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Lessons Learned on Trade and Sustainable Development

**Distilling Six Years of Research from
the Trade Knowledge Network**



Aaron Cosbey, International Institute for Sustainable Development

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Lessons Learned on Trade and Sustainable Development

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Lessons Learned on Trade and Sustainable Development

Preface

This book is a synthesis of six years of research from the Trade Knowledge Network (TKN). It draws out the key lessons of that research in a style accessible to educated non-experts as well as to those well-steeped in the trade-sustainable development debates.

The TKN is a network of research institutions based in eight developing countries: Argentina, Bangladesh, Chile, China, Costa Rica, Pakistan, South Africa and Vietnam. It was formed in 1998 (minus Chile and Bangladesh, which were added in the second phase), with the objective of building capacity among researchers, governments and the wider policy community to address the complex issues of trade and sustainable development. The members conduct in-country research on the most salient linkages at the national level, which is complemented by thematic research from the international level. The research, as well as more general materials on the relationship between trade and sustainable development, is shared with governments and civil society at policy workshops with the aim of building capacity and creating national or regional networks of interested stakeholders. The TKN is currently coordinated by the International Institute for Sustainable Development (Canada) and the International Centre for Trade and Sustainable Development (Geneva).

The research on which this book draws is compiled in full on the CD attached to the back of this book. It can also be accessed in English and Spanish at <http://www.tradeknowledgenetwork.net>. It comprises 14 national-level studies covering 24 cases, and also includes a number of thematic studies and papers commissioned for particular workshops.

In building a synthesis of the research, this book insulates itself from other similar work; all citations are references to the TKN papers. This is not to deny the relevance of other work on the areas of interest—on the contrary, it was difficult to refrain from citing other excellent works to make or bolster particular points. Rather, the intention was to avoid drawing out lessons that are favourites of the author, as opposed to those strictly illustrated by the work of the network. Of course the Network's research itself drew heavily on other cited sources.

As such, this is not an overview piece on trade, environment and sustainable development. It is a thorough analysis of the subset of the issues touched on by the TKN research. While the scope of that research is broad, it is not exhaustive. Nonetheless, the results should be of interest to all those who work on these issues, and should provide a good introduction to them for those outside the debates looking for a fact-based primer.

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Lessons Learned on Trade and Sustainable Development

Chapter One

Q: Is trade good or bad for the environment? A: No.

Is trade good or bad for the environment? It is a mark of how far we have come in the debates on trade and environment, trade and sustainable development, that this question will be widely recognized as silly. The answer is no, trade is not good for the environment, nor is it bad for the environment. The actual relationship is too complex to be described by such general truisms. Trade, and trade liberalization, can in some cases be good for the environment, and in other cases bad, or (frequently) both at once.¹ The final impacts in any given country will depend on the sector's economic characteristics—both domestically and abroad—, the domestic institutions for managing trade and investment, the strength of ancillary institutions such as regimes for environmental management, the details of the liberalizing agreement, and so on.

It is nonetheless valuable to survey what the TKN research tells us about the concrete details of that complex relationship. For one thing, it helps add authority to the widely held view that the relationship is not black and white; there are still some out there that need convincing of this, though their numbers are surely small and shrinking. For another thing, it serves to remind us that it is worthwhile to try to better understand the varied effects of trade on environment, and vice versa, if we are to draft better trade law, and to promulgate better “flanking” policies to soften the impacts of structural change wrought by trade. Nothing works as well as concrete examples in serving both of these objectives.

Before surveying the TKN research, we should note that it can also be asked whether environment is good for trade. This question is most frequently asked by those concerned that environmental measures have the potential to unduly restrict trade flows, whether by poor design or by conscious intent to protect domestic industries from competition. This question is addressed in the following chapter, where we look at the tensions between environmental objectives and development objectives. It is further addressed in Chapter 3, where we look at the wide-ranging impacts of environmental standards and technical regulations. In this chapter we will look only at the other side of the coin: the impacts of trade on environment.

1 Note that by “trade” we mean the full panoply of themes covered under modern trade agreements such as the WTO body of law. As well as trade in goods, this includes such areas as trade in services, intellectual property rights, investment, government procurement, trade facilitation and competition policy. In the face of such varied elements, each with its own distinctive implications for environment and sustainable development, the term “trade” loses a good deal of accuracy. But, for better or for worse, it is the term we adopt herein.

To begin with the good news: trade and trade liberalization can be good for the natural environment in a number of ways. It can, for one thing, remove market distortions that prevent the spread of environmentally-friendly technologies. CENIT (1999) found that Argentina's unilateral liberalization in the 1990s meant a phenomenal expansion of primary agricultural production in the Pampas region of Argentina, with an increase from 26 million tons harvested in 1988–89 to 63 million in 1997–98.² This was due to reduced export levies on agricultural products, and reduced tariffs on the import of capital goods and inputs, including agricultural technologies. One of the technologies subsequently imported at a significant rate was equipment for “direct seeding,” or no-till cultivation, whereby the seed is planted without tilling, by injection in the soil. CENIT (2003) found the area seeded by this technology in Argentina to have increased from less than 300,000 hectares in 1990–91 to over nine million hectares in 1999–2000. No-till cultivation has a number of significant environmental benefits, including reducing erosion, improving the soil's carbon retention,³ reducing water use and eliminating the burning of hydrocarbons normally used in tillage.

In the case of the Pampas in Argentina, no-till technology was adopted as part of a larger “package” of new technology that included the use of genetically modified (Roundup Ready) soy, in combination with the herbicide glyphosate. While the level of chemicals used per acre under this type of system was greatly increased—total use rose from 1.1 million litres in 1990 to 59.2 million litres in 1998—CENIT (2003) argues that the final result is still environmentally benign since glyphosate is considerably less toxic, with little residual effect, as compared with previously used substances, such as atrazine. Note, however, that Benbrook (2003) raises serious questions about the sustainability of glyphosate use in the Pampas at the current levels, predicting an eventual implosion in productivity levels.

In the same vein, the Argentine liberalization brought environmental improvement to a number of manufacturing sectors. Citing the paper sector as a notable example, CENIT (1999) found that a mix of exposure to increased foreign competition, and better access to imported (more efficient) technologies, forced new investments, centred on cost-saving from reduced input use and waste generation.

Another positive linkage involves foreign investors bringing with them environmentally-friendly technologies and management practices. PRCEE (1999) notes that the first dyestuffs manufacturer to become ISO 14001

2 Most of the increase in production came from switching away from beef ranching.

3 This reduces climate change pressures. CENIT (1999) calculates that the changes in practice described here had the potential to fix almost 200 million tons of carbon equivalent.

certified in China was a joint venture between a domestic firm and the transnational chemicals giant BASF. ISO 14001 is a system of environmental management that aims at continuous environmental management improvements. But it is an extremely difficult system to implement without outside help, preferably from those that have already done it elsewhere. CENIT (1999) notes that a number of foreign investors in Argentina demand that their subsidiaries there follow a (high) global standard set by the home country operations.

Trade can also be beneficial for the environment when foreign standards cause exporters to clean up their production processes. The next chapter looks into the dynamics of this phenomenon in greater depth, but we can offer a brief example here. TIPS (1999) found that, in response to strict U.S. and EU environmental and health-based standards for imported citrus fruit, the South African industry has made significant changes for the better. The standards—the most stringent of which are imposed by large supermarkets, rather than by importing governments—cover environmental requirements in the production process (e.g., levels of pesticides used); social requirements (e.g., work conditions, fair labour practices); and health requirements (e.g., levels of pesticide residues on the fruit). The country's largest marketing agent for citrus, Capespan, runs its own accreditation and monitoring regimes to ensure compliance, as well as engaging in outreach and technical assistance. Among the positive results have been decreased pesticide use (the result of a move toward integrated pest management) and better working conditions (in part from decreased pesticide exposure).

An interesting aspect of this study was the final result that the domestic environmental and workplace safety standards became effectively irrelevant for exporters. The standard they needed to respect was set by foreigners. CIPMA/RIDES (2003) note a similar result in the context of forest management standards in Chile, for those exporters pursuing green markets for forest products. This is probably a common phenomenon, and where domestic standards are low it can result in substantial environmental improvements.

The more frequent case is of adequate domestic standards that are simply not respected, in part because they are set not by foreign buyers, but by domestic ministries of the environment. SDPI (1999), for example found water effluent from textile producers in Pakistan that regularly violated legal norms for biological oxygen demand (by up to 50 per cent) and chemical demand for oxygen (by over 200 per cent). The leather tanning industry effluent was the most surprising, surpassing every tested category by large margins (in the case of total chromium residues, for example, by from three to 133 times the legal limit (p. 24). PRCEE (1999) found a similar lack of compliance with domestic standards banning azo dyes in textiles—a situation that only changed (and

even then not completely) when foreign governments issued import bans. And it cited levels of wastewater pollution in the tanning sector that, like the data for Pakistan show widespread and alarming violations of the legal standards (to use the example of chromium again, actual levels were 27–68 times the mandated levels). CINPE (2003) identified the lack of monitoring and effective control by national environmental authorities as one of the key causes of environmental degradation in the Central American agricultural sector. TIPS (1999) in South Africa observed that while standards for air and water pollution from the coal and steel industries were in some cases comparable to those in OECD countries, enforcement of those standards was a real problem. They noted that:

“In many instances exporting firms are less concerned about the local effects of non-compliance with environmental legislation, which have been fairly minor until recently, than about the loss of market share if non-compliance affects their market access.”

Of course, the environmental benefits from improved production processes do not only occur in the export sector. For any given producer there is typically only one production standard for both export and domestic goods, since two systems would be inefficient. As such, for example, when a number of countries banned the fungicide penalchlorophenol in the process of leather tanning, PRCEE (1999) found that while 20 per cent of production was for domestic consumption, production associated with that 20 per cent was carried out at the same improved standard as the 80 per cent that was destined for export.

Trade, or more specifically access to international markets, can also drive a greening of exports in response to voluntary standards—in essence a pursuit of green market niches. CIPMA/RIDES (2003) found, for example, that in pursuit of such markets Chilean exporters had, by the year 2000, converted some 3,300 hectares of vineyards to organic production, practically all of it destined for export. Similarly, about seven per cent of Chile’s productive forests received certification from the Forest Stewardship Council, and some 58 per cent of Chile’s forestry plantations were operated under (less demanding) ISO 14001 environmental management standards. These efforts too were almost exclusively export-oriented.

These cases do not, of course, exhaust the types of environmental benefits that can accrue from trade and trade liberalization. But they offer a good set of examples to illustrate the rich variety of positive linkages. There are also, of course, negative linkages, and the TKN research turned up a number of those.

