed value – adding various prescribed amounts (profits, expenses, transport) to the cost of production (materials, fabricating, processing). This method depends on the seller being willing to supply the necessary costing. The agreement allows the importer discretion to specify that the computed value method be applied before the deductive value method. Developing countries do not have to apply the computed value method before January 1, 2002.

The agreement also provides a rogue's gallery of methods that may not be used:

- Selling price of competing domestic products,
- Choice of the higher value when two alternative values are available,
- Use of the selling price on the market of the exporting country or on another export market,
- Use of production costs except if computing according to the fifth method,
- The price of goods for export to a country other than the country of importation,
- Minimum values,
- Other arbitrary or fictitious values.

The agreement provides that upon written request the importer has the right to a written explanation as to how customs value was determined. The agreement also explicitly states that nothing in it may be interpreted as restricting the authority of customs officials to satisfy themselves that statements or documents presented are true and accurate. It also requires that national legislation provide for the right of appeal without penalty.

Presumed administrative environment

The valuation process the Uruguay Round agreement imposes is one that complements customs systems in place in most of the advanced trading nations (including both developing and industrial countries). That system is based on generalized

use of electronic information management and built-in incentives for self-compliance. Trade in these countries takes place in large-scale lots and duty rates are generally low. In this context, departure from routine business practice is costly, e.g., retrieving additional information in response to a valuation inquiry. Importers normally conduct the valuation process themselves, including application of the add-ins and take-outs needed to comply with the rules. In Norway, a paperless customs declaration system operates around-the-clock, average clearance takes 15 minutes. About 85 percent of declarations pass through the system without being stopped for further investigation.¹²

Enforcement is risk based and involves random selection of entries that will be checked. That selection is grounded in the customs office's record of compliance by the traders. For example, in Mexico, 90 percent of shipments receive the "green light" overall, but historic information affects the probability of the light flashing red for any shipment.

Questioning and verification of the importer-submitted customs value does not normally cause physical delay of the shipment. Instead, the importer posts a customs bond sufficient to cover the amount in question. Financial institutions in many least developed countries do not offer such bonds.

SUPPORTING REFORM IN DEVELOPING COUNTRIES

Colleagues at the Bank who proudly point out that "their" countries have eliminated all quantitative restrictions and have tariff rates at intermediate levels often admit that customs administration is a mess. Reform is needed in many least developed countries. The Uruguay Round Agreement does not prescribe changes particularly suited to the problems and to the administrative environments that exist in these countries; however, it does allow leeway for development and adoption of such reforms. We review in this subsection the relevant provisions of the agreement, and we suggest guidelines for reforms.

Customs valuation agreement provisions aimed particularly at developing countries' concerns

The agreement and its annexes. The customs valuation agreement provides for delayed application by developing countries, those who were not signatories to the Tokyo Round customs valuation code have until January 1, 2000.¹³ As noted above, such countries can take an additional three years before they implement the constructed value method of valuation. Annex III to the agreement acknowledges that the five-year delay in implementation may not be sufficient for certain developing countries, and provides for a developing country to apply for an extension of the deadline (no length is specified) "it being understood that Members will give sympathetic consideration to such a request in cases where the developing country Member in question can show good cause."

¹² WCO 1999.

¹³ The Tokyo Round customs valuation code went into effect in 1990, hence at the time the Uruguay Round agreement went into effect the industrial countries had 15 years' experience with implementing basically the same requirements.

Annex III also provides that “Developing countries which currently value goods on the basis of officially established minimum values may wish to make a reservation to enable them to retain such values on a limited and transitional basis under such terms and conditions as may be agreed to by the Members.”

Ministerial Decisions. In addition to the article on special and differential treatment and the annex cited just above, two Ministerial Decisions taken at the time of approval of the Uruguay Round Agreements addresses developing country concerns about customs valuation.

One of the addressed concerns was that the agreement would not give developing countries sufficient room to challenge traders whom they believed to be under-invoicing. The chief provisions of the relevant Ministerial Decision are that where customs administrators have reason to doubt the truth or accuracy of declared value:

- The customs administrator may ask the importer to provide further information, documents, etc.
- If with such information or lack of response customs still has reasonable doubt about the truth or accuracy of the declared value, it may conclude that value cannot be determined by the first method.
- Before taking such a decision, customs shall communicate to the importer, in writing if requested, its grounds for doubting, and give the importer reasonable opportunity to respond.
- Customs must communicate its final decision in writing to the importer.

Another Ministerial Decision states that “sympathetic consideration” will be given to developing country requests to extend the period of application of officially established minimum prices. In regard to developing country concerns that they would have trouble valuing imports by sole agents, sole distributors and sole concessionaires, the Ministerial decided that the Customs Cooperation Council would assist them in conducting appropriate studies.

Characteristics that reform steps should introduce

Reform should aim to build into a customs system the following characteristics:

- transparency, including codified procedures and codified criteria for determinations;
- objectivity, decisions based on verifiable facts rather than on the discretion of administrators;
- accountability;
- balance, equal access to the process by all stakeholders.

Possible building blocks

Among international organizations, the World Customs Organization has perhaps the greatest capacity to guide overall customs reform. The WCO’s Kyoto Convention (officially, the *International Convention on the Simplification and Harmonization of Customs Procedures*) and various WCO conventions on single topics attempt to codify good practice across the range of activities that make up the entirety of customs administration. The WCO Secretariat has an active program to work with governments

to identify weaknesses in their customs procedures and to develop concrete plans for reform.

The authors of this paper have little experience with customs administration. Our objective here is limited to suggesting that the international community pay attention to how customs administration might be built up a step at a time in the least developed countries, and to offer a suggestion or two that might begin such a discussion. Besides the technical questions of what to do and how to do it, there is also the political need to see that the process is demand driven, to generate ownership in such reforms among the stakeholders in the least developed countries.

Where tariffs are high, and where accounting expertise and access to electronic information limited, shifting to a risk-based valuation system that depends on in-depth examination of a sample (15 or 20 percent) of shipments, might increase rather than reduce the number of shipments on which importers attempt to under-invoice. Traders might view the change as giving them a better, not a worse chance to get away with under-invoicing.

At least for basic goods, a valuation system based on observed world prices might offer a better opportunity to introduce transparency, objectivity and accountability into the system. At periodic reviews of these "reference prices," both import users and import-competing interests might be given "standing;" and could be offered the opportunity to submit evidence in support of revisions. It might also be possible to establish a collective system of reference prices, over which no one government had control. Schedules of reference prices might be determined by an intergovernmental group, their preparation and circulation might be contracted to an independent agency.

6. SANITARY AND PHYTOSANITARY STANDARDS

WTO treatment of sanitary and phytosanitary standards illustrates the expansion of WTO coverage from border measures to the trade dimensions of policies often thought of as domestic policies. GATT Article XX recognizes the right of governments to restrict trade when necessary to protect human, animal or plant life or health, provided that the measures:

- are not applied in a manner which unjustifiably discriminates between countries with the same conditions,
- are not applied as a disguised restriction on trade.

Concerns that removal of traditional restrictions on imports of agriculture products would tempt countries to use SPS in a restrictive way prompted the SPS agreement. The aim of the agreement is to keep to a minimum the trade effects of government actions to ensure the safety of food and the protection of human, animal and plant health.

KEY COMPONENTS OF THE AGREEMENT

The WTO SPS agreement covers all measures taken:

- to protect human, animal and plant health from pests and diseases,

- to protect human and animal health from risks in food or foodstuffs (such as toxins or pesticide residues)
- to protect humans from animal-carried diseases such as rabies.

As GATT Article XX, the Agreement recognizes the right of governments to take such measures but provides greater detail on both what to do and what not to do.¹⁴ In concept it constrains a country to use SPS measures:

- only to the extent necessary to protect life or health,
- based on scientific principles,
- not maintained if scientific evidence is lacking.

The latter bullet implies that SPS measures can be put in place only on the basis of careful laboratory testing and analysis and if science-based concerns about food safety or serious threats to animal or plant health have been identified.

Clout for exporters

As the customs valuation agreement is intended to prevent valuation from being used in a protectionist way, the SPS agreement is intended to limit the use of SPS measures to restrict imports. Before the SPS agreement was in force, an exporter had to comply with the importing country's SPS measures. With the agreement in force, the exporter must still comply with the importing country's SPS measures, but the importing country is, by the agreement, required to demonstrate that its SPS measures are in fact based on science and are applied equally to domestic and foreign producers. The Uruguay Round agreement puts the WTO on the side of those exporters who do comply. The exporter now has clearer grounds for challenging an import restriction.

On imports, a heavier burden for developing countries

While the SPS agreement does not require that a country's domestic standards meet the agreement's requirements, it does require that the standards the country applies at the border meet those requirements. In this regard, the agreement likely places a heavier burden on developing than on industrial countries – this resulting from the standards already in place in the industrial countries more-or-less being established as the standard to which the developing countries must comply.

The agreement specifies that SPS measures in conformity with relevant international conventions¹⁵ are to be deemed necessary to protect human, animal or plant health, and presumed consistent with the SPS agreement.¹⁶ Industrial countries have been leaders in establishing these international conventions, the resulting conventions

¹⁴ The WTO SPS agreement requires that the process of developing and enforcing these laws be transparent. Governments must publish proposed regulations in advance and allow public comment, including from foreign exporters. Governments must notify the relevant international body (see following footnote) of any changes to SPS rules and must establish Enquiry Points so that trading partners can determine a country's present and planned SPS regulations and processes.

