Chapter 2
Global Trade Linkages: National Security and Human Security

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2.1 Introduction

This chapter explores the linkages between international trade rules, national security, and various dimensions of human security, which includes the environment, labor, and human rights. It shows how and why such linkages emerged, describes who initiated and opposed them, and explains how they have affected the membership, terms, scope, and interpretations of global trade agreements. In contrast to several other essays in this volume, this chapter focuses not on regional or bilateral trade agreements, but on multilateral ones. It specifically explores trade policy linkages in the context of the International Trade Organization (ITO), the General Agreement on Tariffs and Trade (GATT), and the World Trade Organization (WTO).

While the ITO never became operational, it did incorporate several non-trade linkages, many of which have since become more politically salient. Security linkages played an important role in the formation and membership of the GATT. For several decades its membership was closely linked to Western security interests during the Cold War. The highly controversial dispute panel decision in the 1991 tuna-dolphin case placed trade and environment linkages on the GATT’s agenda as well as that of its successor organization, the WTO, where they have remained. One of the most important linkages is between the GATT/WTO and the several multilateral environmental agreements (MEAs) that include trade restrictions, which has created considerable discussion and controversy.

While the WTO has explicitly addressed and made various efforts to accommodate environmental linkages, strong opposition from several member states has kept trade and labor linkages off the WTO agenda. However, labor linkages have
surfaced in connection with the reviews of some countries for WTO membership as well as in connection with periodic assessments of country compliance.

Various GATT/WTO provisions permit trade restrictions on human rights grounds, and a number have been adopted. In marked contrast to trade/labor linkages, trade/human rights linkages have been much less controversial as they have affected relatively few countries.

The growth of global corporate social responsibility (CSR) codes is associated with the perceived unwillingness or inability of global institutions, including the WTO, to adequately address important dimensions of human security. As they are voluntary agreements among private actors (i.e. firms and non-governmental organizations), they are generally thought to fall outside the WTO’s purview. However, the boundaries between these private or non-state regulations and many public policies have become increasingly blurred. Many governments and inter-state organizations have both initiated and promoted business compliance with CSR codes, and both states and non-state bodies make extensive use of product certifications or eco-labels, both of which are considered technical barriers to trade under WTO rules.

The unwillingness or inability of the WTO to adequately accommodate human security linkages favored by activist constituencies in the United States and Western Europe has encouraged these countries to enter into numerous bilateral trade agreements that do incorporate such linkages.

2.2 The International Trade Organization

Toward the end of and following World War II, the United States and its allies developed a set of multilateral institutions to govern the post-war global economy. These institutions included the International Monetary Fund, the World Bank, a revised International Labor Organization and the International Trade Organization. In March 1948, negotiations for the ITO’s charter were successfully concluded in Havana. The terms of the Havana Charter, which were endorsed by 50 countries, went considerably beyond the promotion of trade liberalization. Reflecting the objectives of embedded liberalism and the principles of the Atlantic Charter, the ITO sought to integrate the removal of trade barriers with a variety of other social and economic objectives. Specifically, it linked the reduction of traditional trade barriers to employment policies and labor standards, economic development, investment, and the regulation of business monopolies. According to President Franklin Roosevelt, the ITO had an essential role to play in rebuilding a “stable international system of justice for all peoples.”

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1 For a detailed discussion of the ITO, see Drache (2000).
2 Ibid, 17.
3 Ibid.
Two of its important and innovative provisions reflected these broader aspirations. One stated that “unfair labor conditions, particularly in production for export, create difficulties in international trade,” and urged ILO and ITO members to “act in close cooperation with each other and consult each other regularly with regard to matters of common interest.”

In the case of violations of ILO standards, countries would be able to bring their complaints to the Executive Board of ITO and violators could be subject to the organization’s dispute settlement procedures. The ILO was also granted the right to participate in ITO meetings.

A second provision held that the “monopolistic” and other restrictive practices of global firms in critical sectors such as telecommunications, insurance, banking, and pharmaceutical sectors represented a threat to the orderly development of global commerce. Accordingly, signatory governments were permitted to use the power of expropriation to defend national economic interests against global firms. They were also granted the authority to regulate intra-company trade by global firms and to define standards of conduct for them. Thus ITO rules applied not only to governments but to firms as well. The Havana Charter, which created the ITO, contained an entire chapter on anti-competitive practices, effectively making foreign direct investors and multinational firms subject to an international authority.