The alarming figures cited above for wastewater effluent in the export-oriented leather tanning and textile dyeing sectors in China and Pakistan offer an insight into one of the most basic negative linkages—the scale effect. That is,

were it not for international trade, the production of leather and textiles in those countries would be at much lower levels, and of course so would the considerable pollution and human health impacts that they engender. In the same vein, Khan reported worrying levels of pesticide residues and pesticide poisonings associated with cotton production in Pakistan—cotton destined to feed the textiles export trade (though note that the levels of use were still well below those employed in most developed country systems).

TIPS (1999) found a wide array of environmental problems associated with the production of South African coal—the country's second largest export product after gold—and of steel. Note, however, that in both sectors there had been a great deal of concern among industry players over the potential impacts of foreign pressures to green production, and some pre-emptive improvements had already been made.

IUCN/MOSTE (1999) briefly noted another type of impact in Vietnam, observing a shift from more environmentally-benign forms of agricultural production into more chemical-intensive production of coffee, tea and flowers for the export market. This is a structural change wrought by trade, changing the mix of productive activities in the economy toward more polluting or environmentally-damaging ones.

One of the most central environmental arguments against trade—that it pushes environmental standards lower by allowing competition from firms that pollute more than allowed domestically—was not explored by the TKN research. This is understandable; the argument is primarily a developed country complaint, and the TKN research is based in developing countries. It is worth noting, however, that if the argument holds water it is to some extent weakened by the evidence found here of increased stringency of environmental performance in developing country exports. However, to pre-empt some of the discussion from Chapter 3, there is a highly uneven pattern to that improvement. In those areas where there are no foreign standards to meet—and there frequently are none for purely local environmental damage incurred during production—the kind of competition feared by Northern environmentalists is undoubtedly still occurring. It was noted in a number of cases, including steel and coal in South Africa and leather and textiles in Pakistan, that domestic environmental standards in those countries were less stringent than those applicable in developed country markets.

The type of environmental impact research surveyed here is valuable to developing country policy-makers, in that it shows where the national interests lie in terms of trade and sustainable development. It shows where there are damaging effects of trade that decrease domestic well-being, and therefore may require mitigating policies. And it shows where there may be a double advantage to focusing resources on improving environmental performance. That is,

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as argued by Kaushik (1999), governments should determine where environmental standards are likely to be rising in areas of their export interest. In the process of setting priorities for domestic action, they should hold in mind that regulating environmental improvements in these sectors pays a double dividend of improved environment and well-being domestically, and the ability to predict and weather more stringent international standards when they do arrive. The same sort of “double dividend” arguments apply to government support for the pursuit of “green” export markets, as argued by CIPMA/RIDES (2003).

The research can also help developing countries map out a strategic approach to trade and environment as addressed in international trade negotiations, as in the WTO and various bilateral and regional fora. Until they know how current trade flows and current rules impact on their economic and environmental health, they will be hard-pressed to act strategically in these negotiations, taking what Najam (1999) calls a “proactive stand on the environment.”

Finally, this type of research is invaluable to policy-makers and the wider public in developed countries, who too often base their arguments on assumptions about the reality of trade and sustainable development in the south. The more accurate a picture we can get of that reality, the better informed the debates will be. As we argued at the beginning of this chapter, the relationship linking trade, environment and development, is hardly black and white. If the TKN research surveyed here can help define a shade of grey, it will have done well.

Chapter Two

There may indeed be tensions between environment and development, but it's not all about protectionism

One of the strong themes from the beginning of the debates on trade and environment, and trade and sustainable development, is the fear in developing countries that environmental protection in developed countries would be used as a cloak to disguise protectionism. That is, with the WTO-mandated lowering of tariffs and other forms of protection for domestic industries in industrialized countries, governments might turn to other forms of protection to keep foreign goods from threatening entrenched industries. The new forms of protection might include a number of technical barriers to trade, but prominent among them, it was feared, would be environmental measures.

The most suspect (and reviled) would be those that went further than specifying the environmental performance of the products themselves (e.g., energy efficiency or recyclability), to specify how the products were made, and how much environmental damage was caused in the process. A particularly famous (or infamous, depending on your perspective) example was a U.S. ban on imports of shrimp from countries that did not require devices in shrimp nets to prevent endangered sea turtles from becoming entangled and killed.

For their part, environmentalists counter that their agenda is protection of the environment, not protectionism. Often pollution from the production of a good will contribute to global environmental problems such as ozone layer destruction, biodiversity loss or global warming. In such cases, they argue, it is legitimate for the importing country (which will feel the environmental impacts to some extent) to levy such standards.⁴ Or, where the damage in question is more or less localized to the exporting country—as, for example, when leather tanning pollutes local watercourses—they argue that the lower standards expected of foreign firms will put competitive pressures on their own regulators to lower or not enforce existing standards.⁵

4 Note that in trade law parlance *standards* are voluntary requirements, whether imposed by governments or other bodies. Mandatory requirements laid down by governments are *technical regulations*. Throughout this text, the word “standards” is used to denote both types of requirements. When specificity is required we use the terms “technical regulations” and “voluntary standards.”

5 There is a third related argument, but it is not about environmental protection per se. It says that low standards elsewhere will lead to the exodus of firms from high standard countries, and the creation of so-called pollution havens. This is fairly close to a protectionist argument, but it is usually framed in terms of unfair competition.

The wide range of issues related to standards is addressed in greater depth in Chapter 3, but the general theme put forward in the first argument is that there will be tensions between environmental goals in developed countries and economic development in developing countries. And the sub-theme that fuels these arguments with rancour is the charge that such measures amount to either blatant protectionism, or protectionism taking cover under the cloak of well-meaning environmental protection.

The TKN research uncovered a very different phenomenon. There was little examination of the motives for environmental standards (though Kaushik (1999), for one, suggests that certain polluting or harmful technologies were banned only to benefit patent holders of the only available substitute technologies.) But there was, in several cases, demonstration of the fact that there can indeed be some tension between environmental protection in developed countries and economic development in developing countries. However, the measures in question were clearly not protectionist, and the dynamic involved was not the one spelled out in the scenarios of those fearing the trade-environment linkage.

Rather, the research showed in several cases that environmental measures can *inadvertently* lead to outcomes that may have development implications, because they favour larger, more intensive or more integrated producers. For those schooled in the complex debates on international standards, this will come as no surprise, but it is worth looking at the experiences uncovered in the TKN research, and worth driving home the point: environmental standards can have consequences for development, but they are not necessarily born of protectionism. We will come back to the implications of this basic message at the end of this chapter.

One instance of this dynamic was uncovered in the Bangladesh phase two research. IUCN Bangladesh/NSU (2003) was looking at the shrimp aquaculture industry—shrimp being Bangladesh's second biggest export—and the impacts of the EU's relatively strict standards for production and processing. These standards—the internationally respected Hazard Analysis and Critical Control Points (HACCP) standards—specify certain management and processing practices with a focus on:

1. micro-biological hazards,
2. chemical hazards, and
3. physical hazards.⁶

6 Strictly speaking these are human health standards as opposed to environmental standards, but the effects and policy implications are virtually identical.

For each stage of production and processing there is a required monitoring regime to ensure compliance with the standards. IUCN Bangladesh/NSU (2003) found spending by processors to meet the standards amounting to US\$2.2 million per year, with annual government spending on monitoring and certifying compliance reaching \$225,000. Monitoring programs under HACCP regulations include inspection of shrimp farms; monitoring of feed, drugs and chemical use; inspection and monitoring of processing plants; and pre-shipment inspections and certification.

The problem in the case of Bangladesh is that the processors/exporters, who are held responsible for compliance with the HACCP standards, in the end have little control over a large part of the process: the growing, harvesting and some transport of the shrimp that they buy from the producers. They report receiving shipments of shrimp, for example, contaminated by prohibited antibiotics—a situation of which they only become aware when their export shipments are rejected.

The structure of the sector in Bangladesh is such that many producers are small-scale farmers, often with shrimp cultivation as one of several types of farm income. Of those surveyed by IUCN Bangladesh/NSU (2003) 50 per cent owned operations with pond areas of less than 1.7 acres. These types of producers are, first, largely unaware of the HACCP requirements, and second, unable to implement the stringent and expensive monitoring systems required. Such systems become more affordable only at a certain scale of operation.

As such, the Bangladesh research predicts that there will likely be an intensification of production, with small scale producers being pushed out of the system in favour of larger producers, perhaps vertically integrated with the processors and exporters. This would mean greater certainty surrounding compliance with HACCP requirements. But it would also mean a huge blow to small producers, for whom shrimp cultivation is an important income supplement. It might also mean, incidentally, increased environmental degradation, since small-scale producers tend to create fewer environmental problems than intensive producers.

To recap: regulations propounded in the EU, designed to protect EU consumer health, may have negative impacts in the exporting country in terms of sustainable development, concentrating ownership and income related to shrimp aquaculture, and degrading the environment. The lesson here is not that these regulations are illegitimate (and it is certainly not that they are protectionist—HACCP standards are recognized as legitimate by the Codex Alimentarius Commission, a blue-chip seal of approval). But rather, they need to be more carefully designed, taking account of their ancillary negative impacts abroad. And there may need to be efforts in the exporting country to avert those impacts.

Another example of a similar dynamic was described by PRCEE (1999), looking at China's leather tanning and textile dyeing sectors. In both cases, environmental and human health regulations from importing countries have been tightened over the last decade or so. In the case of textile dyeing, one of the predominant industrial dye types—azo dyes—was found to be carcinogenic, resulting in a series of bans by major European importers starting with a German ban in 1994. The impacts were felt both by the dye manufacturers in China, and the printers/dyers. Of the latter, as of September 1997, 1,167 small township and village enterprise operations had been closed by the government at least partly in response to the bans.⁷

The leather tanning sector in China went through a similar transition. As part of an effort to clean up the Huai River system, the State Council closed down 64 tanneries in provinces feeding the river, 90 per cent of which were village and township enterprises. The rationale was that smaller tanneries are simply unviable when stringent pollution control costs are required—it takes a certain scale of operation to make a wastewater treatment plant economically viable. The PRCEE (1999) research in fact recommended the closure of all leather tanneries with a capacity of less than 30,000 sheets of hide, and of any tanneries operating between 30,000 and 100,000 for which there was no possibility of consolidating wastewater treatment with other similar operations.

In Chile, CIPMA/RIDES (2003) found that the fixed costs involved with obtaining organic certification for wine production had significantly different impacts on small and large producers. For vineyards of 50 hectares, certification costs amounted to some five per cent of operating costs, while the equivalent figure for a vineyard of 10 hectares was 25 per cent. There are some provisions for group certification to help address this problem.