¹⁵ The SPS agreement specifically recognizes the Codex Alimentarius Commission, the International Office of Epizootics and the International Plant Protection Convention, including subsidiary, regional, etc. parts thereof.

¹⁶ Article 3.

being in significant part generalizations of industrial country practices and standards.¹⁷ This does not imply that such standards are bad standards in a scientific sense nor that they are biased standards in an economic sense. It does however imply that the SPS agreement provides for a more effective assault against current developing countries' use of SPS measures against imports than against industrial countries' use. As a least developed country health official remarked, "They want us to adopt the SPS agreement so that we will import more chickens from them."

APPLICATION REQUIRES INVESTMENT

For a developing country to effectively use the WTO agreement to defend its export rights or to justify its import restrictions, it will have to upgrade its SPS system to international standards. This necessity does not question that such upgrading would serve the development objectives of the country. Our point again is that for the developing countries, effective use of the WTO agreement depends on extensive investments – it is not a matter of applying existing systems of standards to international trade, it is a much broader matter of installing world-class systems. The following subsection documents this contention.

LESSONS LEARNED FROM WORLD BANK EXPERIENCE

The World Bank has assisted many countries to implement sanitary and phytosanitary regulations. Bank projects supporting SPS systems have typically placed these measures in a general development context of ensuring food security, increasing agricultural productivity and protecting health, rather than focusing on the narrower objective of meeting stringent requirements in export markets. We draw on these cases to illustrate again our basic points, that the scope of reform needed to make development sense of the WTO agreement's standards is broad, and that implementation will cost money.

Broad scope

One SPS-related project that the Bank has supported, an export reform project in Argentina, did have as its objective to improve trade performance. The project is described in some detail in Annex B, we list here only those components that relate directly to implementation of SPS standards:

- Upgrading veterinary services, central and field;
- Laboratories;
- Quarantine stations;
- Disease and pest eradication programs;
- Certification of disease-free and pest-free zones;
- Training, facilities and equipment for seed certification and registration;

¹⁷The basic metric of SPS implementation is risk assessment, e.g., the risk of establishment or spread of a disease or pest. International conventions deal with both the scientific method for measuring risk and the appropriate levels for regulation. A country may adopt other methods or other levels, but to apply such standards at the border the WTO agreement places on the country the burden of demonstrating their scientific merit and appropriateness.

- Training, facilities and equipment for quality control, for certification to ensure the absence of chemical residues in exported meat;
- Laboratory to bring wool certification up to international standards;
- Staff, equipment for research aimed at reducing chemical residues.

Perhaps the critical element of the program was to gain international recognition of certain zones as disease free or pest free. Argentina's meat, fruit and vegetable exports have been limited by other countries' concerns over the presence particularly of foot and mouth disease and citrus canker. In addition, the program recognized that diversification into higher value-added exports such as processed meats, seeds, and horticultural products required producers to meet more stringent quality control standards. The project included also several "economic" components, e.g., market research, export promotion, marketing information systems.

Cost

The following table lists the costs of several SPS-related projects that the World Bank has supported. In addition to such costs to the government, producers in the private sector bear other costs of complying with SPS regulations: vaccinating livestock, eliminating pesticide residues, guaranteeing sanitary food processing conditions, and the like.

Country	Project description	Cost
Argentina, 1991-1996	General agricultural export reform project	\$82.7 million
Brazil, 1987-1994	Livestock disease control project	\$108 million
Algeria, 1988-1990	Locust Control project	\$112 million
Vietnam, 1994-1997	Pest management component of Agricultural Rehabilitation project	\$3.5 million
Madagascar, 1980-1988	Livestock vaccination component of Rural Development project	\$11.8 million
Hungary, 1985-1991	Slaughterhouse modernization component of Integrated Livestock Industry project	\$41.2 million
Russia, 1992-1995	Improve food processing facilities, disease control – component of Rehabilitation Loan	\$150 million
Poland, 1990-1995	Food processing facilities modernization component of Agro-industries Export Development project	\$71 million
China, 1993-2000	Animal and plant quarantine component of Agricultural Support Service project	\$10.0 million
Turkey, 1992-1999	Modernize laboratories for residue control – component of Agricultural Research project	\$3.3 million

7. INTELLECTUAL PROPERTY RIGHTS

The WTO TRIPs agreement covers the seven main areas of intellectual property:

- copyright,
- trademarks,
- geographical indications,
- industrial designs,
- patents,
- layout designs of integrated circuits,
- undisclosed information including trade secrets.

In each area, the agreement:

- specifies minimum standards of protection that governments must provide,¹⁸
- requires governments to provide procedures to enforce,
- provides means of dispute settlement.

The minimum standards are similar for each of the seven areas; they cover, in the instance of patents:¹⁹

- What is patentable.
- What rights flow to the owner of a patent – government is obligated to prevent unauthorized persons from using, selling or importing the patent, the patented process, the patented product or the product or products directly made from the patented process.
- What exceptions to those rights are permissible – e.g., compulsory licensing may be required, but details guard the right of the patent owner and require that compulsory licensing not discriminate on the basis of technology nor between domestic production and imports.
- How long the protection lasts.²⁰

¹⁸ One critic however argues that “these [are] not ‘minimum’ standards of intellectual property protection in the classical sense of the term; rather, they collectively expressed most of the standards of protection on which the developed countries could agree among themselves. (Reichman, p. 586)

¹⁹ WTO Guide, pp. 214f.

²⁰ The TRIPs agreement provided the following transition periods:

- developed countries, until 1 January 1996,
- developing countries and transition economies, up to 1 January 2000,
- least developed countries, up to 1 January 2006 – and may be extended on “duly motivated” request by a least developed country.

Developing countries that at present provide patent protection to processes and not to products, for example in the food, chemical and pharmaceutical sectors, can delay up to 1 January 2005 the application of the obligation to protect products. Even here, governments must provide that inventions made 1995-2004 will be able to gain patent protection after 1 January 2005.

LINKS TO INTERNATIONAL CONVENTIONS

The TRIPs agreement, like the SPS agreement, builds on standards expressed in relevant international conventions. The more important of these include:

- Paris Convention for the Protection of Industrial Property (1967)
- Berne Convention for the Protection of Literary and Artistic Works (1971)
- Rome Convention – the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting (1961)
- Washington Treaty – the Treaty on Intellectual Property in Respect of Integrated Circuits, sometimes labeled the ICIP Treaty (1989)²¹

The TRIPS Agreement obligates members to provide for protection of plant varieties, either by patent or by an effective *sui generis* system such as the plant breeder's rights established in the International Union for the Protection of New Varieties of Plants (UPOV) convention.

EXTENSION OF IPR OBLIGATIONS

The TRIPS Agreement requires each WTO member to adhere to the provisions (with a few provisions excepted) of such international IPR conventions, whether or not the member is party to those conventions. This, of itself, is a major extension for many countries. For example, the coverage of integrated circuits is an extension for many countries, including industrial countries. Under TRIPs, WTO members must consider unlawful – if not authorized by the right-holder – the import, sale, or other commercial distribution of the integrated circuit design, of integrated circuits containing that design, and of articles that contain such integrated circuits.

Another example, the Rome Convention that establishes rights of performers, producers of sound recordings, and broadcasters has few signatories, particularly among developing countries. The TRIPs agreement²² creates the obligations on governments that allow recording companies from one country to attack unauthorized reproduction and sale of its products within another country.

In addition, the TRIPs agreement in some areas has broader coverage than the relevant international convention. It goes beyond, for example, the Berne Convention to obligate copyright protection for certain computer programs and computerized data bases, and it provides the first multilateral obligations on industrial designs (e.g., textile designs).

²¹ This treaty is not yet in force; having thus far only nine signatories, of which only one has ratified.

²² "Counterfeit" usually refers to goods to which a trademark has been applied without authorization, "pirated" to goods that infringe copyrights, etc. – such as unauthorized copies of books, CD's or video-cassette recordings. (ITC, p. 319)

WIGGLE ROOM

The enforcement provisions of TRIPs require that a member provide civil as well as criminal remedies for infringement of intellectual property rights. They also obligate members to provide means by which right-holders can obtain the cooperation of customs authorities to prevent imports of infringing goods. At the same time, the enforcement provisions are generic enough to apply to varied legal systems. They attempt to provide a balance between creating barriers to trade and abuse of procedures, likewise to strike a balance between the interests of developers and prospective owners of intellectual property rights and those of users and of society in general, i.e., between legal incentives to create and the rights of second comers to compete.

While it is impossible to predict how the process of application and interpretation through the WTO dispute settlement mechanism will play out, a number of legal experts²³ see sufficient “wiggle room” in the agreement so that developing countries could – within a good faith implementation of their obligations – strike a balance between the interests of second comers and the need to promote innovation and investment in innovation that favors second comers. This would likely require a considerable departure from the balance that has been institutionalized in the industrial countries’ intellectual property rights law. That balance, many industrial country experts argue, is tipped toward the interests of commercialized producers of knowledge – tipped past the point of optimality even for the community of interests that make up industrial country societies.²⁴

The tendency in these parts of the WTO is however to give the benefit of the doubt to established standards. Finding grounds for moving away from established standards may be particularly difficult in the area of intellectual property rights. They are, after all, an existential matter of legal definition, not a scientific matter of empirical estimation. On intellectual property rights even more than on SPS, the benefit of the doubt will rest with systems presently in place in the industrial countries.