However, the ITO did not become operative because the US Congress refused the repeated requests of the Truman administration to ratify it. Congressional leaders were concerned that some of its provisions would interfere with domestic economic policies, such as employment, while other American policymakers argued that the ITO did not sufficiently protect American business interests and investment rights. The Charter was also opposed by domestic supporters of trade liberalization, who argued that it contained too many loopholes and exceptions, many of which had been demanded by developing countries. In effect, “what had begun as an ‘American project’ did not remain one once the developing countries become involved in designing the ITO.” However, in important respects the ITO proved prescient. Its linkages between trade policies on one hand, and labor practices and the conduct of global firms on the other, have recently become increasingly salient.

### 2.3 The GATT: Trade and Security Linkages

With the demise of the ITO, efforts to promote trade liberalization focused on an alternative global institution, namely the General Agreement on Tariffs and Trade (GATT). In October 1947, an agreement on its terms was reached and signed by

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4 Ibid.
5 Ibid, 4.
nine of the 23 countries that had participated in negotiations, including the US. The GATT was much narrower in scope than the ITO: it only addressed the removal of trade barriers. It did not include the ITO’s provisions on labor standards or any rules governing the conduct or international obligations of global firms. Unlike the ITO, whose provisions were influenced by the interests of developing countries, the terms of the GATT were primarily shaped by the United States and Great Britain. The only developing country that signed the initial agreement was Cuba, though over the following year, several other developing countries ratified it. A year later, the GATT’s membership consisted of 21 countries, all of whom were considered original signatories to the agreement.

The GATT was initially ratified by far fewer countries than the ITO because it was originally intended as a provisional agreement that would be superseded by the ITO. It thus took several years before the “GATT 1947” became the primary focus of international governmental cooperation on trade matters. However, GATT membership steadily expanded through the 1960s, and by 1963, an additional 41 countries had become members.

The GATT’s membership was strongly influenced by the Cold War. During this period, American trade policy was effectively controlled by the State Department, which regarded trade liberalization as a vehicle to strengthen America’s Cold War allies and exclude its Cold War adversaries. The American government viewed the GATT as “an arrow in the Western world’s quiver, much like the Marshall plan.” The trade organization became closely associated with the interests of the Western alliance:

The link between GATT and liberal capitalist democracies gave the GATT’s commercial mandate a new meaning. In the Cold War context, peace and prosperity came to be equated with survival and triumph…The values embedded in liberal trade policies were bedrock principles of capitalism.

Moreover, “prosperity would permit members of the Western alliance to afford the large defense budgets needed to deter Communist expansion.” In short, “the GATT was written in the language of the free world.”

Accordingly, membership was extended to a number of developing countries on the grounds that promoting their economic development would lessen the appeal of communism and integrate them into the global capitalist system. American security interests contributed to the important concessions the US made to Great Britain at the outset, which allowed the most important political ally of the United

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6 This section is based on McKenzie (2008), 79–109.
7 Ibid., 87.
8 Ibid., 79.
9 Ibid., 87–88.
10 Ibid., 79.
States to maintain its system of imperial preferences. Security considerations also prompted the United States to successfully pressure for membership of the occupied countries of West Germany, which joined the GATT in 1951, and Japan, which became a member in 1955. GATT accession was viewed as critical to both promote their economic growth and to integrate them more closely into the Western alliance.

While the United States was unable to expel Czechoslovakia, which had joined the GATT before the Communist seizure of power, it did withdraw all its trade concessions after Czechoslovakia became part of the Soviet bloc, a decision that was ratified by two-thirds of the GATT’s membership following extensive American lobbying. Czechoslovakia in turn revoked all the tariff benefits it had extended to American exports. American pressures also led China, which had joined the GATT in 1948, to withdraw from the organization when it became communist. Cuba did maintain its GATT membership after it became communist, though the United States subsequently suspended all trade relations with it on national security grounds.

During the 1950s de-Stalinization and the partial relaxation of Soviet control over the economies of central and eastern European countries, the position of Western countries changed. Security considerations now led the United States and its Western European allies to support the admission of some communist states into the GATT in order to reduce their dependence on and the political influence of the Soviet Union. However, negotiations over the terms of the accession of Poland, Romania, and Hungary proved contentious. While Western European governments wanted to maintain quantitative restrictions against the import of products from Central and Eastern Europe, the United States, which had negligible commercial interests at stake, supported the full incorporation of these countries into the GATT’s multilateral non-discriminatory framework. The former prevailed: while the non-market economies of Poland, Hungary, and Romania were admitted to the GATT between 1967 and 1973, they joined as “second-class citizens”: they were denied all of the trade liberalization privileges accorded to other GATT members.