Rotherham (2003a) notes that it is generally accepted that environmental standards will be more troublesome for small and medium-sized enterprises than they will be for larger enterprises. Over and above the costs of changing the production process, there are the costs of certification, monitoring and management, which in larger firms can be spread over a greater base of revenues. The costs of information are also more prohibitive for smaller firms, which are typically less aware than their larger counterparts of the relevant international standards.

It is not difficult to identify this type of trend toward consolidation, pushed by foreign environmental standards. It is more difficult to understand what consolidation means for sustainable development. Are the poor worse off if many small enterprises are shut down and one large one built in their place?

7 These closures were part of a broader effort to close down small and inefficient heavy-polluting enterprises in 15 different sectors.

Intuitively it would seem that this type of change would concentrate not only productive operations, but also income. This seems to be the clear implication in the case of Bangladesh. But it is impossible to make general statements on this subject. Each case needs to be examined in its own right. And the analysis should be careful to also factor in the impact on well-being arising from environmental improvement.

In the end, the lesson from the TKN research is that these types of standards can have serious impacts beyond their intended environmental and human health scope. Perhaps some of the most serious impacts come from regulations that do not stem from protectionist sentiment, but rather from legitimate objectives, combined with ignorance of the impacts in exporting countries. In the face of such standards, exporting country governments need first to better understand their full impact, through TKN-like research. They then need to work at avoiding the undesirable possibilities through domestic policies (IUCN Bangladesh/NSU (2003) make a number of recommendations for policies of this type), and by making use of the WTO-mandated comment periods provided by the standards-propounding countries.

Those expounding the standards also have obligations. Again, these start with better understanding the impacts of the standards they propound. This will involve being open to the input of exporters, and giving adequate lead time when notifying draft standards. Most important, there needs to be enough concern about non-domestic impacts to either alter the structure of the proposed standards, or engage in technical assistance, technology transfer or capacity building to help soften the blows.

A final lesson is the need to take the rancour out of the trade-environment debates. While there are undoubtedly instances of protectionism in the construction of environmental standards, it is unproductive to cast all environmental standards in such a light. A better approach would be to carefully deconstruct standards on a case-by-case basis, fighting those that are indeed protectionist, and working strategically to make the best of those that are not.

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Chapter Three

Trade-related environmental standards: make them better, meet them better, but don't bother complaining

Environmental standards set in developed countries are of keen interest to developing country policy-makers and exporters, being hard to know, hard to meet, sometimes unreasonable, but for the most part, imperative to export success. In effect, they are one more facet of the potential tension between environmental and development goals; if they are made and implemented without regard to their wider effects on exporters, and with a sole focus on their environmental objectives, they will often frustrate sustainable development in developing countries.

But rejecting them is not a solution, except for the limited number that can be contested under trade law. Instead, we need renewed efforts by exporter governments as well as standard-setters to help make trade-related environmental standards an opportunity for environmentally-friendly export success.

By delving into the specifics of these standards, and the difficulties encountered by developing country exporters in meeting them, the TKN research gives us at once some insight into their impacts in the South, and the beginnings of a roadmap to having them serve both their environmental objectives and the objective of sustainable development.

Kaushik (1999) argues that environmental standards are tougher on developing country exporters than on their competitors in developed countries, for a number of reasons:

“Lack of infrastructural and monitoring facilities, limited technology choices, inadequate access to (and relatively more expensive) environmentally friendly raw materials and information are one set of reasons identified. Secondly, small and medium enterprises (SMEs) face more formidable compliance costs and there is an increasing emergence of environmental standards of export interest to them. Thirdly, developing country enterprises lack the skill and technology required for exploiting the positive trading opportunities generated by environmental measures. Fourthly, developing country exports are more vulnerable to market access barriers on account of their scale and sectoral composition. A connected problem is the diseconomies of scale on account of small domestic markets.”

Many of these themes are explored in various sections of this book, and the TKN research cited in this chapter seems to confirm that developing countries

face pressing challenges in meeting (or in demonstrating compliance with) environmental requirements in their target markets. Some of those challenges are explored below. The most interesting question, to which we turn in greater detail in concluding this chapter, is what to do about it.

The sentiment that informed many early developing country government positions was two-fold: first, to urge recourse to the WTO rules to remedy the unfairness of many environmental standards, and second, to deny a relationship between trade and environment, so as to avoid discussions that might legitimize trade-related environmental requirements.

Najam (1999) forcefully argues the self-defeating nature of the defensive position that underlies this sort of denial. As noted in the previous chapter, he calls for a “proactive stand on the environment”—a strategic position that exploits the opportunities offered by the trade-environment linkage, and works to avoid the risks. Indeed, the modern developing country positions on trade and environment in the WTO arena are increasingly founded on such strategic positions.

One of the clear policy recommendations from the PRCEE (1999) research was as follows:

“The direct impact of these environmental articles may be negative on the trade of developing countries. However, it is neither appropriate nor effective to try to reject them. The right approach should be to analyze them, adjust them, adapt to them and create conditions to meet their requirements.”

In the Chinese case—which was in this respect typical of the TKN research—this statement in part reflects the fact that most of the important standards faced by exporters are laid down not by governments, whose mandatory requirements can be contested as breaching trade law obligations, but by private buyers, or non-governmental labelling organizations. In the case of private buyers, and to a large extent also in the case of non-governmental labellers, questioning the criteria offered up by the standard-setters would be fruitless.

In the same vein, TIPS (1999) counsels an approach that distinguishes those standards that are contestable from those that are not:

“The studies ... showed that trade and environment linkages do not only arise from, and hence can be addressed within, the formal world trading system and the WTO. Some of the issues presented, such as eco-labels, are industry-led initiatives and ostensibly voluntary. Others are based on real or perceived consumer demands or consumer risk aversions, such as the need for pesticide-free produce. Therefore a policy response cannot be limited only to a better presentation of South Africa’s position in world trade fora. A more nuanced and broader approach is required to meet the challenges presented.”

Where standards are contestable and unfair, they should be contested (though the system for doing so via trade law is hardly ideal, and the impacted firms may have suffered irreparable damage by the time there is any redress). In other cases, the energies of exporters and their governments should focus instead on strategically exploiting the opportunities they might offer. In this respect environmental standards should be seen as no different than other expressions of consumers’ tastes; the challenge is to fulfil them innovatively, and to do so more cheaply and completely than the competition.

On types of standards, and on PPMs

The remainder of this chapter will consider the results of the TKN research to gain insight into how this might be done, looking at the roles that might be played by governments in exporting and importing countries. Before turning to that question, however, it will be useful to segregate the various types of standards, and to briefly touch on the differing policy implications each poses.

Table 1 shows the various types of measure we usually have in mind when we refer to environmental standards.⁸ They can be imposed by governments, private buyers, or non-governmental labelling organizations, and any standards can be based on either the processes and production methods (PPMs) by which the products are made, or on the characteristics of the product itself.⁹

Table 1: A Taxonomy of Standards

	PPM-based	Product-based
Set by government	<p><i>Voluntary</i> (eco-labels): e.g., organic standards;</p> <p><i>Mandatory</i> (technical regulations): e.g., dolphin-safe shrimp harvesting methods, related labelling requirements</p>	<p><i>Voluntary</i> (eco-labels): e.g., eco-friendly materials, energy efficiency standards;</p> <p><i>Mandatory</i> (technical regulations): e.g., bans on CFC refrigerant, required automobile emission reduction systems, related labelling requirements</p>

- 8 Remember (as per footnote 4) that in trade law parlance standards are voluntary requirements, whether imposed by governments or other bodies. Mandatory requirements laid down by governments are technical regulations. We use the term standards to refer to both.
- 9 Some *process* requirements are put in place because following them will have a desired effect on the end *product*. For example, requirements for sanitary handling and processing of food products are in place in order to prevent contamination of the final product. In the technical language of the debates, these sorts of standards are said to cover “product-related” PPMs, while those that are concerned entirely with process are said to cover “non-product-related” PPMs. In this text we will lump together product standards and product-related PPM standards. This gives us greater clarity, but loses nothing in terms of policy-relevant specificity.

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	PPM-based	Product-based
Set by private buyers ¹⁰	e.g., environmental management system requirements (ISO 14000); pollution or technology standards; codes for sustainably sourced materials	e.g., energy efficiency standards; product recyclability requirements
Set by private standards bodies	e.g., non-governmental standards for sustainable forestry, fisheries practices (FSC, MSC)	e.g., non-governmental standards for eco-friendly materials, energy efficiency standards

Several observations flow from this taxonomy. One is that only a small sub-set of standards can be addressed by seeking remedy in the WTO. Only government standards are covered by WTO rules—buyers’ standards can be as unfair and inappropriate as the market will bear. Rotherham (2003b) notes that there is a long-standing and hardy debate over whether private labels are covered by WTO rules, but concludes that there will be no consensus on their inclusion in the near future. Of the universe of government standards, only mandatory standards (technical regulations) are effectively contestable; voluntary standards are covered by a legally weak code of good practice.¹¹ And finally, technical regulations covering environment-related PPMs are extremely rare. In the end, legally contestable standards represent a very small slice of the pie that is trade-related environmental standards.

There are, of course, a number of *human health*-related technical regulations, some of which the TKN research focused on as questionable, asking whether the benefits in the importing countries were out of proportion to the economic costs borne by exporters. Kaushik (1999) argues that the EU standards on aflatoxin levels in peanuts—which exceed the norms set by the Codex Alimentarius, the international standard-setting body for food-related standards—engender disproportionate costs, and may be designed to serve protectionist ends. And there have been similar charges—though none were raised

¹⁰ In many cases the private buyers are not technically setting the standard. The ISO 14000 standards demanded by many private buyers are in fact set by the ISO, an international standards body.

¹¹ Code of Good Practice for the Preparation, Adoption and Application of Standards, Annex 3, TBT Agreement.

by the TKN researchers—about the legitimacy of the broad body of import restrictions on genetically modified organisms.¹² These concerns might well be pursued within the context of WTO law. But, again: such standards are in the distinct minority of standards faced by developing country exporters.

This is not to suggest that there are no protectionist environmental standards, or that those that exist are insignificant. Kaushik (1999) alleges, for example, that some developed country standards on formaldehyde, glyoxal and PCP residues in textiles were driven at least in part by the fact that they would benefit western holders of patents on the only known substitutes. And PRCEE (1999) notes (though it does not allege protectionist intent) that the bans in many countries on the use of penachlorophenol—a fungicide used in leather tanning—has greatly benefited the U.S. company that manufactures the only viable alternatives. Such standards may have significant impacts, and may have protectionist genesis. But the point is that such standards are arguably less important than the vast number of standards for which arguments about legitimacy and legality are futile.