HOW TO DO IT

Even for an individual country, it would be nigh on impossible to provide objective guidelines as to how to strike the optimal balance between legal incentives to create, and the costs that are thereby incurred by users and potential second-comers. Systems in place must be defended as the outcome of accepted (e.g., democratic) political processes, not of scientific calibration. It would be even more difficult to scale this balance to different levels of economic development. Analysts have so far built up little

²³ Reichman, 1998, and references cited there.

²⁴ In preparing this paper, we have come across a number of authors who argue that the balance currently institutionalized in industrial countries is not the socially optimal one even for these countries. Reichman for example urges that “the logical course of action for the developing countries in implementing their obligations under the TRIPs Agreement is to shoulder the pro-competitive mantle that the developed countries have increasingly abandoned. (p. 589) Templeman argues that there is no public justification for the level of intellectual property rights defined by industrial countries’ laws.

knowledge of the impacts of various forms of intellectual property rights on economic development, even less about different degrees of any form.²⁵

With regard to bringing developing countries' IPR regulations to the standards of the WTO agreement, the World Bank and UNCTAD case studies that we reviewed found considerable differences from country to country in the degree and the nature of needed reform. Our review of World Bank and UNCTAD case studies in support of IPR reform in developing countries likewise provided us with little insight into how to calibrate the appropriate balance. While the UNCTAD studies are prospective cost estimates, the World Bank examples are actual projects, in each of which the government had decided that the money spent to augment intellectual property rights systems would be money well spent. We might thus conclude that the optimal level of IPR protection in these countries is above the initial level, though perhaps less than what would be delivered by an unquestioning imitation of systems in place in industrial countries.

Our review of case studies in support of IPR again shows a considerable range of needed reforms; drafting new legislation, (e.g., to extend IPR protection to plant varieties), augmenting administrative structures (e.g., capacity to review applications, including computerized information systems and extensive training for staff) and buttressing enforcement. The technical complexity and specificity of many IPR issues means that judges, customs officials and others involved in enforcing IPRs may require additional training.

World Bank Projects

Country	Project description	Cost
Brazil, 1997-2002	Train staff administering IPR laws – component of Science and Technology Reform project	\$4.0 million
Indonesia, 1997-2003	Improve IPR regulatory framework – component of Information Infrastructure Development project	\$14.7 million
Mexico, 1992-1996	Established agency to implement industrial property laws – component of Science and Technology Infrastructure project	\$32.1 million

²⁵ Abbott (p. 501) in his introduction and summing-up to an issue of the *Journal of International Economic Law* devoted to TRIPs, notes this lack of understanding of the impact of IPR on economic development.

UNCTAD Case Studies²⁶

Country	Reforms needed	Cost
Bangladesh	Draft new laws, improve enforcement	\$250,000 one-time plus \$1.1 million annually
Chile	Draft new laws, train staff administering IPR laws	\$718,000 one-time plus \$837,000 annually
Egypt	Train staff administering IPR laws	\$1.8 million
India	Modernize patent office	\$5.9 million
Tanzania	Draft new laws, develop enforcement capability	\$1.0-1.5 million

²⁶ UNCTAD, The TRIPS Agreement and Developing Countries, UNCTAD/ITE/1 (1996).

8. CONCLUSIONS

The major lessons we draw from our review are listed and explained in this section.

REFORM IS NEEDED

In the areas we have covered, customs administration, sanitary and phytosanitary standards and intellectual property rights, we found no shortage of projects to review. Developing countries are willing to borrow money to finance improvements in these areas; hence it is evident that they, themselves, see a need for reform. “Not to reform” is an untenable option; questions about implementation are questions of priorities, of method and of ownership-motivation.

DELAY IS NOT AN ASSET

We should be careful not to be lulled into the ethic of a reciprocal negotiation in which delay, of itself, is a victory. As we have already stated several times, the less developed economies need improvements in the areas that are new to the WTO – to delay these improvements is to lengthen the time that the people in these countries remain poor. Time will be needed for implementation, but implementation periods should be based on the engineering requirements to accomplish the required construction, not handed out as second prize in a tough negotiation.

SCOPE OF OBLIGATIONS

For the advanced countries whose systems are compatible with international conventions (or *vice versa*) the WTO brings no more than an obligation to apply their domestic regulations fairly at the border. This includes not discriminating among transactions involving different countries and not unnecessarily impeding international transactions.

Countries that at present apply their own indigenous standards, have the additional – and far larger – obligation to apply the internationally sanctioned standards in their domestic economies. Though new WTO areas, e.g., SPS, intellectual property rights, aim at the trade-related aspects of their subject matter, for the least developed countries they require first the establishment of such systems – or the conversion of indigenous systems – to the system recognized by international conventions.

Staying with an indigenous system is not a real alternative. In defending trade-related actions, the systems recognized by international conventions have the legal benefit of the doubt, an indigenous system must prove itself. The least developed countries do not have the resources needed to do that; hence the only effective option for a country that retains an indigenous system of standards is not to apply standards at the border.²⁷ The WTO’s free rider problem has not gone away, it has been swapped for a

²⁷ We are not arguing here that the iron fist imposes the wrong standards. Our concern is to remove the velvet glove of comforting rhetoric from that fist.

forced rider problem, its burden shifted from the industrial countries to the least developed countries.

DO IT MY WAY

The content of the obligations imposed by the WTO agreements on customs valuation, intellectual property rights and SPS can be characterized as the advanced countries saying to the others, Do it my way! The customs valuation agreement and TRIPs are explicit on this and while the SPS agreement appears to allow the retention of an indigenous system, doing so is not a real alternative.

INAPPROPRIATE DIAGNOSIS AND INAPPROPRIATE REMEDY

One effect of this “Do it my way!” nature of the agreements is to intensify the ownership problem, discussed below. In addition, this characteristic brings back our initial questions. From a development perspective:

- Do the WTO agreements appropriately identify the problems faced by developing countries?
- Given the least developed countries’ needs and their resource bases, do the agreements provide the most effective remedy?

The customs valuation agreement, we have argued above, provides neither appropriate diagnosis nor appropriate remedy. It addresses only a small part of least developed countries’ problems with customs administration and of course provides no remedy over other parts. Over the small part of the problem it covers, it provides an inappropriate remedy, one incompatible with the resources they have at their disposal.

Our conclusions on the intellectual property rights agreement are similar. As to diagnosis, its focus is not on encouraging innovation or protecting endogenous technology in developing countries, it is on industrial country enterprises’ collecting for intellectual property on which least developed countries now recognize no obligation to pay. The default remedy is to copy industrial country intellectual property law. While legal scholars point out that the intellectual property agreement allows for the possibility of adopting intellectual property law that is friendly to users and to second comers, they point out that the benefit of the doubt is on the side of copying present industrial country approaches. A major cost of standardizing on the current industrial country example is to cut off experimentation – the process of developing more appropriate legal approaches in developing countries.²⁸

Our review found less significant problems with the SPS agreement. Developing and industrial countries’ interests in food safety are closer together than their interests on intellectual property rights protection; hence a one-size-fits-all approach is more appropriate.

²⁸ Matthew Stillwell of the Center for International Environmental Law pointed this out to me.

NO OWNERSHIP OF THE REFORMS IN LEAST DEVELOPED COUNTRIES

The lack of instinctive ownership of the reforms needed to comply with WTO obligations will make implementation very difficult, and will likely push governments to superficial adjustments aimed at avoiding clashes with trading partners. Private and social sector shareholders were not involved in the creation of these obligations – nor even the government agencies that will ultimately be responsible for implementation. How the least developed countries organize their participation in WTO affairs needs modification; perhaps the WTO process also.

Effective implementation and compliance involves investment-development projects, but WTO negotiations have not supported examination from this perspective. The dynamic behind the WTO process has been the export interests of major enterprises in the advanced trading countries. Development ministries in the advanced countries frequently complain how hard it is to get their trade ministries to pay attention to development issues. In the advanced countries, development ministries are junior partners in making trade policy; at the WTO, the least developed countries have little capacity to organize and to advance their own interests.

ALLOWING FOR ALTERNATIVES VS. PROVIDING ALTERNATIVES

Each of the three Uruguay Round agreements we have reviewed includes a promise of assistance to implement. In addition, each provides for delayed implementation, and provides also a way for a least developed country to request an extension beyond the agreement's deadlines. The latter provision might be interpreted as recognition that the prescribed or default technology included in the agreements might not be the most suitable for the least developed countries.

Though the agreements allow for the possibility that alternative approaches might be developed and recognized, they provide no such alternative. As to developing alternatives, the WTO negotiations are a self-interest propelled process. Narrowly interpreted, that places the burden of developing alternatives that are appropriate to least developed countries' needs and their resources on the least developed countries themselves.

The international community however is clearly not in a mood to accept that narrow interpretation. The Integrated Framework for the least developed countries' trade development is one initiative that has already been launched to improve the capacity of the least developed countries to respond to opportunities provided by the international trading system. We are aware of several ongoing discussions among World Bank member governments (who are also WTO members) about additional World Bank involvement. The Bank already has under way substantial programs to support developing country participation in upcoming negotiations. The programs have a large capacity-building component to build up developing country institutions, from which developing country governments can draw support on issues that might be included in future negotiations – without the intermediate ion of the Bank, if they want it that way. We have also initiated a smaller program to build implementation of WTO standards into "regular" development projects, e.g., SPS as part of a pest control project, TRIPs as part

of a project to increase the availability of seed varieties. This program is aimed particularly at the least developed countries. Its objectives and those of the larger program to support developing countries in the negotiations include building a sense of developing country ownership in the required reforms, and to begin to learn something about how these things look in a development environment – to build the intellectual capital from which development-enhancing alternative approaches to WTO implementation can be built and to add to developing countries' capacities to advance their interests within the WTO mode.