During the 1980s, strategic considerations led the Western powers that dominated the GATT to deny applications for affiliation from Bulgaria and the Soviet Union. Opposition to the latter’s inclusion was led by the US, which claimed that Moscow’s “state supported and controlled economic system was incompatible with GATT trade rules” and that “to admit the Soviet Union would do too much damage to the fabric of the GATT system” (Haus 1992, 5). Thus prior to the break-up of the Soviet empire around 1990, no communist country enjoyed full GATT privileges.

11 See Miller (2000).
12 For an extensive discussion of the accession of communist states, see Haus (1992).
2.4 Trade and Environment

2.4.1 The Tuna/Dolphin Case

Neither the ITO nor the GATT addressed the linkages between trade and environmental protection. The word ‘environment’ did not appear in either agreement, although Article XX(b) and (g) of the GATT did specify conditions under which trade restrictions could be imposed on environmental grounds. The relationship between GATT rules governing trade liberalization and national environmental policies first became politically salient following the 1991 ruling of a GATT dispute panel. It found that American legislation restricting the import of tuna from three developing countries in order to protect dolphins in international waters violated American obligations under the GATT.

One critical issue in this dispute was the GATT dispute panel’s interpretation of Article XX(b), which permits signatory nations to restrict imports if they are “necessary to protect human, animal or plant life or health.” The position of the US was that its import ban was “necessary” to protect animal life, specifically the large number of dolphins that were being killed as a result of the harvesting of tuna, much of which was subsequently exported to the United States. According to the US, “no alternative measures were reasonably available to the United States to protect dolphin health and lives outside of American jurisdiction.”

However, the dispute panel concluded that Article XX(b) only permitted countries to enact restrictions on “production and consumption within their jurisdiction.” However, the dolphins the United States was seeking to protect were harvested in international waters and thus were outside of American jurisdiction. According to the panel, “if the United States can dictate conservation methods to Mexico as a condition to Mexico’s access to the U.S. market, the GATT would be eviscerated” since countries could only then maintain access to the markets of another country if their regulations were identical.

2.4.2 The Uruguay Round

The tuna/dolphin ruling led to strong and heated criticism of the GATT by environmentalists, who claimed that it showed how the GATT favored free trade over environmental protection. It also stimulated considerable discussion and

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13 Quoted in Vogel (1995), 110. For a more extensive discussion of this case and the debate over its implications, see ibid., 103–125.
14 Quoted in ibid., 112.
debate among policy analysts about the relationship among trade liberalization, trade rules, and environmental regulation. The 1994 Uruguay Round agreement, which created the World Trade Organization, attempted to address some of the concerns of environmentalists and of countries that wanted to protect their environmental regulations from challenges by the WTO. The preamble to the Standards Agreement on Technical Barriers to Trade, which was incorporated into the WTO, marks the first mention of the word “environment” in an international trade agreement. It states that each country “may maintain standards and technical regulations for the protection of human, animal, and plant life and health and of the environment,” though it did not address the issue of extraterritorial jurisdiction, which was central to the tuna/dolphin trade dispute.

Signatory nations also approved a resolution that committed the newly established WTO to undertake a systematic review of “trade policies and those trade-related aspects of environmental policies which may result in significant trade effects on its members.” In January 1995, the WTO’s General Council officially established a Committee on Trade and the Environment (CTE) open to all WTO members, to undertake such a review. The impetus for its establishment came from the US and the EU, who wished to improve the WTO’s public image in response to heated criticisms of both its trade rules as well as trade liberalization in general by environmentalists following the tuna-dolphin decision. At the same time, they also wanted to subject the growing number of national environmental regulations to GATT/WTO scrutiny to prevent them from being abused as trade barriers. This initiative was strongly opposed by some delegates from developing countries who feared that the CTE would be used by developed countries to justify “green protectionism.”