Another observation flowing from Table 1 is that the classic distinction—the controversial heart of the trade and environment debates from the earliest days—between standards based on PPMs and standards based on products is not all that useful. From the perspective of a developing country exporter, there is no real difference between the two. Both cause just as much hardship, both force exporters to change their production processes, and for both it would be good to have more developing country input on standards being developed. Thus, from an economic point of view, leaving the legal distinctions behind, there is little real difference between a PPM-based and a product-based standard.¹³

Turning trade-related environmental standards into opportunities

This section focuses on those trade-related environmental standards that are not protectionist, and/or are not legally contestable. Exporters must either meet such standards, or fail to export to the buyers they cover. How can we decrease the difficulty that such standards cause exporters, allowing them to become simply better specifications of consumers' tastes? How can we turn them from obstacles into opportunities for sustainable development?

The research suggests two distinct bodies of tasks to be shouldered in this effort: one by exporter governments and one by the standard-setters. We consider each below.

12 These regulations, extensively surveyed by Baumuller (2003), may in fact be aimed at protecting both human health *and* the environment.

13 Note that recent WTO jurisprudence—i.e., the Shrimp-Turtle Appellate Body rulings—mean that there is not much of a legal distinction either. Both are legal, but are subject to (different) WTO rules in their design and implementation.

The role of exporter governments

Rotherham (2003a) argues that most developing countries do not have adequate national-level infrastructures to help exporters cope with the ongoing tightening of trade-related environmental standards, and suggests that most do not have the resources to invest in creating it. The type of supportive infrastructure needed is suggested both by Rotherham and by the various TKN research results:

- a national standards body with various supportive functions;
- accredited institutions of conformity assessment; and
- policy management.

A national standards body. The primary role of standards bodies is to set standards, both at the domestic and international levels. But such a body can also serve a number of other useful functions. One key role is to compile and make available the standards of interest to exporters in their key target markets. Another is to warn exporters of standards in the pipeline, and solicit, collate and relay their input to the standard-setting governments (in the case of government standards) during the comment periods mandated by the WTO's Agreement on Technical Barriers to Trade.¹⁴ Based on the experience of China's dyestuffs and textiles industry, for example (primarily relating to the German ban on azo dyes, which was badly implemented), PRCEE (1999) strongly recommended such a body be created:

“There is a need to establish a mechanism to track and release information in foreign environmental standards and requirements to products including those of dyestuffs. ... This will help raise [industry's] awareness of trade and environmental issues, make timely necessary adjustment for the industrial structure and avoid any possible risks and losses.”

In a similar vein, in light of losses to exporters who faced unexpected bans in the surgical goods and shrimp export sectors, SDPI (1999) argued that “the government needs to be proactive in acquiring information about environmental standards and passing this information on in a timely manner to industry working closely with the various industry chambers.”

Another key role for such a body is participation in the drafting of standards at the international level, in bodies such as the Codex Alimentarius and the International Organization for Standardization (ISO). As with the comment period mandated in the case of government standards, this kind of participation helps ensure that the particular concerns of developing country exporters

¹⁴ For standards, the TBT calls for a 60-day comment period (TBT Annex 3 (*Code of Good Practice*), para. L). For technical regulations, no period is specified; draft measures should be published “at an early appropriate stage,” and members should “allow reasonable time for other Members to make comments in writing.” (TBT Art. 2.9.4)

can be taken into account in the drafting of standards (though national governments are still able to draft standards that are stricter).¹⁵

A final role that can be played by such a body is to spearhead the proposal and drafting of international standards in areas of interest to developing countries. Rotherham (2003a) notes, by way of example, the absence of such standards for formaldehyde residues on textiles, for environmental PPMs for cut flowers, and in other areas where developed country and non-governmental standard-setters fill the void with widely varying norms.

Finally, to perform all these tasks effectively, the standards body needs a lively network of interested exporters, and good channels of communication. This will serve to help define national interest in the area of standards, as well as to give exporters up-to-date information on the standards they must meet in target markets.

There is an obvious role for governments in setting up and supporting the operations of such a body, as per the TKN policy recommendations from above. And there is a clear need for financial assistance to those governments in doing so (a theme we return to below). In the end, the existence of a single body is not so important as the performance of the tasks described above, by whatever institutional means. The possibility of an international body to compile importers' standards is discussed below. There is also the possibility of cost-saving regional approaches, where there are a number of small nearby countries with similar export patterns, such as in the Caribbean or South-East Asia.

Accredited institutions of conformity assessment. Conformity assessment is the certification that a standard has in fact been met. It increasingly involves sophisticated and expensive equipment (testing in the tenths of parts per million is common), and specialized knowledge. This type of activity is most frequently carried out by one of a handful of multinational firms. In theory, conformity assessment could be carried out by domestic-based organizations, but in many less developed countries the facilities often simply do not exist; start-up costs are too high, and the market for their services is too small. Rotherham (2003a) notes that using foreign certifiers increases costs—since they charge higher rates for field work, and since they may be exercising some monopoly power. CIPMA/RIDES (2003) argue that it also means a lack of accountability on the part of the certifiers, relative to what there would be in the case of a domestic body.

Even in the case where there are domestic certifying bodies, if they are not accredited by the importers as able to do certification, they cannot be used. Accreditation is typically an expensive and difficult process. CIPMA/RIDES (2003) note that when the Chilean organic certifier *Certificadora Chile*

15 If an international standard exists, and national governments want to adopt stricter standards, the WTO rules oblige them to clear a number of hurdles designed to prevent unfair trade restrictions.

Orgánico was approached by the government with an offer of support for a bid to become accredited by the EU, CCO declined, citing the high costs involved. There are obvious economies of scale involved in providing certification services in more than one country to the same standard—part of the reason for the dominance of multinational firms in this field. Some countries and buyers (and some labelling schemes, such as the Forest Stewardship Council) restrict the number of accredited entities, creating problems for those in the hinterlands of conformity assessment.

Again, there is an important role for governments here in supporting the accreditation of their domestic (or regional) agents of conformity assessment. The key obstacles are primarily financial: the agent needs to own equipment that is up to the task of the testing needed, it needs to employ highly-trained specialists, and it needs to pay for the costs of accreditation. (CIPMA/RIDES (2003) note that accreditation to the Organic Accreditation Service of the International Federation of Organic Agriculture Movements costs some US\$14,000 per year). And again there is an obvious potential role for regional collaboration in the right circumstances.

Policy management. CIPMA/RIDES (2003) use the term “policy management” to mean the active coordination among the various ministries, and between them and the involved industries. In the present case, that coordination would be in the service of helping exporters cope with trade-related environmental standards. This type of policy management is a challenge in both developed and developing countries.

In part, this is because of the number of ministries or departments involved. In Chile, for example, the issue of organic wine exports involved the Ministry of Foreign Relations (under which there was the Department of Sustainable Development and the Export Promotion Agency), the Ministry of Agriculture, the Ministry of Economy (under which there was the Chilean Economic Development Agency and the National Technology Centre’s Clean Technology Centre) and the National Commission on the Environment.

Peck (1999) describes what seems a highly successful case of policy management in phasing out ozone-depleting substances (ODS) from Singapore’s production processes, in line with its Montreal Protocol commitments. The efforts there involved:

- a tender and quota allocation system for CFCs, the main ODS in use;
- technical assistance and information dissemination;
- an ODS-free process verification scheme; and
- financial incentives for SMEs.

These programs were a joint product of many agencies. The overall coordinating body was the Ministry of the Environment. Also involved were the Singapore Trade Development Board, the Singapore Productivity and Standards Board, and the Singapore Economic Development Board. This kind of successful inter-departmental collaboration is a useful demonstration that policy management is possible.

PRCEE (1999) describes another such case, where the authorities for the textile and dyeing sectors in China worked together with the Department of Commodity Inspection in response to the German ban on azo dyes in textiles in 1994—a ban that covered 104 varieties of dye used in China at the time. PRCEE (1999) notes that “[The] starting point is that they consider the ban as an opportunity to increase the environmental awareness of the textile and dyeing sectors in China and upgrade the quality and categories of dyes to expand the market share of dyes so as to promote the development of the dyes in China.” In Shanghai, a collaboration of the Municipal Economic Commission and the local, the dye, textile and trading companies worked to develop a large number of substitutes for the banned dyes, some of which are actually exported. This is an excellent example of collaboration to turn adversity into opportunity.

The role of standard-setters

There are a number of ways in which the setters of standards—whether they be governments, private buyers or non-governmental labellers—can help to minimize the negative impacts in developing countries of trade-related environmental standards. To a great extent, they involve taking on board the principles and guidelines already laid down in the TBT’s Code of Good Practice. Many of these potential solutions are recommended by the TKN researchers, and some are demonstrated by negative example.

Notify draft standards with adequate lead time for comments. In the case of government standards, this is a mandated obligation as per the TBT Agreement, but is not always observed. It is not an easy or quick process to garner domestic input on draft standards and feed it back to the standards setter. In the case of non-governmental standards, buyers usually give suppliers adequate notice. Eco-labelling organizations have a poor record of soliciting input from foreigners on draft standards.

Include adequate information with standards and draft standards. For example, the German azo dye ban caused some havoc in China since, among other things, it did not specify a testing method. As such, textile manufacturers had no way of knowing whether domestic dye varieties would pass the new criteria, and had to quickly switch to buying imported dyes.

Take comments into account. It is one thing to solicit comments on draft standards, but is quite another to take them into account. This is actually *required* of governments under the TBT Agreement's Article 5(6)(4).

Longer transition times. In light of the special difficulties faced by developing country exporters in meeting trade-related environmental standards, it may be appropriate to offer them longer lead times in meeting any new standards.

Transparency. Existing trade-related environmental standards, and criteria for conformity assessment, should be easy to acquire. In the case of government standards and criteria, there should be a national point of enquiry to which interested exporters and national standard bodies can go to find what standards prevail. This is an obvious point, and is in fact a requirement under the TBT Agreement's Article 10(1), but compliance is patchy.

Technical assistance/capacity building. It was noted above that there was a great need for assistance in the establishment of the domestic institutions for managing trade-related environmental standards. In fact, such assistance should be a good fit with the mandates of most developed country official development agencies. In helping to establish national standards bodies, and in helping foster accredited conformity assessment bodies, developed countries can help increase the competitiveness of developing country exporters, many of whom are important engines of development in their respective countries.

The need for assistance and capacity building can also extend to help in meeting new standards, where they involve new technologies, or technologies not currently available in exporting countries. In an ideal world, such efforts would include some forms of technology transfer, but at an absolute minimum they should include full information about the relevant testing methods, and about the use and availability of substitutes for banned products/technologies. PRCEE (1999) noted that the German ban on azo dyes in textiles failed on all these counts.