IT COSTS MONEY

The project costs we have presented here provide a first approximation to the investments needed to implement WTO obligations on SPS, IPR and customs reform. To gain acceptance for its meat, vegetables and fruits in industrial country markets, Argentina spent over \$80 million to achieve higher levels of plant and animal sanitation. Hungary spent over \$40 million to upgrade the level of sanitation of its slaughterhouses alone. Mexico spent over \$30 million to upgrade intellectual property laws and enforcement that began at a higher level than are in place in most least developed countries, customs reform projects can easily cost \$20 million. Those figures, for just three of the six Uruguay Round Agreements that involve restructuring of domestic regulations, come to \$130 million.²⁹ One hundred thirty million dollars is more than the annual development budget for seven of the twelve least developed countries for which we could find a figure for that part of the budget.

FORMULATING DEVELOPMENT POLICY IN TRADE NEGOTIATIONS

In two of the three areas we reviewed, the resulting agreement provides an inappropriate diagnosis of development problems; inappropriate remedies even for the problems diagnosed. In no case did the negotiations deal with the costs of the investments the agreements mandated – not even with how much the costs would be, much less with the return in that application versus in some alternative use. Our review suggests then that international trade negotiations are a poor way to take on development problems.

²⁹ The experiences we have reviewed were in the more advanced developing countries, the costs could be higher in the least developed countries who will begin further from the required standards.

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10. ANNEX A: MARKET ACCESS LIBERALIZATION AT THE URUGUAY ROUND

According to conventional wisdom, the developing countries accepted at the Uruguay Round obligations on intellectual property rights, standards, etc., in exchange for market access – liberalization by industrial countries on products of particular export interest to them. In this section we present a brief review of the outcome of the Uruguay Round market access negotiations, with particular focus on what the developing countries gave versus what they got in those negotiations.³⁰

TARIFF NEGOTIATIONS

At the Uruguay Round, some 130 countries or customs areas agreed to tariff bindings or reductions.³¹ We summarize these concessions in Table 1. Figures given there reflect only reductions that resulted from commitments made at the Uruguay Round negotiations – they do not include so-called ceiling bindings (bindings at rates above applied rates) nor do they include bindings of unilateral concessions.³² Table 2 provides a profile of post Uruguay Round rates.

The principal results of the tabulations are that:

- developing economies' tariff cuts cover approximately the same percentage of imports,
- developing economies' tariff cuts are actually deeper.

In addition to the tariff reductions reflected in these tables, a number of developing countries – e.g., several Latin American countries and India – introduced unilateral reforms during the 1980 and early 1990s. Finger and Schuknecht calculated that these

³⁰ The topic is treated in greater length by Finger and Schuknecht.

³¹ All WTO Members have submitted their schedules of post-UR bound rates, but tabulations of tariff cuts have been made only for some 40 major participants (counting the 14 member states of the EU as one) that have contributed "before" and "after" trade and tariff data to the WTO's electronic Integrated Data Base. Of the 40, 26 are transition or developing countries, but none of the least developed countries are included.

³² These calculations of depth of tariff cut depart in two ways from the way that the GATT tariff cuts are traditionally measured. First, GATT tariff cuts are usually measured only over the import categories on which cuts are made; e.g., "a 30% cut on 40% of imports" does not mean that the tariff, on average, is now 30 percent lower. It means that the tariff is, on average, $.4 \times 30\%$, or 12 percent lower. We include "zero cuts" in our average. Second, it is obvious that a 50 percent reduction of a 2% tariff rate does not improve market access the same as cutting a 40% rate in half. Taking this into account, we have calculated tariff changes from the formula

$$dT/(1+T)$$

where T is the ad valorem tariff rate, or ad valorem equivalent. From the perspective of an exporter, $dT/(1+T)$ measures the percentage by which she can reduce her delivered price in the importing country while keeping the net price she collects (after the tariff) the same. This comes to less than 1 percent if a 2% rate is cut in half, to more than 14 percent if a 40% rate is cut in half. We consider, thus, the formula $dT/(1+T)$ to provide the more appropriate measure of market access improvement.

countries have so far bound under the WTO about 2/5 of the total reductions they introduced.

Table 1: Uruguay Round Tariff Concessions Given and Received

	Bindings (percentage of 1989 imports)		Tariff reductions	
	pre-UR	post-UR	% of imports	Depth of cut
				(dT/(1+T))
Tariff Concessions Given – All merchandise				
Developed Economies	80	89	30	1.0
Developing Economies	30	81	29	2.3
All	73	87	30	1.2
Tariff Concessions Received – All merchandise				
Developed Economies	77	91	36	1.4
Developing Economies	64	78	28	1.0
All	73	87	33	1.3
	Bindings (percentage of 1989 imports)		Tariff reductions	
	pre-UR	post-UR	% of imports	Depth of cut
				(dT/(1+T))
Tariff Concessions Given – Industrial goods				
Developed Economies	85	92	32	1
Developing Economies	32	84	33	2.7
All	77	91	32	1.3
	Bindings (percentage of 1989 imports)		Tariff reductions	
	pre-UR	post-UR	% of imports	Depth of cut
				(dT/(1+T))
Tariff Concessions Received – Industrial goods				
Developed Economies	79	93	37	1.5
Developing Economies	72	86	36	1.2
All	77	91	37	1.4

Source: Finger and Schuknecht

Table 2: Post-Uruguay Round Tariff Rates, all merchandise

	bound rate, average ad valorem	post-UR bound rate above applied rate ^a	applied rate, average ad valorem
Developed Economies	3.5	19	2.6
Developing Economies	25.2	37	13.3
All	6.5	22	4.3

^aPercentage of 1989 imports.

Source: Finger and Schuknecht

TEXTILES AND CLOTHING

Since the 1930s, developed economies have used negotiated or “voluntary” export restraints to limit their imports of textiles and clothing. At the Uruguay Round the international community decided to put an end to this practice. The major provision for eliminating quotas and VERs on textiles and clothing obligates all Members now applying restrictions sanctioned by the MFA to “integrate into GATT 1994,” all textiles and clothing products – this to be done in four stages, due on January 1, 1995, January 1/1998, January 1, 2002, January 1, 2005; encompassing 16 percent, 17 percent, 18 percent and 49 percent (by 1990 volume) of imports of all specified textiles and clothing products.³³

These percentages do not apply to the volume of imports under restraint. They refer to all textiles and clothing import categories. As a matter of semantics then, the operative phrase in the agreement, to integrate into GATT 1994, is better described as “certifying that a product is clean of restrictions”³⁴ than as “removing MFA restrictions.”

The developed economies’ policies toward these imports are among their most restrictive. Hufbauer and Elliott estimate, for example, that almost 9/10 of the cost to the US economy of US import restrictions are accounted for by restrictions on imports of textiles and clothing. At the same time, textiles and clothing account for more than 20 percent of developing economies’ industrial exports; hence there is much to gain all around from liberalization.

Implementation has proceeded through the first two stages; thus, each importing country has integrated into GATT 1994 products accounting for at least 33 percent of its imports. There have been, however, loud complaints that minimal liberalization has resulted from this implementation. The most often voiced complaints are that each importing Member has weighted its liberalization toward products:

- that were not under restraint in that country,

³³ There are also obligations on the product coverage of each stage and on the growth rates of quotas that remain.

³⁴ Those that would be illegal under GATT 1994.

- with little value added or on which developed economies do not have comparative advantage, e.g., yarns and fabrics rather than clothing,
- with high tariffs,
- and that they have overused transitional safeguards or have applied antidumping and other WTO-legal restrictions disproportionately against textiles and clothing.

As to evidence on each of these, the tabulations in Table 3 – taken from information notified to the Textiles Monitoring Board – does indicate that importers have selected items that were not under restriction. The United States, in the initial two stages, has met its obligation to integrate 33 percent of its textiles and clothing categories into GATT 1994 in a way that has eliminated only 1 percent of its MFA restrictions. The EU has eliminated 7 percent, Canada, 14 percent. Norway, of the countries in the table, is the exception. Norway has decided to liberalize more rapidly than the agreement requires.³⁵ Similarly, this “integration” has been skewed away from products on which the developing countries have comparative advantage, e.g., few clothing categories, many categories of sophisticated textiles.³⁶

If the industrial countries apply similar art to the stage due in 2002, almost all obligations to remove MFA restrictions will be delayed until 2005– without violating the letter of the agreement.

Finger and Schuknecht found minimal use of the textiles and clothing agreement that allows for “transitional safeguards” on products not yet liberalized. Perhaps because of the limited liberalization so far, there has been minimal use of other WTO-legal measures such as safeguards and antidumping on liberalized textiles and clothing products.

Tariffs on textiles and clothing remain high relative to those on industrial products generally. However, Uruguay Round tariff cuts on textiles and clothing were relatively large. Not only were the cuts (measured by $dT/(1+T)$) deeper on textiles and clothing, they were applied to a larger fraction of imports.