2.4.3 The WTOs and MEAs

The CTE’s charge was a broad one. It included charges, taxes, standards, technical regulations, as well as packaging, labeling, and recycling requirements used for environmental purposes, along with environmentally harmful substances, the export of environmentally harmful goods, and trade barriers for green goods and services. Among the CTE’s most important responsibilities was to examine the GATT/WTO consistency of the 17 international environmental agreements that provide for enforcement through trade restrictions. As the GATT had earlier noted, the trade agreement’s principles needed to be carefully reexamined “to make certain that they [did] not hinder multilateral efforts to deal with environmental

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17 Ibid., 137.
problems. Thus the relationship between these two kinds of international agreements was now placed on the WTO agenda.

In principle, there was no conflict between the two as long as every international environmental treaty that included trade restrictions was also ratified by every WTO member. But would a WTO member that had not ratified an international environmental agreement be able to challenge trade restrictions imposed by another WTO member that had? In the important case of the Montreal Protocol, adopted in 1987, GATT officials privately informed its drafters that its trade restrictions were GATT-consistent. The harm due to the depletion of the ozone layer it was designed to prevent was global in nature and thus did affect domestic health and welfare. However, a potential conflict between the WTO and the Protocol was avoided after the latter was ratified by all of the world’s major producers of ozone-depleting chemicals who also were WTO members.

2.4.4 The Cartagena Protocol and the WTO

The relationship between the Convention on Biological Diversity’s Cartagena Protocol on Biosafety and the WTO became a major focus of contention during the Protocol’s negotiations. The Protocol explicitly addressed the conditions under which a country can restrict imports or the use of genetically modified organisms (GMOs). The United States, joined by other major agriculture exporters, sought to both reserve its rights to challenge the Protocol’s enforcement in the WTO and to require any signatories who imposed restrictions on GMOs to base them on the risk assessments required by the Agreement on Sanitary and Phytosanitary Standards (SPS), which was incorporated into the WTO during the Uruguay Round.

The EU, whose regulations for GM varieties are the world’s most stringent, opposed making the Protocol subservient to the WTO. It also sought to include a provision that would permit countries to restrict GM varieties on precautionary grounds, a less demanding risk management standard than that required by the SPS Agreement, and one which was consistent with the EU’s own risk management policies. The result was a complex compromise: the Protocol included language that both acknowledged the importance of scientific risk assessments as well as the right of signatory countries to base their risk management decisions for GMOs on the precautionary principle. However, many analysts regard the inclusion of the latter as incompatible with the SPS Agreement, and it remains unclear whose standards would apply in the case of a WTO dispute settlement proceeding.

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18 Quoted in ibid., 138.
19 For a detailed discussion of this issue, see Kuijper (2010).
While many environmentalists remain highly critical of the WTO, subsequent WTO dispute panels have been careful to avoid any ruling that would provoke the public outrage that followed the GATT panel’s tuna/dolphin ruling.

An important example is how the WTO’s dispute panels addressed the shrimp/turtle trade dispute, which pitted the United States against India, Malaysia, Pakistan, and Thailand. In a series of rulings, which were concluded in 2001, the US was permitted to impose trade restrictions based on how a product was produced outside its borders—an important basis of the ruling against the US in the tuna/dolphin case—provided the same turtle protection standards were applied equally to all trading partners and that the US had made a good faith effort to pursue bilateral or multilateral approaches before imposing unilateral trade sanctions. One important factor underlying this decision was the fact that the turtle species the United States was trying to protect migrated between American and international waters (unlike dolphins, which were not found in American waters), which enabled the panel to broaden the interpretation of the “exhaustible natural resources” provision of Article XX(g).

The final resolution of the shrimp-turtle trade dispute did suggest a change in the interpretations of some of the environmental dimensions of WTO rules by the organization’s dispute panels and subsequently, their decisions were heralded as signaling the belated “greening” of the WTO. Not only did it “represent the first time that a [dispute panel] ruling... clearly supported a breach of international trade law rules for the purpose of environmental protection” but the basis of its ruling employed some of “the same logic” that an earlier panel had used to rule against the United States in the tuna-dolphin trade dispute (DeSombre and Barkin 2002, 17). In essence, the panel expanded the criteria that permitted a signatory nation to impose trade restrictions to protect the natural environment. Not surprisingly, the dispute panel’s rulings were strongly criticized by the developing countries whose trade the US had restricted on conservation grounds.