With respect to exporter information on existing standards, the Chilean research recommended, on the basis of both the organic viticulture research and the research on sustainably managed forest products, the establishment of an international institution charged with collecting and disseminating information on standards of particular interest to developing country exporters. This is an interesting alternative to having this task performed by a number of different national-level bodies, as suggested above. But it would need some sort of international financial support, which might be in part forthcoming from the standard-setting countries.

Accreditation. All three types of standards-setters are at various times guilty of making the accreditation process unfairly difficult. Non-governmental standards-setters such as the Marine Stewardship Council, the Forest Stewardship

Council and the International Federation of Organic Agricultural Movements all limit and control the supply of accredited certifiers, with the frequent result that only developed country certifiers can afford to get accredited. Most governments insist on certification being done by their own domestic agents for certain standards, refusing to grant accreditation to foreign certifiers. As CIPMA/RIDES (2003) found in Chile, the process for getting local certifications recognized as equivalent to those done in the EU (technically, an exercise in “mutual recognition”) is costly complex and lengthy, and is still not complete after years of effort. Rotherham (2003a) describes a move by the international quality assurance community to rationalize the accreditation process, for example drafting guidelines on how an applicant must demonstrate competence. This is a welcome move, and one to which standard-setters should sign on without delay.

Conclusion

The TKN research shows a great deal of concern among developing country policy-makers and exporters with trade-related environmental standards. Given the stakes involved this is understandable, but the standards in question are rarely contestable under trade law. The research also gives us vivid insight into the nature of the problems faced by exporters, and into some of the ways in which exporting governments and standard setters could ease their burdens—primarily through developing institutional capacity at the national/regional level, and through fostering organizational capacity within exporting firms. In this way it might be possible for trade-related environmental standards to serve as opportunities to foster sustainable development, rather than as obstacles to development. This theme of opportunity is the focus of the next chapter.

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Chapter Four

Green opportunities exist, but they aren't easy

There are at least two types of trade and environment-related opportunities that developing country exporters might exploit. The first, covered to some extent in the last chapter, is to use foreign standards as a prod to make new investments and implement new systems that increase competitiveness. PRCEE (1999) noted that this was very much the spirit with which the industry and government approached the imposition of the European bans on azo dyes in textiles. The specific example of Shanghai, which actively developed and eventually exported new substitute dyes, was noted in the previous chapter. And CENIT (1999) noted that a number of larger Argentine firms made these types of investments when liberalization simultaneously brought them increased competition and access to new imported technologies.

The second type of opportunity, on which this chapter focuses, is the pursuit of “green” export markets. A number of TKN studies analyzed opportunities of this sort, including the export of organic wine and sustainably-managed forest products from Chile, the export of sustainably-produced (sandy-land aquaculture) shrimp from Vietnam, the export of organic agricultural products from China, the export of eco-tourism services from South Africa and the export of organic orange and pineapple juice from Costa Rica.

There would seem to be potential here for win-win solutions, which involve environmental benefits in the country of export, as well as increased economic development from the successful pursuit of new markets. Moreover, there are indications that the process of greening—at least in some cases—need not be unduly expensive. SDPI (1999), for example, found in the case of Pakistan’s textile and leather industries that there could be enormous improvements in environmental quality—reducing pollution loads for cloth production by some 91 per cent and for leather tanning by some 66 per cent—for outlays amounting to, respectively, 1.6 per cent of revenues for a hypothetical cloth manufacturer, and 0.045 per cent of leather export revenues.

But the message of the TKN research seems to be that these types of opportunities should not be over-sold. Or, at least, they should be sold “as is.” It is not a simple prospect for developing country exporters to tap into these markets. While the win-win benefits may be substantial, the following caveats should accompany any recommendations to pursue green export markets:

Success depends on the extent to which the exporter has:

- knowledge of the markets;
- knowledge of marketing channels;
- the ability to mount strong marketing efforts; and
- appropriate support from home governments (not only and not necessarily financial support).

Success will also depend on the extent to which the following obstacles can be overcome:

- difficulties associated with differing standards in different markets;
- costs and difficulties in conformity assessment;
- government support offered to competitors in export market countries;
- structural problems in the supply chain; and
- lack of a domestic market for “green” goods and services.

Each of these considerations is addressed in greater detail below, drawing on the experience of the TKN research.

Knowledge of markets. Green exporters in developing countries often face difficulties in getting the information they need. What are the global demand trends? What are competitors doing in other countries? The IUCN Vietnam/MOFI research, for example, was geared to assessing the viability of a form of shrimp aquaculture that can be environmentally and socially preferable to other forms of cultivation. But the researchers—drawn from the highly capable Ministry of Fisheries—had no luck in estimating market size or price premium for such a product, or in identifying what other countries/competitors might be moving in similar directions. This is a problem particularly for those looking to break into or create new markets, as opposed to those contesting existing markets such as organic produce (and note that many of the green goods in which developing countries might have comparative advantage are in effect new goods). The problem is more pronounced for green goods than for conventional goods because the available statistics seldom break down in ways that are informative. That is, it is possible to get figures on trade in shrimp, but not on trade in environmentally-preferable shrimp.

Knowledge of marketing channels. CIPMA/RIDES (2003) identified the lack of this sort of information as an important obstacle to the organic wine exporters of Chile in seeking to export to the EU. In each country the marketing channels for organic wines differ; in Germany direct marketing and marketing via specialized shops was for some time dominant, whereas in Great

Britain, Denmark and Sweden the largest marketers were supermarkets. In the case of Germany, they found that “the market for organic viticulture is essentially based on personal contact,”—contact that is difficult for foreign sellers to establish. Like the knowledge of markets, this problem is also faced by exporters of conventional products. But it may be more pronounced in this case because the market is many times smaller and more heterogeneous than that for conventional products, and retailing tends to be done through smaller independent establishments (though large buyers such as supermarkets are starting to develop their own green brands).

Strong marketing efforts. Marketing is key for any product; this is another instance of a challenge that is not unique to those seeking to pursue green markets. But the challenges are tougher than they are for conventional products. As noted above, in many cases the good or service must be promoted as if it were a new good, carving out a new market—a difficult marketing prospect. TIPS (2003) found, in the case of a South African wetland reserve park selling eco-tourism services, that one of the key obstacles to the park’s success was the lack of effective marketing—attributable to lack of clarity in government over whose responsibility that should be. CIPMA/RIDES (2003) suggested that the lack of a domestic organic vintner’s association in Chile acted as a barrier to exports because it also hamstrung marketing efforts.

Government support. There are a number of ways in which governments might need to support efforts to pursue green market niches. In its analysis of the government of Pakistan’s support in this regard, SDPI (2003) concluded:

“... In the best case scenario, exporting firms can comply with [foreign] standards and reap economic benefits from doing so. However, this is premised upon a support infrastructure that, presently, does not exist. Specifically, Pakistan does not have the institutional and technical capacity to help its industries respond to the plethora of voluntary standard requirements, or tap into the export prospects that they offer.”

The particular deficits catalogued by SDPI included a weak regulatory regime for environmental management. Existing standards—which were in some cases well below world standards—were routinely flouted. This meant firms lagged far behind foreign standards levels, missing the chance to find synergy between foreign and domestic standards. Problems also included a lack of information on foreign standards available to foreign exporters—a need discussed in depth in the previous chapter.

Other forms of needed government support will vary from one case to another. CIPMA/RIDES (2003) found that organic wine exports to the EU were severely impacted by the fact that Chile as a country did not have a certification system that the EU recognized as equivalent to its own. Gaining such a

“third party” status would mean acceptance throughout all the EU countries for products certified in Chile. The lack of such a status, which must be sought by the Chilean government, means that exports must be certified on a shipment by shipment basis, by accredited agencies in the importing country.

Also problematic for the industry was the lack of an effective legal framework in Chile that defines “organic” production. As well as missing potential synergies between domestic and international standards in this context, and hamstringing the bid for EU third party certification, the lack of such regulations makes it difficult to develop a domestic market for organic wine, since it erodes the credibility that consumers demand of an eco-label.

In Vietnam, the various research divisions, mostly from the Ministry of Fisheries, called on the government to extend several types of support to those interested in pursuing sandy land shrimp aquaculture: low-interest loans for start up and infrastructure, outreach and technical assistance. Without such start-up support only a few could afford to risk adopting the new technology.

Depending on the nature of the sector and the transition involved, the support needed might be substantial. In the specific context of Pakistan’s cotton sector, Banuri (1998) argues that a transition to organic production methods would entail “extension efforts far beyond what was experienced during the green revolution.” Organic production, like many new technological endeavours in the greening of production, involves a difficult transition to complex new technologies, and widespread adoption would entail commensurate portions of outreach and capacity building.

In a number of instances the TKN research showed the need for government to recognize the value of greener exports, and to support them coherently as a policy objective. The status quo tends to involve scattered energetic individual firms, their efforts fragmented and tenuous, toiling away in the absence of any effective support or recognition from governments. In part this is due to the problem of policy management discussed above: there is crippling uncertainty about which ministry should coordinate this sort of promotion and support, given the plethora of viable candidates.

Differing standards. In the context of Chilean organic agriculture, CIPMA/RIDES (2003) call the variety of differing standards in different jurisdictions “the greatest non-tariff related barrier.” The same could be said of eco-labelling schemes in general, of which there are more than 20 different national varieties, each with different criteria and categories. This is an exporter’s nightmare, as it quickly increases production costs to unviable levels, or limits exports to a small number of larger markets.

Costs and difficulties in conformity assessment. It was noted above that Chilean organic wine producers need to have each shipment certified by agents

from importing states of the EU, since Chile does not have EU “third party” status. This is typical of the problems encountered in certifying exported green goods. It was previously noted that developing countries tend to have few certifiers in country that are accredited by foreign buyers. Thus the process of certification often involves finding a different foreign certifier to “match” each desired export market—an expensive and complex prospect. This is another aspect of the problem of differing standards, discussed above.

Certification when it comes is not cheap. CIPMA/RIDES (2003) calculated the costs of certifying a medium-sized forestry operation (3,000–20,000 hectares) to Forest Stewardship Council specifications at over US\$20,000. And the cost of certifying an organic vineyard for the EU was, depending on the size and complexity of the operation, anywhere from five to 25 per cent of annual production costs. These costs are over and above operating costs, and the costs of transition to sustainable management practices.