³⁵ WTO document G/C/M/23, p. 23.

³⁶ Finger and Schuknecht, Table TC2.

Table 3: Numbers of Specific Quota Limits on Textiles and Clothing Imports Notified and Eliminated in Stages 1 and 2

(Stage 1 plus stage 2 requires integration of 33%, by import volume.)

Member	Notified, Number	Eliminated in Stages 1 and 2	
		Number	Percentage
United States	650	8	1
European Union	199	14	7
Canada	205	28	14
Norway	54	46	85

Source: WTO Doc. G/L/179, page 29. Norway G/C/M/23, p.23.

AGRICULTURE

The agriculture negotiations focused on three categories of policy; import restrictions, domestic support programs, and export subsidy programs. On import restrictions, the major objective of the agreement is to establish a “tariffs only” regime – to eliminate all forms of import restriction other than bound tariff rates. To do so, all members were required to “tariffy” – convert to tariffs – their non-tariff import restrictions. Developing countries likewise were obligated to remove all agriculture-non-tariff measures, but had the option to submit ceiling rates on previously unbound tariff items. Agreed negotiating modalities called for a certain percentage reduction of the tariffed items, but these modalities provided sufficient wiggle room for converting NTBs to tariffs so that a country could, within the modalities, end up with higher protection.³⁷ In part because of this possibility, the agreement also includes “market access commitments.” These commit each importer to minimum import volumes, based on levels of base period imports.

According to the WTO Secretariat, forty countries participated in the tariffication process which covered (in aggregate) about 22 percent of their tariff lines.³⁸ Finger-Ingco-Reincke calculations over the IDB show that tariffication covered, by value, just over one-third of tariffing countries’ agriculture imports.

Finger-Ingco-Reincke tabulations reported in Table 4 indicate that the package of commitments the industrial countries have undertaken on agriculture will reduce

³⁷ The reader should be careful to recognize the difference between the negotiating process through which legal commitments are agreed and the legal commitments themselves. The conversion guidelines were part of the negotiating process. They likely influenced what tariff rates one Member was willing to accept from another, but once a Member’s schedule of rates was accepted and annexed to GATT 1994, the conversions guidelines became irrelevant. No Member can be taken to the dispute settlement mechanism on its bound rates being higher than those calculated with the conversion guidelines.

³⁸ WTO Secretariat (1999), p. 136.

protection on only about one-fourth of their agriculture imports, and on an even smaller fraction of the imports on which they previously imposed NTBs. Countries that converted NTBs to tariffs have, in some cases, posted rates higher than the base year tariff equivalent of those NTBs. Japan, for example, has announced that beginning in April 1999 its tariff on rice will be \$3.05 per kilo. *International Trade Reporter* (1998) estimates that this rate is equivalent to 1,000 percent, ad valorem. (This rate applies only to imports in excess of Japan's minimum access commitment.) Hathaway and Ingco calculate that Japan's actual base period protection on rice had a tariff equivalent of about 650 percent.

Judging from the sample of countries in the IDB, both developed and developing economies have now bound virtually 100 percent of their agricultural tariff lines – overall an expansion of coverage of about two-thirds for the developing economies, one-fourth for the developed economies.

As to how market access commitments have affected the scope of liberalization. Hathaway and Ingco (1996, p. 49) estimate that Japan and Korea's minimum access commitments on rice will result in nearly a million tons per year of new imports, an expansion of world trade in rice of 7.5 percent over its 1992 level. Otherwise, they conclude that "the minimum access commitments will provide relatively little additional access and even less additional trade," – no more than 0.5 percent for wheat and sugar. (p. 48, 49)

Table 4: Agricultural Products: Uruguay Round Tariff Bindings

	Percent of imports GATT-bound		Post-UR bindings that reduce protection ^a
	Pre-UR	Post-UR	
<u>Tariffied products</u>			
All economies that tariffied	66	100	14
<u>Untariffied products</u>			
Developed Economies	71	100	35
Developing Economies	37	100	17
<u>Tariffied and untariffied products</u>			
Developed Economies	72	100	26
Developing Economies	37	100	17

Source: Finger-Ingco-Reincke.

Notes:

^a Tariffied products: percentage (by value) of imports with final-UR bound rates (rates that include reductions) below the tariff equivalent of base period protection. Untariffied products: percentage of imports with final-UR bound rates below base period applied rates.

Source: Finger-Ingco-Reincke, Tables G2.

11. ANNEX B: CUSTOMS REFORM EXPERIENCE IN DEVELOPING AND TRANSITION ECONOMIES

We present in this section a review of customs reform projects in several countries. This review reinforces one of the arguments we made in the previous section, that needed reform is much broader than valuation reform. The section in addition provides information on how much customs reform costs.

ARMENIA

Armenia had to create a customs administration from scratch after the collapse of the USSR. Armenia did not initially (after the breakup of the USSR) impose tariffs on imports – a practice observed in many countries in the early stages of transition from central planning. The customs administration's initial responsibility was to collect VAT and excise taxes on non-FSU imports. In time, the World Bank and IMF recommended that Armenia begin collecting a low and uniform tariff for revenue purposes. As a newly independent state, Armenia needed also to develop institutional capacity for collecting trade statistics. The World Bank and UNCTAD³⁹ provided some assistance early on, the EU currently provides assistance under the TACIS program to aid WTO accession.

Cost⁴⁰

World Bank lending for customs reform was part of a larger project to support institutional reform. The cost of the Customs Administration & Trade Facilitation component of the project was for \$1.604 million.

Scope. The customs reform project in Armenia covers development of a new customs law, staff training and computerization.

LEBANON

Lebanon is currently an observer but not a member of the WTO.

Cost⁴¹

The World Bank is supporting customs reform in Lebanon as part of a project for revenue enhancement and fiscal management. The loan program is scheduled to close in March 2000. The customs reform component was projected to cost \$3.82 million, allocated as follows:

³⁹ Wichelen, Martial van, Customs Evaluation Report: Republic of Armenia

⁴⁰ Memorandum and Recommendation of the President report number P-6014-AM, March 8, 1993.

⁴¹ Memorandum and Report to the President report number P-6374-LEB, June 10, 1994.

Technical Assistance and Advisory Services	1.36
Training and Workshops	0.25
Equipment Supplies and Materials	1.25
Incremental Operating Costs	0.52
<i>Subtotal Base Cost</i>	3.38
Price and Physical Contingency (13%)	0.44
Total Cost (million)	\$3.82

Technical support would consist of 79 work-months of international consultant services and 30 months of local consultant services.

Scope

The reform program includes

- *Computerization* – including a radio-based communications system for customs offices and general improvements to office equipment and computers.
- *Valuation procedures*
- *Clearance Procedures* – aimed at simplification
- *Tariff Classification* – including introduction of the Harmonized System of classification.
- *Staff Training* – general upgrading of skills, particular training in fraud investigation, valuation, assessment and collection. 120 staff would be trained.

TANZANIA

Tanzania is a member of the WTO. Customs consultant Bert Cunningham prepared a report to the Tanzanian Revenue Authority proposing a comprehensive reform of Tanzanian customs procedures.⁴²

Cost

The proposal calls for spending \$8-10 million over three years. This would cover technical assistance, training, refurbishment of buildings, new equipment, and computerization.

Scope

The reform proposal includes

- *Computerization* – including ASYCUDA (the UNCTAD customs valuation computer system), a bonded warehouse inventory control system, the WCO narcotics interdiction database, a statistical reporting package, and the PSI firm's valuation database.

⁴² Bert Cunningham, "Tanzania: Strategy and Action Plan to Reform Customs Administration," June 1996.

- *Valuation procedures* – gradually phase out the Brussels Definition of Value (which uses reference prices) and adopt the WTO system (based on transaction prices).
- *Cargo controls* – speed up processing and eliminate fraudulent or incorrect valuation.
- *Building refurbishment* – refurbish customs buildings necessary to house ASYCUDA.
- *Administrative reforms* – establish a new division responsible for customs valuation and tariff classification, increase size of auditing and inspection staff, establish appeals tribunal, develop comprehensive staff training program, reduce discretion exercised by customs officers.
- *Legislative reforms* – rewrite laws to make them consistent with procedures used in ASYCUDA (including electronic filing), formally accede to the Harmonized System Convention, increase transparency.

TUNISIA

Tunisia is a member of the WTO.

Cost and Scope⁴³

The World Bank has just approved an export development loan to Tunisia that includes a customs modernization component.

New information system	4.3
Customs container scanners	1.6
Customs Training Center	7.08
Equipment for Documentation Center	1.0
Pilot version for electronic manifest	0.06
Equipment and systems integration for electronic document interchange	2.17
Total Cost (million)	\$16.21

CENTRAL AND EASTERN EUROPE

The European Union has been assisting ten of the formerly socialist countries in Central and Eastern Europe with institutional reforms through its Phare Program. One component of this is reform of customs laws and procedures, bringing them into conformity with EU rules.

⁴³ Draft Project Appraisal Document report number 18778-TUN, March 29, 1999.

Cost⁴⁴

The total budget allocated for Phare customs modernization in the ten candidate countries is 90 million ecus for 1990-97, of which 70 million has been contracted. (At a \$/ecu rate of 1.2, this is approximately \$108 million and \$84 million.)