However, the terms of the Appellate Body’s rulings still left unresolved the critical question of “whether the imposition of an import or export ban pursuant to an MEA against a WTO member that is not a signatory to the MEA would be GATT [WTO] consistent” (Cameron and Campbell 2002, 31). In fact, the term “MEA” did not even appear in the text of the dispute panel decision: the panel thus made no reference to the fact that, unlike dolphins, various species of turtles were protected by an international environmental treaty.

In the case of the equally potentially politically explosive trade dispute between the United States, Canada, and Argentina on one hand and the European Union on the other which adjudicated the compatibility of the EU’s restrictive regulations on...
GMOs with its WTO treaty obligations, the dispute panel decisions also sought to avoid controversy. After a long delay, the WTO dispute panel rendered a split decision that enabled each of the disputants to claim “victory” and thus neither appealed its ruling. The scope of the panel’s ruling, issued in 2006, was a narrow one: it explicitly chose not to address the safety of GMOs, a highly divisive issue on which European and American regulatory policies have sharply diverged. Equally important, the panel also chose not to consider the provisions of the Convention on Biological Diversity’s Cartagena Protocol in evaluating the legality of the EU’s regulations that restricted biotechnology products on the grounds that not all parties to the WTO dispute (i.e. the United States) had also signed the Protocol. Thus, like its rulings in the shrimp/turtle case, the WTO dispute panel carefully avoided addressing the potentially highly contentious relationship between WTO rules and the provisions of an MEA.

2.4.6 Trade and Global Climate Change

More recently, a new, potentially highly divisive conflict between trade rules and environmental protection has emerged. This stems from the increasing number of national and international initiatives to reduce greenhouse gas emissions in order to address the risks of global climate change. While the Kyoto Protocol itself does not incorporate any trade restrictions—which in part reflects the impact of the WTO—many national or regional climate change policies do have potential trade implications. These include procurement policies and subsidies that favor domestic producers of alternative energy technologies, energy efficiency standards, and the certification of biofuels for environmental sustainability based on how they are produced. Moreover, national competitiveness concerns may well lead some Kyoto signatories to impose taxes on the carbon content of imported products, though no country has yet done so.

Several of these climate change policies and regulations have or could be carefully crafted to withstand WTO scrutiny, while the WTO could agree to waive some signatory treaty obligations in order to enable signatory nations to adopt important regulations without running afoul of the WTO’s rules. Moreover, it is possible, though by no means assured, that a carbon tax on imports could be judged permissible under the Article XX(g) environmental exemption if a dispute panel held the global climate to be an “exhaustible natural resource” whose preservation transcended national boundaries (as it ruled in the shrimp/turtle trade dispute).22 The publication of several studies on the relationship between climate change regulations and the WTO, including by the WTO itself, reveals the degree

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22 For a discussion of under what conditions they would be required to meet to be judged WTO consistent, see Pauwelyn (2007).
of concern by policy analysts about the potential of this new dimension of environmental regulation to conflict with WTO rules.\textsuperscript{23} As a co-authored paper by Patrick Low of the WTO Secretariat admits, “the reality [is] that the GATT/WTO rules were not originally crafted to accommodate climate change policies and concerns.”\textsuperscript{24}

2.4.7 The Doha Round

In 2001, trade ministers and negotiators met in Doha to begin a new round of trade negotiations. Paragraph 31 of the Doha Declaration outlined the WTO’s first negotiating mandate on trade-environment linkages. It endorsed trade negotiations on the relationship between WTO rules and the trade dimensions of MEAs, 18 of which now contained trade provisions as part of their enforcement mechanisms. It also instructed trade negotiators to develop procedures for information exchanges between MEA secretariats and relevant WTO committees as well as to develop criteria for granting observer status to MEAs. In addition, trade negotiators were charged with developing proposals for the reduction or elimination of tariffs or non-tariff barriers for environmental goods and services. The responsibility for negotiating these issues and proposing policies to address them was assigned to the CTE.

However, agreement on changing WTO rules to address the substantive dimensions of trade-environmental linkages has proven elusive. Developing countries have strongly resisted proposals to remove trade barriers to environmental goods and services on the grounds that their domestic green technologies would then become dominated by firms from developed countries. The EU and the US have also clashed over the reduction of government subsidies for fisheries and agriculture.