Government support offered to the competitors in export market countries. Developing country exporters’ competitors in target markets may be provided with significant state support on the basis of their good environmental credentials. In the context of agriculture, Werth (2003) finds a wide variety of this type of support provided by the Quad countries (EU, Canada, the U.S. and Japan). Measures include outright payments, but also include important support in the areas of marketing, research, technical assistance and input subsidies. The EU, in the 2000–2006 reform of its Common Agricultural Policy, based the reforms on four so-called pillars. The second pillar was “measures aimed at improving agri-environmental performance, promoting rural development and structural adjustment.” Average annual funding for this pillar amounts to some 2.3 billion Euros. Support to non-agricultural goods might also include tax breaks, research funding and discriminatory green government procurement policies.

The CIPMA/RIDES (2003) research on organic wine exports looked carefully at the types of support offered to EU-based competitors. In the case of Germany, they estimated that direct financial support to the average organic vintner is equal to some 10 per cent of production costs. This support obviously increases German producers’ competitiveness relative to their Chilean competitors.

In cataloguing these types of support measures we do not intend to imply unfairness or impropriety. The objectives involved may be legitimate and laudable. But the results are significant for potential competitors in developing countries, and should be borne in mind.

Structural problems in the supply chain. It was noted above that SDPI (1999) concluded that minor increases in total price would be sufficient to effect fun-

damental environmental improvements in Pakistani leather and textiles production. In all sectors where greening is being contemplated, such evidence needs to be considered in light of the realities of the supply chain. Banuri (1998), for example, looks at the supply chain that runs from cotton cultivation to the retail of textiles, and demonstrates that the lion's share of available rent is appropriated by garment producers and retailers. Thus, while a very small increase in final price might be enough to permit the farmers to produce organically, the problem is in getting that small amount from the consumers to the farmers.

Lack of a domestic market for green goods and services. In developed countries most producers of green goods and services will produce not only for export, but also (in some cases primarily) for the domestic market. Developing country exporters by contrast cannot, in most cases, count on their ability to sell into a domestic market for their wares. CIPMA/RIDES (2003) note there is practically no Chilean market for organic agricultural products, and little awareness of the environmental benefits of organic production. CINPE (2003) noted the same problems in the context of organic agricultural products in Central America.

In South Africa, TIPS (2003) noted the very different characteristics of the domestic and international users of the Greater St. Lucia Wetland Reserve, the latter being eco-tourists and the former being consumers of a more conventional tourism experience. This has led to problems, such as the divisive nature of a law banning driving of motorized vehicles on the beaches—a measure that preserves birds' nests for eco-tourists, but that has caused a huge drop in visits by domestic users who at the time constituted the majority of the area's tourists.

On the pursuit of green export markets, the key message of the TKN research is simple: there may be lucrative opportunities, and they may well be worth pursuing for the win-win results they can bring. But this is a highly uncertain and difficult pursuit. Without adequate government support, knowledge of markets, strong marketing, and in the face of the difficulties of differing standards in target markets, costs and difficulty of certification and other potential obstacles, the risks may simply be too high. Given that this is one of the most clear-cut positive relationships between trade and sustainable development, this is an outcome all parties—exporters, home governments, standard-setters, aid agencies and multilateral development banks—should work hard to avoid.

Chapter Five

For trade and sustainable development to be mutually supportive, there must be strong domestic and international institutions

A number of analysts have written in recent years of the need for strong institutions if globalization is to result in development (or, depending on the author, in sustainable development). The TKN research suggests that this dynamic holds true in the specific case of trade and sustainable development in developing countries. That is, if trade and trade liberalization are to result in sustainable development, there is a need for strong domestic and international institutions to manage the process.

This chapter will survey some of the institutional needs highlighted by the TKN research. Many of these have been discussed in previous chapters in other contexts. They are revisited here as a group to make the point that they constitute institutional prerequisites to the mutual supportiveness of trade and sustainable development. Discussed below, in turn, are institutions for standards, export promotion institutions, institutions for environmental protection and institutions of openness.

Standards-related institutions

Rotherham (2003a) begins his analysis of international standards by laying out the following case:

“The [WTO’s] TBT Agreement established rights and obligations that seek to ensure that standards and technical regulations do not unnecessarily restrict trade. Experience to date suggests that, without certain basic institutional infrastructure, developing countries cannot benefit from the provisions in the TBT Agreement. Indeed, without these institutional capacities, standards and technical regulations can restrict trade whether or not a company or product is in compliance with the relevant requirements.

A growing list of environmental, health and safety (EH&S) standards and technical regulations threaten to restrict developing countries access to OECD markets. Without adequate infrastructure in place to deal with these standards and technical regulations, companies in developing countries may find their export markets restricted not because of an unwillingness or inability to comply, but because of an inability to either

identify relevant requirements, implement the necessary institutional and procedural changes, or demonstrate compliance in a credible fashion.”

This is an argument, explored in greater detail in Chapter 3, for the strength of domestic standards institutions as essential if exporters are to exploit the opportunities offered by high standards in their target markets, and avoid the risks. Based on the work of the TKN researchers, the most important of those institutions in question are:

- Some agency charged with compiling and disseminating the standards of exporter interest that prevail in key export markets (note that this need not necessarily be a domestic institution—a multilateral or regional body might serve as well or better);
- A national agency that serves as a communication bridge between foreign standard-setters and domestic exporters, relaying standards and trends to the latter, and feedback from the latter to the former;
- Domestic or regional agencies accredited to perform conformity assessment (accreditation implying possession of the necessary technologies and skills to do advanced reliable testing); and
- Some body that can participate in the crafting of standards at the international level, representing the country’s interests in venues such as the Codex Alimentarius and the International Organization for Standardization. This same body should be charged with seeking to develop international standards in areas of interest to the country—a task too often only undertaken by developed countries. Rotherham (2003a) notes for example the lack of international standards in the areas of formaldehyde residues in textiles, and the production of cut flowers.

Environment-related institutions

A strongly related type of institution discussed in the previous chapter is an effective regime for environmental management. That is, if domestic environmental standards are well below those prevailing in export markets (as in the case of China’s dyestuff sector, where PRCEE (1999) noted that there was no existing standard for heavy metals in dyes), or if standards are adequate but enforcement is ineffective (as in Pakistan, where SDPI (1999) found that most tanneries and textile mills were not in compliance with national norms, or in China where PRCEE (1999) found that a domestic ban on azo dyes was not widely respected until it was eventually duplicated by foreign buyers), then domestic producers will be at a disadvantage in selling to markets where standards are high.

They will also be at a disadvantage relative to those firms that have made investments in “win-win” scenarios. SDPI (2003) looks at various cases of investment in environmental improvements in the leather and textile industries of Pakistan, and finds that there are a number with such short paybacks that they make sense from a purely economic standpoint, environmental and market access considerations aside. Such opportunities are not found, however, unless they are sought. A lax regulatory culture acts much like a culture of trade protection, fostering inefficient industries that are not accustomed to looking for cost-saving opportunities. Such industries are not well equipped, technologically or managerially, to contest the big high-standard foreign markets. Thus, CENIT (1999) found that after liberalization a number of domestic firms were forced to invest in environment-related efficiency improvements to remain competitive.

Of course, the positive environmental and social results of a strong environmental management regime are the other side of the coin and a distinct set of benefits unto themselves. With strong environmental protections in place, trade need not lead to the poisoning of workers and neighbours with effluents, pesticides and other “by-products” of production, or the degradation of environmental services on which many people rely.

Export-related institutions

In many countries there is an agency, or agencies, with a mandate to promote exports. The precise shape or institutional nature of such an agency is not as important as the fact that the mandate itself is effectively pursued by someone. The three key roles described below could as easily be adopted by a national standards body, a sectoral exporters’ association or a government export promotion agency.

1. Organize industry-wide responses to new or future expected standards. Peck (1999) describes how the Singapore Productivity and Standards Board organized a coalition of bodies and industries to deal with the country’s obligations under the Montreal Protocol, to phase out the use of ozone-depleting substances. This meant finding substitutes for the cleaning compounds traditionally used in the semiconductor sector, and it meant finding the best forms of regulations/incentives to ration and eventually phase out use of the old compounds (CFCs). Similarly, PRCEE (1999) describes the valuable role of the Shanghai Municipal Economic Commission in organizing that city’s dye sector to respond to the European ban on azo dyes in textiles.
2. Build capacity in export industries to comply with international standards. TIPS (1999) describes the case of South Africa’s citrus industry, facing high U.S. and EU sanitary and phytosanitary standards (in particular

standards on pesticide residues). One of the country's largest export agents for citrus fruit, Capespan International, achieved remarkable success in exporting to those markets. Among the tools they used to do so was a solid program of research and extension services for their growers, to help disseminate knowledge on good practice in both quality production, and production to meet foreign standards. This role is particularly necessary in the case of small and medium-sized enterprises.

3. Petition governments to consider launching legal challenges to trade-related environmental standards, in those cases where the law may not have been respected. As Rotherham (2003a) notes, there are a number of safeguards built into the WTO's TBT and SPS Agreements. But in many cases they are not exercised because governments or exporters do not realize they have a case.

There are a number of other tasks one could imagine to fit the mandate of export promotion, including representing industry to government, undertaking marketing efforts and working on the issues of certification/accreditation. The important thing, as argued above, is that there be some agency or agencies with the mandate to pursue these tasks.

Institutions of openness

TIPS (1999), in the South African case, surveyed the difficulties likely to be encountered by the coal and steel industries as a result of the pending implementation of obligations contained in the Kyoto Protocol (which limits countries' emissions of greenhouse gases). The concern was that foreign trade measures born of those obligations might target South African exports of coal, or of products manufactured with energy derived from that coal. Part of their conclusions was a recommendation that there should be domestic-level consultation with affected industry and civil society generally before the government undertakes commitments in multilateral environmental agreements, or in the World Trade Organization. This type of openness, while difficult to do effectively, can only result in better trade and environment policy from a national perspective.

If we were to go looking for institutions—particularly at the domestic level—that are needed to allow developing countries to better exploit the opportunities offered by trade and trade liberalization, the list provided above would be only a starting point. The final list would surely include, among other things, all those factors that attract foreign direct investment: property rights; rule of law; physical and administrative infrastructure for transportation and communications; a functioning bureaucracy, etc.

Distilling Six Years of Research from the Trade Knowledge Network

The institutions surveyed in this chapter are a sub-set of that wider list—those that focus specifically on the interaction between trade and environment. The TKN research highlights the need for these types of institutions if the objectives of economic development and environmental protection are to be mutually supportive.

Lessons Learned on Trade and Sustainable Development

Chapter Six

There is a Southern agenda on trade and environment

One of the assumptions underlying the TKN project is that there is indeed a “Southern agenda” on trade and environment. That is, there is a range of issues where developing countries have a strategic interest in proactive policies to address the trade-environment interface.