Computerization	42.74
Equipment	6.85
Training	13.77
Management	2.35
Other	4.54
Total Contracted (million ecus)	70.25

Scope

Countries differ widely in level of development as well as in experience with managing customs agencies. Some countries, such as the Slovenia and the Baltic states, are newly created states that created customs administrations from scratch. Hungary, on the other hand, has operated an institute for training customs agents for over a century. Accordingly, the type of Phare assistance varies widely. Grants to Poland paid for expensive anti-smuggling equipment while Romania purchased VCRs (for training videos) with its Phare equipment grants. Bulgarian programs were exclusively training and management.

- *Computerization* – Establish computerized customs declarations systems in all countries.
- *Anti-Smuggling Equipment* – Provide laboratory and detection equipment for drug interdiction and other anti-smuggling efforts. Equipment ranges from x-ray equipment and gas chromatographs to communications equipment.
- *Management and Staff Training* – Train staff in basic management, customs procedures and computer operations; establish staff training schools.
- *Legal Reforms* – EU candidates must adopt the EU customs code. Phare assistance funded translation of laws, training to (re-)write laws that conform with EU codes, and conduct public information campaigns.

⁴⁴ Pricewaterhouse Coopers, "Evaluation of the DG 1A Programmes: Phare Customs Programmes," December 1998. URL: http://europa.eu.int/comm/dg1a/evaluation/phare_customs/index.htm [Accessed June 16, 1999].

12. ANNEX C: WORLD BANK EXPERIENCE IN SUPPORT OF IMPLEMENTATION OF SPS STANDARDS

The World Bank has assisted many countries in implementing sanitary and phytosanitary regulations. Bank projects supporting SPS systems have typically placed these measures in a general development context of ensuring food security, increasing agricultural productivity and protecting health, rather than focusing on the narrower objective of meeting stringent requirements in export markets. The projects presented in this section each have components dealing with various parts of the WTO SPS agreement. The export reform project in Argentina, which we present first, is the only project reviewed here that focused particularly on improving SPS standards for trade purposes. The other cases are divided into three groups, by the major emphasis of the project: (a) disease control measures, (b) sanitary conditions in food processing, and (c) upgrading laboratories and quarantine facilities.

AGRICULTURAL EXPORT REFORM IN ARGENTINA⁴⁵

A project in Argentina supported by the World Bank and other donors dealt directly with SPS implementation, although the project predates the WTO SPS agreement. The primary objective of the project was to promote exports, its scope was a general upgrading of agricultural and animal husbandry services. Components aimed to improve sanitary and phytosanitary conditions so that Argentine exports could meet the standards imposed by importing countries. Argentina's meat, fruit and vegetable exports are limited in part by the presence of diseases (e.g., foot and mouth disease and citrus canker). Diversification into non-traditional (and often higher value-added) exports—such as processed meats, seeds, and horticultural products—requires producers to meet more stringent quality control standards.

The program of technical assistance lasted from 1991 to 1996, and included a total expenditure of \$82.7 million, broken down as follows.

⁴⁵ Report P-5428-AR, Memorandum of the President for Loan 3297-AR, Agricultural Services and Institutional Development Project. January 29, 1991. Report 9138-AR, Staff Appraisal Report for Loan 3297-AR, Agricultural Services and Institutional Development Project. January 29, 1991.

Component	Cost ⁴⁶
Animal Health	20.0
Phytosanitary Services	13.2
Fisheries	12.7
Meat	11.1
Research	10.3
Export Promotion	8.3
Information System	1.2
Project Coordination	5.9
Total Project Cost (millions)	\$ 82.7

Animal Health

The objective of this component was to strengthen animal disease control, both to facilitate exports and to increase domestic production. The specific elements were:

- Strengthening the National Animal Health Service's (SENASA) central services (\$1.5 million);
- Strengthening SENASA's field services and disease control campaigns (\$7.5 million);
- Constructing a central veterinary laboratory (\$10.2 million)
- Constructing a medium-security animal quarantine station at the Buenos Aires airport (\$800,000).

Note that the above do not include disease control costs paid directly by farmers and ranchers to protect animal health. At the time the project was prepared (1990), producers were spending an average of \$70-80 million annually to vaccinate against foot and mouth disease.⁴⁷

Phytosanitary Services

The goals were (a) to eradicate pests, allowing fruit exports to be certified as originating from disease-free zones, and (b) to improve general quality control necessary to market fruit in export markets. This component contained financing for:

- Construction of quarantine stations (\$2.0 million);
- Staff support and construction of office facilities (\$5.5 million);
- Refurbishment of a lab for pesticide residue analysis (\$3.0 million);
- Development of disease-free zones, by setting up quarantine barriers, upgrading disease monitoring, and conducting campaigns to eradicate citrus canker and fruit flies (\$2.7 million);

⁴⁶ Figures include physical and price contingency mark-ups.

⁴⁷ Staff Appraisal Report, p. 5.

- Technical assistance and equipment for seed certification and registration. The project documents specifically mention the need to meet OECD certification requirements (\$1.0 million).

Fisheries

This component was designed to expand Argentina's fish catch in a rational manner. Most of the funds (\$10.2 million) were allocated to upgrading research ships. There does not appear to be any element of this related to meeting sanitary standards in importing countries.

Meat Marketing

This component was designed to upgrade Argentina's capacity to promote meat exports, primarily by facilitating the marketing of meat in vacuum-packs rather than as sides. A secondary goal was to improve domestic meat marketing systems. This component included financing to:

- Perform research into quality control and certification to ensure the absence of chemical residues in exported meat (\$1.0 million);
- Conduct a broad-based study into developing a modern meat classification system based on cuts of meat (\$4.2 million);
- A domestic meat substitution campaign – promoting poultry, lamb and pork rather than beef consumption (\$2.7 million)
- Develop information systems to support the government's export marketing promotion (\$200,000);
- A standard export promotion campaign (\$3.0 million).

Agricultural Research

This component financed research into new technologies to facilitate agricultural exports. Specifically this component:

- Established a laboratory to bring wool certification up to international standards (\$2.3 million);
- Remodeled biotechnology laboratories where research into animal and plant diseases would be conducted (\$2.7 million);
- Recruited staff and purchased equipment for research into post-harvest physiology in fruits and vegetables, specifically aimed at reducing chemical residues and developing fungicides to reduce disease during refrigeration (\$3.4 million);
- Constructed forestry research facilities (\$1.9 million).

Non-Traditional Export Promotion

Argentina wants to follow Chile's success with exporting fruits and vegetables during Northern Hemisphere winter. This component finances generic export promotion activities, including an export promotion fund that traders could tap into.

Information System. This component financed staff training and upgrading of some general government computer systems.

Project Coordination. This component financed the establishment of a coordinating agency, staff training, buying computers, "ensuring smooth functioning of established inter-institutional relationships networks," and the like.

IMPROVE DISEASE CONTROL IN THE AGRICULTURAL SECTOR

Importing countries with stringent sanitary and phytosanitary standards often require exporters to certify that animal and agricultural products are free of diseases or were raised in disease-free zones. The most obvious area of government activity to meet these standards is upgrading domestic programs for eradicating and controlling diseases, pests, vectors, etc. This requires, first of all, a nation-wide infrastructure for plant and animal testing to detect the presence of pests. Governments then need to conduct or coordinate campaigns to control the pests that are found, and educate farmers and ranchers in proper usage of pesticides and veterinary products to prevent the emergence of pesticide-resistant strains. Finally, governments need to establish internal quarantine barriers to maintain pest-free regions within the country.

The International Plant Protection Convention (IPPC) requires countries to establish "national plant protection organizations" (NPPO). The functions of an NPPO are to:

- issue certificates relating to phytosanitary regulations;
- report outbreaks or spread of pests;
- inspect and disinfect imported plants;
- distribute pest control information;
- conduct plant protection research.

A number of Bank projects have included components for plant and animal health, particularly in the area of livestock disease control. The primary objective of many of these programs is not to meet requirements in export markets, but simply to improve agricultural productivity and meet domestic food needs.

Brazil Livestock Disease Control Program

Period: 1987-94, Cost: \$108 million.

Although a primary objective of the project was to increase production for domestic consumption, the project documents note that the project would also help Brazilian meat exporters meet increasingly strict restrictions imposed by importing countries. The program contained a number of components:

- recruitment and training of staff Department for Animal Health Protection (\$22.8 million);
- training of veterinarians and purchase of equipment for the State Veterinary Services (\$31.7 million);
- recruitment and training of staff for the Department for Animal Health laboratories (\$40 million);
- modernization of equipment and facilities at nine of the seventeen federal laboratories and at four quarantine stations,
- development of procedures to monitor chemical residues and prevent accidental virus escape (\$13.9 million).

Staff recruitment and training comprised 86 percent of the projected base cost; facilities construction and equipment purchases comprised the remaining 14 percent.⁴⁸

Algeria Locust Control Program

Period: 1988-90, Cost \$112 million.

Most of the expenditure covered by this project (\$79.6 million) was to combat a current locust plague. Additional components funded equipment to upgrade ongoing locust control capabilities (\$15.9 million) and information gathering and dissemination systems for a locust surveillance and detection program (\$8.2 million).⁴⁹

Vietnam Agricultural Rehabilitation Credit

Period: 1994-97, Cost \$106.7 million.

The project included a \$3.5 million plant protection component, which promoted the use of integrated pest management and financed the purchase of laboratory equipment and vehicles for field work. One objective of this component was to develop a system for monitoring of pest and disease incidence, provide early warning of outbreaks, and advise farmers on corrective measures.⁵⁰

Madagascar Village Livestock And Rural Development Credit

Period: 1980-88, Cost: \$11.8 million.