The most contentious issue has been the relationship between MEAs and the WTO. The EU has proposed that WTO rules be changed to exempt any trade restrictions sanctioned by a MEA from being legally challenged as a trade barrier, thus creating an expanded “environmental window” in WTO rules. This initiative has been strongly opposed by developing countries who fear that it would be used to coerce them into adopting the environmental priorities of their greener trading partners.

For its part, the US, which has recently ratified far fewer international environmental agreements than the EU (and fewer than scores of other countries) has implicitly backed the position of developing countries, on the grounds that there is no need for any change in WTO rules as no dispute has come before the WTO regarding the provision of a MEA. The American position is that “increased

\textsuperscript{23} See, for example, Charnovitz (2003), Low et al. (2011), Zhang and Assuncao (2002), Pauwelyn (2010) and World Trade Organization (2009).

\textsuperscript{24} Low, “The Interface,” ii.
information exchange between MEAs and the WTO...could go a long way to ensuring that the two systems of international obligations remain compatible and mutually supportive.”25

This issue has sharply divided the CTE, with the US and many developing countries on one side and Norway, Switzerland, and the EU on the other, with the majority of states favoring the former’s position. For their part, developing countries remain suspicious of any change in WTO rules that would make it easier for developed countries to restrict their imports on environmental grounds, including those made pursuant to the provisions of MEAs. For many developing countries, making the WTO “greener” would provide a window of opportunity for developed country producers to join hands with environmentalists to restrict their imports.

In this context, it is worth recalling that the two most controversial trade-environmental disputes to come before the GATT/WTO—namely the tuna-dolphin and shrimp-turtle disputes—pitted developing countries against a coalition of American environmentalists and domestic producers. Consequently, “the CTE negotiations have largely resulted in a stalemate between a minority of WTO members who have sought clear and explicit rules to exempt MEAs from WTO challenges and those who oppose any further environmental compromise of trade rules” (Eckersley 2004, 33). In any event, any substantive changes in WTO rules governing environmental regulations must await the completion of the Doha Round, which to date shows little sign of coming to a successful conclusion.

2.4.8 Administrative Linkages

However, at the administrative level, there has been measurable progress in reducing conflicts regarding trade-environmental linkages. Much of this effort has been spearheaded by the WTO’s secretariat, which provides staff support for the CTE. The secretariat has become “the center of WTO politics surrounding trade-environment overlap management” (Jinnah 2010, 63). Since 1996, the secretariats from several MEAs have been granted permanent observer status at meetings of the WTO and they regularly brief the CTE on the use of trade measures in their agreements. At the Seattle Ministerial conference in 1999, the WTO and the United Nations Environment Program entered into a formal relationship, which includes annual UNEP-CTE meetings and the production of joint working papers.

The staff of the CTE has become an important source of information for WTO delegates, many of whom have little or no expertise on environmental issues. As one staff member put it:

We write documents for members informing them of issues from an environmental perspective, such as why the Montreal Protocol has a trade embargo on certain substances, or why the Basel Convention (on hazardous waste exports) does what it does or how the CBD (Convention on Biological Diversity) rules fit within TRIPS (Trade-Related Aspects of Intellectual Property).26

The staff has organized several workshops in various regions in order to promote awareness of the relationship among trade, environment, and sustainable development and encourage dialogue between national policymakers responsible for trade and environment in WTO member states. It has also informally worked with both the UNEP, which administers several MEAs, as well as with selected non-governmental organizations (NGOs) to arrange for them to schedule their meetings and workshops at the same time as those of the CTE.

Members of the WTO secretariat also regularly attend MEA conferences and side events. As a result, many MEAs that use trade measures to achieve their objectives now have a standing item on their negotiating agendas that addresses their relationship with the WTO. WTO staff have worked closely with MEA negotiators to encourage them to adopt international environmental agreements that would avoid potential conflicts between WTO rules, an effort that has been characterized as “GATTing the greens.”