At the time of the project’s inception, in 1997, this was a more contentious assertion than it is now. At that time many developing countries were denying the existence of any trade-environment linkages, or forestalling discussions of those linkages. Najam (1999) analyzes the position paper prepared by Pakistan’s Permanent Mission to the WTO, submitted in advance of the WTO’s Seattle Ministerial Conference in 1999, noting that it argues Pakistan should “ensure that there is no substantive movement in the ... trade and environmental agenda.” In large part this was out of fear that any discussions in the WTO would legitimize the use of environmental measures as barriers to developing country exports—a fear Najam concedes has some merit. We have seen above that there are tensions of this sort inherent in the issues of labelling, for example. But we have also seen that many of these tensions do not stem from protectionist intentions, meaning there is more hope they might be resolved than would otherwise be the case.

Since the TKN project began in 1997, much has changed (a fact for which the TKN deserves its small share of credit). Developing countries have developed a stronger sense of what they want from multilateral trade talks (as opposed to simply what they do *not* want), and have not been afraid to fight for it. This was manifestly evident in the lead up to the WTO’s fifth Ministerial meeting in Cancun, when the U.S. and the EU stitched together a framework agreement on agriculture that, as per traditional practice, they presented to the rest of the world as the way forward. In a striking violation of tradition, however, a number of powerful developing countries then presented their alternate vision of the way forward, not even agreeing to use U.S.-EU text as the basis for negotiations.

So too in the area of trade and environment; developing countries are now engaging more proactively. Outside the context of the WTO, they were instrumental in concluding a strong deal on the trade-related provisions of the Cartagena Protocol, which governs the use of trade measures and the application of the precautionary principle in the context of genetically modified organisms. And within the WTO they have been strong on the environmen-

tal issues of their greatest interest, including the patenting of life forms under the TRIPS Agreement, special and differential treatment in agriculture, and others.

The TKN research seems to confirm the hypothesis that there is a Southern agenda on trade and environment. That agenda covers two broad fronts: the domestic and the international. That is, there are actions that developing countries might take at the level of the WTO and other trade (and environmental) agreements, and there are other actions which they might take within their own borders. Most of these have been surveyed above in other contexts, but they are brought together in this chapter for two reasons. First, they help make the point that there is scope for proactive efforts on the part of developing countries in the trade-environment interface. Second, they form a useful survey of the types of efforts on which developing countries might focus.

Naturally there is no one-size-fits-all template agenda—differing circumstances in each country will dictate different sorts of actions. And it goes without saying that the agenda highlighted by the TKN research is not exhaustive, but touches only on those areas where the network happened to conduct research. But the exercise of this chapter is instructive nonetheless, highlighting some key areas for action.

The international agenda

Much of the TKN research focused on agricultural issues, agriculture being a topic of intense interest to most developing countries. It is not difficult to see why. In the Chinese context, as the CAITEC (2003) research points out, there are 800 million people (almost 2/3 of the total population) employed in the agricultural sector, many of them rural poor. There is in general a much higher proportion of the population involved in agriculture in developing countries.

As such, there is a cluster of agricultural issues that could be part of a southern agenda on trade and environment. Several of those issues are discussed below.

There is a need to tighten the criteria used to qualify measures of support as falling in the WTO Agreement on Agriculture's (AoA's) green box. The green box is a category of support measures that is non-, or minimally trade-distorting. Among other things it includes measures for supporting good environmental practice in farming, aiming to preserve biodiversity, reduce erosion, etc.¹⁶ Members are free to use these types of support measures, but must limit their use of other types.

¹⁶ The term “green” does not refer to environmental concerns in this context, but rather to permissibility (as in “green light.”) Other categories of support falling in the green box include infrastructure spending, disaster relief and research and development.

CAITEC (2003) noted that the criteria for green box measures were somewhat loose, and risked allowing a proliferation of measures that in fact distorted trade. They recommended that there be enough flexibility in the green box for developing countries to pursue their objectives of rural development and sustainability, but that the criteria be revisited and revised with a view to avoiding excessive market-distorting developed country support. They also recommended reducing allowances for support in the more trade-distorting blue and amber boxes, given the fact that most developing countries cannot afford to avail themselves of the existing allowances for support.

There should be a special category of developing country sustainable exports, subject to more favourable treatment. CINPE (2003), in the context of agriculture in Central America, recommended that there be explicit trade law recognition of the fact that organic produce, for example, is not “like” conventional produce, and that the former should be accorded preferential treatment such as increased market access, lower tariffs, etc. Another option suggested was that these types of preferences could be manifested through the Generalized System of Preferences—a regime under which developed countries accord special tariff treatment to imports from developing countries.

In a similar vein, CIPMA/RIDES (2003) recommend that the current Doha Round negotiations in the WTO consider a definition of environmental goods and services that includes goods that have been sustainably produced, such as organic wine and sustainably-produced forest products. There is a heated debate in the WTO related to this issue, as WTO members struggle with a mandate for “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.”¹⁷ The question is whether an environmental good is, for example, a smokestack filter (that is, something that because of its *end use* should be considered environmental) or an organic orange (that is, something that is considered environmental because of *how it was produced*). Since developed countries have most of the patents on the former type of environmental goods, and developing countries have a comparative advantage in producing many of the latter, the debate is not surprisingly split along North-South lines.¹⁸

Moving from the agricultural realm to the more general, CIPMA/RIDES (2003) also call for the WTO to bring some rule to the practice of eco-labels, suggesting that they should be covered under the Code of Good Practice, an Annex to the TBT Agreement that spells out how standards should be propounded and implemented. The current debate in the WTO, described by

17 WTO Doha Ministerial Declaration, para. 32(iii).

18 The negotiating positions are in fact somewhat more complex than this. A powerful argument against calling an organic orange an environmental good is the question of who certifies, and to what standard? This is not a game the WTO has any desire to play.

Rotherham (2003b), is over whether non-governmental bodies can in fact be covered by the Code, given that the commitments made in the WTO are made by governments with respect to their own behaviour (and that of lower levels of government). Whether in the WTO or in some other international forum, however, there is undoubtedly a need for widely-accepted rules on such subjects as accreditation, conformity assessment, transparency and non-discrimination in relation to environmental standards.

More generally—and again there is some question whether the WTO is suited to undertake this mandate—there is a need for some mechanism whereby standard-setters take better account of the effects of their standards in the countries of export. The example of Bangladesh shrimp aquaculture is instructive here: as IUCN Bangladesh/NSU (2003) argues, the strict human health standards set by the EU may inadvertently result in environmental degradation and social strife in Bangladesh, as shrimp aquaculture there moves toward a more intensive and vertically-integrated production model. Ideally, this fact would result in changes to the standards, or technical assistance/capacity building to help ameliorate the impacts.

Rotherham (2003a) recommends that developing countries make use of the as yet untested provisions in the TBT Agreement related to technical assistance. He notes that Article 11 of the TBT Agreement states that Members shall, if requested, advise other Members, especially the developing country Members, and shall grant them technical assistance on mutually-agreed terms and conditions regarding:

- the preparation of technical regulations;
- the establishment of national standards bodies, and participation of these bodies in the international standardizing bodies;
- the establishment of regulatory bodies, or bodies for the assessment of conformity with technical regulations;
- information on how to implement technical regulations;
- the establishment of bodies for the assessment of conformity with standards adopted within the territory of the requesting Member;
- the steps that should be taken by their producers if they wish to have access to systems for conformity assessment operated by governmental or non-governmental bodies within the territory of the Member receiving the request; and
- the establishment of the institutions and legal framework that would enable them to fulfil the obligations of membership or participation in regional or international systems of conformity assessment.

No country yet has made such a request. As such, there are a number of uncertainties about how the obligations would be fulfilled. For example, we are not sure how to interpret the obligation to provide technical assistance *on mutually-agreeable terms and conditions*. But surely testing these provisions, given the needs described in previous chapters, would form part of a Southern agenda on trade and environment.

Najam (1999) argues forcefully for the need to pursue a Southern agenda on trade and environment in the WTO, though he does not call it by that name:

“Instead of simply reacting to the various agenda issues put on the table by the North, the developing countries, including Pakistan, need to come up with an agenda of their own. Given that the ability to define the agenda translates directly to negotiative power, we need to move beyond why we find the proposals made by the developed countries unacceptable to focus on defining alternative proposals that do meet our interests.”

The domestic agenda

The preceding chapters of this book have laid out a rich agenda at the domestic level for developing countries in tackling the trade-environment relationship. Chapter 5, drawing on the preceding analysis, focused on a number of domestic institutions necessary to ensure that developing countries avoided the risks involved in the trade-environment nexus, and exploited the opportunities it presents. Those institutions included:

Standards-related institutions:

- some agency charged with compiling and disseminating foreign standards of exporter interest;
- a communications bridge between standard-setters and exporters;
- agency or agencies accredited to assess conformity with foreign environmental standards; and
- a national standards body charged with representing national interests before international standards bodies.

Export-related institutions:

- an agency to coordinate industry response to new or upcoming trade-related environmental standards;
- an agency charged with building capacity in exporters to meet trade-related environmental standards (special need for action on SMEs); and
- an agency that will petition governments to launch challenges to standards of questionable trade legality.

Environment-related institutions:

- an effective regime for regulation; and
- an effective regime for enforcement of regulations.

Institutions of openness:

- some consultative mechanism for industry, civil society broadly, to comment on national interest in relation to WTO Agreements, multilateral environmental agreements with trade impacts.

It should be noted that a number of these institutions need not be purely domestic, but could rather be regional cooperative endeavours. This suggestion is born of the understanding that most developing countries do not have the wherewithal to adequately finance the southern agenda on trade and environment, as desirable as that might be. Regional cooperation is one way to address this problem.

A side note on finance might be warranted here, though the TKN research did not go so far as to consider such questions. In recent years a number of OECD country development agencies have begun to question how to most effectively support development in an era of globalization. For these agencies, and for the multilateral development banks as well, it would seem that financing the southern agenda on trade and environment would be an obvious answer, even if not the whole answer.

To come back to the central question of this chapter: there clearly is a Southern agenda on trade and environment. In fact, the present analysis surely does not cover the full extent of it, based as it is on only those areas in which the TKN research was conducted. Even so, the agenda presented here is itself rich enough to constitute a sizable challenge to developing country policy-makers.

Chapter Seven

The need for more research, capacity building

It would be a rare survey of research that ended without calling for more research. This book is not rare in that sense. This final chapter makes the case for more research aimed at building capacity to manage the trade and sustainable development relationship.

The case for more research and capacity building, though, rests on an assumption: that we want sustainable development. That is, we want to increase human well-being on an economically and environmentally sustainable basis. A related assumption is that trade and trade policy should primarily work toward that end (as opposed to, for example, the end of increased trade flows).