This project was intended to increase meat production and exports through improvements in animal health. The main component was technical assistance and the purchase of equipment and veterinary supplies to support nationwide vaccination campaigns (of cattle, pigs and poultry). Although the project accomplished the short-term objective of vaccinating livestock, it failed to promote exports. FAIFAMA, the agency established to conduct the campaigns, was dissolved upon completion of the project, leaving no institutional infrastructure in place to maintain a disease-free environment. In addition, the EC withdrew the export license granted to the

⁴⁸ Implementation Completion Report number 17868, May 5, 1998; Staff Appraisal Report number 6724, June 11, 1987; MOP number P-4598, June 11, 1998.

⁴⁹ Project Completion Report number 11849, May 5, 1993.

⁵⁰ Staff Appraisal Report number 12065-VN, December 22, 1993.

slaughterhouse that FAIFAMA operated, due to unsanitary conditions and inefficient management.⁵¹

IMPROVE SANITARY CONDITIONS IN FOOD PROCESSING

Animals and crops may be raised in disease free zones but subsequently processed under unsanitary conditions. Exporting countries need to certify that meat, fruit, plants, etc., are processed under sanitary conditions to meet requirements set by importing countries.

Most Bank programs that contain food processing components focus on increasing food output (more motivated by a concern to increase domestic consumption rather than to export) and developing rural enterprises rather than improving sanitation per se. These objectives overlap to some extent—unsanitary food processing is wasteful as well as unhealthful.

Hungary Integrated Livestock Industry Project

Period: 1985-1991, Cost: \$41.2 million

The project was designed to increase Hungary's export earnings. One component was slaughterhouse modernization: improving the hygienic conditions of meat processing in line with USDA and EU standards. Equipment for slaughterhouse modernization cost \$41.2 million.⁵²

Russia Rehabilitation Loan

Period: 1992-95, Cost: \$150 million

This loan (the World Bank's first to Russia) contained a component financing central government purchases of imports to improve food processing and agricultural production. The Russian government requested \$150 million to purchase imported spare parts, equipment and materials for food processing and storage of agricultural products, pesticides, seed-cleaning equipment, and veterinary products. The primary objective was to reduce dependence on food imports by improving quality of food processing and reducing post-harvest waste. Another objective was to facilitate the emergence of the private sector (food processing enterprises tended to be smaller and less capital intensive than most Soviet state-owned enterprises). Purchases made using the loan started in December 1992 and were completed by February 1995.⁵³

Poland Agroindustries Export Development Project

Period: 1990-95, Cost: \$71 million

The project was intended to increase Poland's export earnings. One component of this program was \$71.0 million allocated to modernizing technology and increasing

⁵¹ Project Completion Report number 10128, December 5, 1991; Project Performance Audit Report number 11732, March 3, 1993.

⁵² Project Completion Report 12621, February 23, 1993, p. 19.

⁵³ MOP Report Number P-5834-RU, July 22, 1992; Project Completion Report 16300 February 12, 1997.

capacity in the food processing industry, specifically buildings, equipment and spare parts for: freezing and processing lines for fruits and vegetables; cold storage facilities; equipment for processing of ham and meat products. Many Polish slaughterhouses did meet USDA approval at the time of the project; the goal of the loan was primarily to improve productivity and to shift exports into more highly processed agricultural products.⁵⁴

UPGRADE LABORATORIES AND QUARANTINE FACILITIES

One component of programs to comply with the SPS Agreement is to develop or upgrade laboratory and quarantine facilities within the country. This is necessary for countries that import from countries with weaker standards as well as those that export to countries with stronger standards. Below are some examples of Bank programs with components related to laboratories and quarantine facilities.

China Agricultural Support Service Credit

Period: 1993-2000, Cost \$10.0 million

This project was implemented in the 1990s and contained a number of components related to laboratory and quarantine services. The Animal and Plant Quarantine Services component aimed to modernize China's plant and animal quarantine control procedures by rewriting quarantine regulations to conform with international best practices, establishing a computerized quarantine information system, upgrading eighteen provincial quarantine laboratories, computerizing the Shenzhen quarantine entry points, and developing a new plant quarantine isolation station. The base cost of this component was \$10 million (out of a total program cost of \$238.3 million). The Livestock Field Services component funded the modernization of a network of veterinary diagnostic laboratories and purchase of refrigerators and iceboxes for a vaccine distribution system, and provided technical assistance in the area of animal health and production. The base cost of this component was \$66 million.⁵⁵

Turkey Agricultural Research Loan

Period: 1992-99, Cost \$77.6 million.

This program was designed to strengthen the overall research and extension capacity of Turkey. It included \$2.3 million for a residue control program. This funded a laboratory program to test and monitor the presence of a variety of chemical residues: pesticides, fertilizers and growth regulators in horticultural crops; veterinary and agricultural drugs in animal products; and residues of packaging materials in food. A somewhat related component of the loan program was \$4.5 million for research into integrated pest management. The objective of this program was to develop and introduce

⁵⁴ MOP Report Number P-5150-POL, January 5, 1990. Staff Appraisal Report number 7112-POL, January 3, 1990.

⁵⁵ MOP/PR number P-5877, January 29, 1993; Staff Appraisal Report number 11147-CHA, January 22, 1993.

biotechnical methods of controlling pests (in citrus, apples, vegetables and potatoes) in order to reduce the use of chemical pesticides.⁵⁶

The Brazilian livestock disease control project mentioned above included a \$13.9 million component to upgrade nine laboratories and four quarantine facilities.

⁵⁶ Staff Appraisal Report number 9890-TU, April 9, 1992.

13. ANNEX D: REFORM EXPERIENCE WITH INTELLECTUAL PROPERTY RIGHTS IN DEVELOPING ECONOMIES

We present in this annex a review of several intellectual property rights reform programs that have been supported by the World Bank, along with a summary of several studies supported by UNCTAD to estimate the cost of certain IPR-related in other developing countries.

WORLD BANK PROJECTS

Brazil⁵⁷

The World Bank is supporting reform of the administration and protection of intellectual property rights in Brazil as one component of a broader science and technology development project. The project as a whole is intended to stimulate private-sector R&D spending, which is low compared to that in other emerging markets. The ultimate objective of the IPR component is to improve industrial productivity and competitiveness, especially in export-oriented firms. It consists primarily of administrative improvements to support implementation of the new (1996) industrial property law.

Brazil has signed the Paris, Berne, UPOV (in May 1999) and Rome conventions, but not the integrated circuits treaty.

Cost. The cost of the IPR component is \$4.0 million.

Scope.

- *Staff Training* – train staff involved in IPR administration.
- *Administrative reform* – develop local agencies that specialize in providing industrial property technical assistance.
- *Information exchange* – disseminate information about the new IPR law and develop national indicators for trademarks and patents.

Indonesia⁵⁸

The World Bank is supporting institutional reforms for the protection of intellectual property rights in Indonesia as one component of a larger information infrastructure development project. In 1997 Indonesia passed new laws to protect intellectual property rights in support of commitments made under the TRIPS Agreement and to make Indonesia more attractive to investment by foreign information technology firms. The IPR component of the Bank project helps develop the legal and regulatory

⁵⁷ Project Appraisal Document report number 17178-BR, November 26, 1997.

⁵⁸ Project Appraisal Document report number 17106-IND, October 16, 1997.

framework necessary to implement these laws. The ultimate objective of the project is to enhance private sector supply of information technology services.

Indonesia is a member of the Berne and Paris conventions, but not the UPOV or Rome conventions, nor has it signed the integrated circuits treaty.

Cost. The cost of the IPR protection component is \$14.7 million.

Scope.

- *Administrative Improvements* – create new agency to implement national information technology strategy; develop better procedures for IPR administration, examination, and information dissemination.
- *Staff Training* – train staff involved in implementation of IPR laws (including customs officials, policy, judges, prosecutors).
- *Legal Reforms* – prepare laws and regulations on integrated circuits (topography), trademarks, and trade secrets.

Mexico⁵⁹

As one part of a broader effort to improve research and development, the World Bank funded a program from 1992-96 to improve intellectual property rights protection in Mexico. The project as a whole aimed to improve the competitiveness of Mexican firms (through increased R&D), to attract foreign investment, and to develop institutions supporting IPR administration and protection. Specific goals of the IPR component were to reduce delays in awarding industrial patents and to increase IPR enforcement activities in support of newly passed industrial property laws. A Bank review notes that the project reduced delays in awarding patents, but failed to increase patent awards to Mexican nationals or to stimulate Mexican R&D spending.

Mexico is a member of the Berne, Paris and UPOV conventions, it has not signed the integrated circuits treaty.

Cost. The final cost of the IPR component was \$32.1 million, less than the \$40.6 million originally budgeted, due to savings in administrative expenses (which comprised 85 percent of the original budget). The automation program and information center were initially budgeted to cost \$1.7 and \$2.4 million, respectively.

Scope.

- *Administrative Improvements* – established agency to implement the new industrial property law.
- *Staff Training* – trained staff of the patent and trademark office.
- *Computerization* – automated patent application process; computerized database of patent and trademark documents.
- *Enforcement* – trained judicial staff, created specialized intellectual property court.

⁵⁹ Implementation Completion Report number 18763, December 30, 1998. Staff Appraisal Report number 10468-ME, April 30, 1992. Memorandum and Recommendation to the President report number P-5757-ME, April 30, 1992.