The case for more research

Given those starting points, it is simple to make the case for better understanding the varied impacts of trade on environment (as well as its broader impacts on sustainable development, which would include social impacts as well—more on this below) and, in turn, of environmental concerns on trade. Understanding these impacts is a fundamental prerequisite to better trade and environmental policies—policies that will lead to sustainable development.

The survey of research offered in this book supports this argument in two ways. First, it shows that the specifics of the trade-environment nexus will vary from country to country, and from sector to sector. This case was strongly made in Chapter 1. Each case being different, the only way to know the reality—and thus to properly inform policy-making—is through empirical research of the TKN type.

Second, this book shows that research of this type can uncover and solidly support a raft of policy recommendations for the various actors: governments in developing and developed countries, business, standard-setters and the development assistance community. Chapter 5 offers clear examples of such recommendations in elaborating elements of a southern agenda on trade and environment.

As that chapter argues, the research can have two distinct types of values. First, it can inform negotiations at the international level. The research by CAITEC (2003), for example, serves as a solid contribution to the Chinese government's negotiating position in the ongoing WTO agriculture negotiations. Second, it can inform developing country governments on the ways in which their

domestic policies might strive for win-win solutions that marry improved export performance and environmental integrity. This can be either in the context of pursuing green export markets (as in the case of CIPMA/RIDES' (2003) research on organic wine and sustainably-managed forest products in Chile), or in the context of meeting current or expected buyers' specifications (as in the case of SDPI's research on the textile and leather sectors in Pakistan).

The case for capacity building

The TKN is constructed as an exercise in capacity building, focused on increasing knowledge and understanding. Its primary beneficiaries are the researchers themselves, who through their efforts have extended and solidified their expertise on the issues of trade and sustainable development. The secondary beneficiaries are government policy-makers, whose decisions are influenced by the TKN members through their research, policy workshops and other modes of contact. The third layer of beneficiaries is the wider policy community of NGOs, academics and business—those whose understanding of the issues is deepened by the work of the TKN researchers.

The case for capacity building of this type is the same as that made above for more research. The better an understanding we have of the complex linkages between trade and sustainable development, the better we are able to prescribe and implement policies that exploit the opportunities and avoid the risks of the type discussed in this book.

It bears noting that there is a need for this kind of understanding both within and outside of government. While it is true that government, as maker of policies that guide economic activity, is a key audience, governments alone cannot possibly marshal the resources to be completely informed. Governments need business to tell them what specific barriers and opportunities they face. They need civil society to tell them about the environmental and social impacts they have experienced as a result of existing policies. In a sense, non-governmental actors can act as sensory organs that help inform the governmental thought process. As well, those actors can engage in helpful thought of their own, as evidenced by the policy recommendations advanced by the TKN researchers. The bottom line is: the better the non-governmental communities' understanding and credibility on trade and sustainable development issues, the better government policy can be.

There is, of course, a need for capacity building that goes beyond what TKN-type research can supply. Knowledge and understanding of the trade and sustainable development linkages are a good foundation for better policy, but they also need to be supplemented by technical training in such areas as trade law, environmental law, treaty negotiations, environmental management and regulation, and so on. This is the type of capacity building typically supplied by

intergovernmental organizations such as the WTO and the multilateral development banks.

Bringing the lessons to the North

The need to better understand developing countries' trade-sustainable development linkages is not limited to those in developing countries. One of the explicit aims of the TKN is to bring the reality of the South to those in the North who work on trade and sustainable development issues. While there have been and continue to be other excellent efforts of this type, there were very few when the TKN was formed.

Educating the North is a worthwhile effort. Trade policies agreed at the multilateral level are primarily influenced by developed country negotiating positions, and most of the environmental standards faced by developing country exporters are propounded in the developed countries. As well, national-level trade and trade-related policies prevailing in such economic giants as the U.S., EU and Japan have powerful effects in developing countries. Developed country policies are influenced in turn by the opinions of their citizens, whose understanding of Southern realities is often limited. The better the citizens and policy-makers of the North understand the reality of developing country perspectives on trade and sustainable development, the better chance there is for developed country policies that foster, rather than frustrate, sustainable development in the South.

TKN and sustainable development

It was noted above that the value of TKN-type empirical research (and of TKN-type capacity building) is that it gives policy-makers a better picture of the national interests in the area of trade and sustainable development. This is true, but it can be argued that the TKN research itself is of limited value on the *social* aspects of sustainable development, focusing instead rather heavily on economic and environmental issues.

The mandate of the TKN is centred on sustainable development, not environment. And some of the research did indeed look at social issues. In Bangladesh, IUCN Bangladesh/NSU (2003) asks about the social impacts of the shrimp aquaculture industry following HACCP standards. In South Africa, TIPS (1999) looks at the social improvements wrought by Capespan's desire to meet foreign process and product standards. In Pakistan, SDPI (1999; 2003) research focuses on emissions of pollutants that take a high toll in terms of domestic human health impacts.

But the fact remains that the primary focus of the TKN research has been on environmental issues, and their interaction with trade and trade policies.

While this is valuable research, it does not go far enough, and leaves us with an incomplete picture. Most of the lessons distilled from the research of the TKN in this book are environmental, and do not deal with issues such as income distribution, poverty, impacts on communities and indicators of well-being such as education levels, nutrition and so on. This piece of the puzzle's absence is glaring, and the future work of the TKN will do a better job of considering these issues.

Conclusion

The objective of the TKN project, as laid out in the original project document, was:

“... to foster long-term capacity to address the issues of trade and sustainable development in developing country research institutions, non-governmental organizations (NGOs) and governments, through increased awareness, knowledge and understanding of the issues.”

Fostering capacity is, as the passage notes, a long-term proposition. It is a challenge as deep as the proverbial piece of string is long, and any individual effort is doomed to be no more than a small piece of the larger solution.

This book, as part of the small piece that is the TKN, tries to distill some of the key lessons from the six years of the first two stages of the project. It should come as no surprise that the final lesson is the need for greater efforts toward the objectives that TKN tries to fulfil.

Annex A – TKN Members

Argentina: Centro de Investigaciones para la Transformación (CENIT)

Bangladesh: North-South University; IUCN Bangladesh

Chile: Recursos e Investigación para el Desarrollo Sustentable (RIDES);
Centro de Investigación y Planificación del Medio Ambiente (CIPMA)

China: Chinese Academy of International Trade and Economic Cooperation (CAITEC); Policy Research Centre for Environment and Economy (PRCEE)
(*first phase*)

Costa Rica: Centro Internacional de Política Económica para el Desarrollo Sostenible (CINPE)

El Salvador: Programa Salvadoreño de Investigación sobre Desarrollo y Medio Ambiente (PRISMA) (*first phase*)

Pakistan: Sustainable Development Policy Institute (SDPI)

South Africa: Trade and Industrial Policy Strategies (TIPS)

Vietnam: IUCN Vietnam; Ministry of Fisheries (MOFI); Ministry of Science, Technology and Environment (MOSTE)

Lessons Learned on Trade and Sustainable Development

Annex B – CD Contents

The CD attached to the inside back cover of this volume contains all of the papers and summaries produced by Trade Knowledge Network partners since the network's inception in 1998. The following items are also available online at <http://www.tradeknowledgenetwork.net/publications.asp>

Contents

- Banuri, Tariq (1998): Environmental Impact of Cotton Production and Trade
- Baumuller, Heike (2003): Domestic Import Regulations for Genetically Modified Organisms and their Compatibility with WTO Rules
- Benbrook, Charles (2003): Economic and Environmental Impacts of First Generation Genetically Modified Crops: Lessons from the United States
- CAITEC (Chinese Academy for International Trade and Economic Cooperation) (2003): Green Box Support Measures Under the WTO Agreement on Agriculture and Chinese Agricultural Sustainable Development
- CENIT (Centro de Investigaciones para la Transformación) (1999): Environmental Improvements Without Environmental Policies: Argentine Agriculture and Manufacturing Exports in the 1990s (Mejoras medioambientales sin políticas medioambientales: exportaciones agrícolas y de manufactura argentinas en los años 90)
- CENIT (Centro de Investigaciones para la Transformación) (2003): The Adoption of Transgenic Crops in Argentine Agriculture: An Open-ended Story (La adopción de cosechas transgénicas en la agricultura argentina: una historia con final abierto)
- CINPE (Centro Internacional de Política Económica para el Desarrollo Sostenible) (2003): The Relationship Between Trade and Sustainable Development of Agriculture in Central America (La relación entre el comercio y el desarrollo sustentable de la agricultura en América Central)
- CIPMA/RIDES (Centro de Investigación y Planificación del Medio Ambiente/Recursos e Investigación para el Desarrollo Sustentable) (2003): Green Markets: Often A Lost Opportunity For Developing Countries? (Mercados verdes – ¿a menudo una oportunidad perdida para países en vías de desarrollo?)

Lessons Learned on Trade and Sustainable Development

- Cosbey, Aaron (2003): *New Views of Trade and Sustainable Development: Using Sen's Conception of Development to Re-Examine the Debates*
- IUCN Bangladesh/NSU (The World Conservation Union Bangladesh/ North South University, Dhaka) (2003): *Sanitary and Phyto-Sanitary Barriers to Trade and its Impact on the Environment: The Case of Shrimp Farming in Bangladesh*
- IUCN Vietnam/MOFI (The World Conservation Union Vietnam/ Vietnamese Ministry of Fisheries) (2003): *Expanding Shrimp Aquaculture on Sandy Land in Vietnam*
- IUCN Vietnam/MOSTE (The World Conservation Union Vietnam/ Ministry of Science, Technology and Environment) (1999): *Trade and Sustainable Development in Vietnam*
- Kaushik, Atul (1999): *Promoting Sustainable Trade: The Case of Environmental Requirements*
- Najam, Adil (1999): *Forthcoming Trade Negotiations: Identifying Pakistan's Interests (A paper prepared for the Pakistan Mission in Geneva)*
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Lessons Learned on Trade and Sustainable Development



Lessons Learned on Trade and Sustainable Development

This book is a synthesis of six years of research from the Trade Knowledge Network. It draws out the key lessons of that research in a style accessible to the educated non-expert as well as to those well-steeped in the trade-sustainable development debates.

The Trade Knowledge Network, originally formed in 1998, is a network of research institutions based in eight developing countries: Argentina, Bangladesh, Chile, China, Costa Rica, Pakistan, South Africa and Vietnam. The network's key objective is to build capacity in researchers, governments and the wider policy community to address the complex issues of trade and sustainable development.

The research on which this book draws is compiled in full on the enclosed CD. It comprises some 14 national-level studies covering 24 cases, and also includes a number of thematic studies and papers commissioned for particular workshops.



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