UNCTAD STUDIES

UNCTAD produced a study in 1996 of reforms necessary to implement the TRIPS Agreement.⁶⁰ This included brief case studies of reforms in six countries, listed below (membership in international conventions as of May 1999).

Bangladesh

Patents, designs and trademarks are protected under existing laws; Bangladesh has signed the Paris and Berne Conventions, but not the Rome Convention, the UPOV, or the integrated circuits treaty. UNCTAD notes that the volume of patent, design and trademark applications is very low, due to the low levels of industrialization and commercialization of the economy.

Cost. The estimated one-time cost of drafting new laws is \$250,000. The estimated annual costs for judicial work, equipment and enforcement measures is over \$1.1 million, excluding staff training costs.

Scope.

- *Administrative Improvements* – Assemble an effective administrative framework for IPRs.
- *Legal Reforms* – Bangladesh needs to pass new legislation to bring food products, plant varieties, and pharmaceuticals under patent protection. New laws are also needed to extend copyright protection to computer software.
- *Enforcement* – Even where there are laws on the books for patent protection, the judicial, administrative and enforcement mechanisms are nonexistent or weak.

Chile

Chile is a member of the Paris and Berne Conventions, the International Union for the Protection of New Varieties of Plants (UPOV). Chile is not a member of the Rome Convention or the integrated circuits treaty. The number of patents granted is declining because the technical complexity of patent claims is overwhelming the patent examiners. Chile has begun a program to modernize IPR protection.

Cost. The modernization program is expected to have a one-time cost (for drafting new laws and initial training) of \$718,000 and increased annual cost of \$837,000 for recurring personnel costs

Scope.

- *Legal Reforms* – draft new laws in areas of database protection, rental rights, and performers' rights.
- *Administrative Improvements* – develop new examination and registration procedures; recruit new staff.
- *Staff Training* –train industrial property and copyright officials.
- *Enforcement* – tighten customs procedures; train judges.

⁶⁰ UNCTAD, The TRIPS Agreement and Developing Countries, UNCTAD/ITE/1 (1996).

Egypt

Egypt is a member of the Paris and Berne conventions, and is the only country to have ratified the Treaty on Intellectual Property in Respect to Integrated Circuits. However, Egypt does not provide patent protection for pharmaceuticals, and customs officials are not fully equipped to undertake monitoring and discovery activities. Egypt is not a member of the Rome or UPOV conventions. Egypt is conducting a review of existing laws and administrative procedures

Cost. The estimated costs of some specific reforms are \$1 million for staff training, \$192,000 for strengthening judicial system, and \$598,000 for recruiting new patent personnel and purchasing new equipment.

Scope.

- *Administrative Improvements* – upgrade administrative framework; develop systems for disseminating technical information.
- *Staff Training* – train staff in virtually all IPR fields.
- *Enforcement* – strengthen judicial procedures.

India

There is patent protection for food products, drugs, and chemical inventions but no patent protection for plants, animals, integrated circuits. Indian copyright protection is up to most TRIPS standards, according to the UNCTAD study, as is border enforcement of IPRs. Laws concerning border enforcement appear to be up to TRIPS standards. India is a member of the Paris and Berne conventions and is one of only nine countries to have signed the integrated circuits treaty. India has not signed the Rome or UPOV conventions.

Cost. The estimated cost of a three-year program to modernize the patent office is \$5.9 million. India recently completed a three-year project to modernize the administrative system used in trademark enforcement. This cost \$353,000.

Scope.

- *Computerization* – the patent office is undergoing a computerization and training program to eliminate a backlog of patent applications.
- *Legal Reform* – India needs to change patent laws (for industrial designs and trademarks, and to reverse the burden of proof in patent infringement cases). Laws have been introduced but not ratified to expand patent protection for pharmaceuticals and agro-chemicals.

Malaysia

Malaysia has signed the Paris and Berne conventions, but not the Rome Convention, UPOV convention, or the integrated circuits treaty. The Malaysian government was planning or undertaking several IPR reforms when the UNCTAD case study was written:

- The Industrial Design Act was to be reformed in 1997 to facilitate the development of Malaysian-made goods.

- The government established a number of working groups to study how to implement the TRIPS Agreement.
- A special enforcement team was established to apprehend and prosecute copyright infringers.
- The process of trademark and patent searching was being computerized.

Tanzania

Tanzania currently has laws covering patents, trademarks and copyrights. However, Tanzania has not signed any of the major international agreements concerning intellectual property rights protection, including the Paris, Berne and Rome conventions, the UPOV, and the integrated circuits treaty mentioned in the Uruguay Round. There is no systematic enforcement of intellectual property laws.

Cost. The cost of drafting new laws, expanding enforcement capabilities, strengthening administrative offices, and providing training is estimated to be between \$1 million and \$1.5 million.

Scope.

- *Legal Reforms* – draft and implement new laws covering integrated circuits, trade secrets, geographical indications, plant varieties and software.
- *Administrative Improvements* – expansion and modernization of administrative offices.
- *Enforcement* – judges and customs officials are unaware of IPR requirements.

Generalizations

The UNCTAD concluded that the direct and administrative costs of complying with the TRIPS Agreement will depend on the country's level of development and state of existing IPR institutions. In general, developing countries will need to introduce reforms in legislation, administration and enforcement.

Legislation: the immediate task to comply with the TRIPS Agreement is to introduce or rewrite laws guaranteeing protection of patents, copyrights, trademarks, trade secrets, etc., so that these laws comply with the TRIPS Agreement. In some countries this will require writing laws which extend protection to new IPRs (e.g., plant varieties, computer software). In some cases this will require rewriting laws to specify the length of patent or copyright protection.

Administration: As countries expand the number of IPRs receiving protection, they will also need to expand their administrative apparatus for granting patents, copyrights and the like. Many countries will need to expand and modernize to accommodate increased volume of applications for IPRs as their economies industrialize. Computerization will be necessary to speed up the process of granting IPRs (e.g., conducting trademark searches).

Enforcement: The TRIPS Agreement requires WTO members to provide effective means of IPR protection. Judicial systems and enforcement procedures must be developed or modernized in many countries to comply with this aspect of the TRIPS Agreement. The technical complexity of many IPR issues means that judges, customs

officials and others involved in enforcing IPRs may require additional technical training that is unnecessary in routine law enforcement matters.

الجمهورية اللبنانية

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14. ANNEX E: DEVELOPMENT BUDGET INDICATORS, SELECTED LOWER INCOME COUNTRIES

millions of US dollars data are for 1995 unless otherwise noted

	Central Government Capital Expenditure Budget	Gross Domestic Fixed Investment	Official Development Assistance	Population (millions)
Albania (5)	133.8	516.5	185.6	3.25
<i>Bhutan</i>	<i>53.9</i>	<i>141.1</i>	<i>74.1</i>	<i>0.70</i>
<i>Burkina Faso</i> (2)	<i>125.7</i>	<i>559.1</i>	<i>489.9</i>	<i>9.99</i>
<i>Burundi</i>	<i>127.6</i>	<i>72.7</i>	<i>289.0</i>	<i>6.16</i>
Cameroon	88.8	1,155.4	444.5	13.18
<i>Congo, Dem. Rep.</i>	<i>14.9</i>	<i>611.8</i>	<i>195.9</i>	<i>43.85</i>
<i>Ethiopia</i> (1)	<i>128.7</i>	<i>949.9</i>	<i>890.5</i>	<i>56.53</i>
Ghana (2)	183.7	1,365.2	653.6	17.08
India	6,115.3	81,171.5	1,745.7	929.36
Kenya	284.8	1,934.6	735.2	27.22
<i>Lesotho</i>	<i>153.8</i>	<i>708.4</i>	<i>115.0</i>	<i>1.93</i>
<i>Madagascar</i>	<i>189.6</i>	<i>345.8</i>	<i>303.4</i>	<i>13.30</i>
<i>Mongolia</i>	<i>48.2</i>	<i>252.6</i>	<i>212.9</i>	<i>2.45</i>
Nicaragua	205.9	453.3	664.0	4.43
Pakistan	2,161.9	8,447.2	821.6	122.37
<i>Rwanda</i> (1)	<i>106.5</i>	<i>114.1</i>	<i>712.2</i>	<i>6.40</i>
<i>Sierra Leone</i>	<i>33.7</i>	<i>48.5</i>	<i>206.8</i>	<i>4.51</i>
<i>Tanzania</i> (4)	<i>149.6</i>	<i>1,003.7</i>	<i>882.2</i>	<i>29.65</i>
<i>Yemen, Rep.</i>	<i>305.9</i>	<i>770.5</i>	<i>175.2</i>	<i>15.27</i>
<i>Zambia</i>	<i>279.4</i>	<i>476.3</i>	<i>2,035.1</i>	<i>8.98</i>

Sources: World Bank, World Development Indicators 1999 CD-ROM, IMF Staff Country Report, Tanzania

Notes:

Countries in italics are least developed countries.

(1) 1992 budget data

(2) 1993 budget data

(3) 1994 budget data

(4) Development Spending rather than capital expenditures; equals total minus recurrent expenditures.

(5) Gross Domestic Investment rather than Gross Domestic Fixed Investment

Republic of Lebanon

Office of the Minister of State for Administrative Reform

Center for Public Sector Projects and Studies

(C.P.S.P.S.)