While the CTE has emerged as the key international mechanism in the consideration of trade-environmental issues,

It has been unable to achieve its integrative potential in part because its delegates still reflect primarily the WTO’s dominant trade paradigm…Despite its stated objective of considering modifications to the multilateral trading system to accommodate environmental concerns, the CTE has been reluctant to make recommendations that would in any way be inconsistent with the GATT’s [WTO’s] core principle of nondiscrimination…and ongoing trade liberalization (Cameron and Campbell 2002, 26).27

The underlying reason why the CTE continues to be so constrained is that it reflects the preferences of the WTO’s member states. These remain sharply divided: there is no consensus among WTO signatories as to how trade-environmental linkages should be better addressed, or indeed, whether they should be addressed at all.28 Because the CTE is unable to move beyond the terms of the Uruguay Round Agreement, whose principles and rules currently govern the WTO, the organization is unable to engage in meaningful negotiations with either NGOs or MEAs; the hands of the CTE and the WTO secretariat are effectively tied. As a result, trade-environmental linkages will continue to be muddled and the formation of an integrated trade-environmental regime will remain elusive. As one observer notes,

26 Ibid, 64.
27 For a highly critical analysis of the CTE’s weak environmental impact, see Gabler (2010), 80–117.
28 See Shaffer (2002), 80–114. He notes that not only has there been no agreement within the CTE among countries, but in many cases, the interests and policy preference within WTO members have been divided.
A great deal remains to be done in order to go beyond the usual diplomatic formula of striving to make trade and environmental objectives ‘mutually supportive.’ What is needed is to bring the various MEAs and WTO agreements, which can be regarded as elements of global economic governance, into some coherent mosaic.\(^{29}\)

But this shows no sign of happening.

### 2.4.9 Analysis

There has been no shortage of proposals to make WTO rules more accommodating to environmental concerns, but due to a lack of consensus among its member states, none have been adopted. Thus the WTO’s efforts to reduce trade-environment tensions and conflicts can be best understood as palliatives. They are designed to defuse tensions between green constituencies, including the staffs of MEAs, and the WTO without making or requiring any substantive changes in the latter’s rules. To date, the WTO has been relatively successful in defusing the highly contentious trade-environmental linkages provoked by the tuna-dolphin dispute. But new potential sources of trade-environmental conflicts, such as regulations to address global climate change, continually emerge. Thus it may only be a matter of time before tensions between the two flare up again, thus creating another legitimacy crisis for the WTO.\(^{30}\)

### 2.5 Labor Linkages

The linkages or potential conflicts between labor standards and the WTO are different from those involving the relationship between trade and environment. While the potential trade impacts of national environmental standards are typically indirect consequences of their implementation or enforcement, in the case of labor standards, their trade impact is explicit. A key issue is whether WTO signatories can use trade policy to require or pressure other WTO members to improve their domestic labor standards or practices. A broader question is whether all WTO members should be required to enforce the core international labor standards of the International Labor Organization (ILO).

As noted above, the ITO did incorporate linkages between trade and labor standards. One reason why labor provisions were not incorporated into the GATT was the assumption that the ITO would supersede the GATT, and thus there was no reason to also include them in the latter agreement. In 1953, 1979, and 1986, the United States sought to remedy this omission, but its efforts were unsuccessful.

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\(^{29}\) Quoted in Charnovitz (2002), 259.

\(^{30}\) See, for example, Esty (2002), 7–22 and Conca (2000), 484–494.
The GATT, however, does contain one labor-related provision, which was subsequently incorporated into the WTO. Article XX(e) permits signatory nations to unilaterally prohibit trade produced by prison labor, though it does not itself restrict trade in such products. It has also been suggested that trade restrictions on goods produced by abusive labor practices might fall under the “public morals” exception of Article XX(a), but no country has ever attempted to invoke this clause and thus its legal status remains unclear. In principle, a country’s labor practices might also be challenged on the grounds that they constitute an unfair trade subsidy. But again, no country has ever sought to restrict trade from a WTO signatory on this basis.31

Within both the GATT and the WTO, resistance to formally linking trade and core labor standards has been powerful. When the administration of President George H.W. Bush requested that a GATT working party study the link between labor rights and trade, it was met with strong opposition from developing countries, led by Mexico and India. They claimed that the American concern about worker rights was a form of protectionism, and suggested that the ILO, not the GATT, was the proper forum to address labor practices. As a result, such a study was not authorized.

In the preparatory meetings for the 1996 WTO Singapore Ministerial Conference a few countries, including the United States, urged that labor rights be included on its agenda. The Clinton Administration specifically proposed the establishment of a WTO working party on Trade and Core Labor Standards. Both initiatives were strongly resisted by developing countries, who argued that “the subject of labor standards should not be brought into the WTO in any form.”32 As a result, the labor language in the WTO Ministerial Declaration explicitly rejected the use of labor standards for protectionist purposes, adding that the comparative advantage of lower-wage developing countries “must in no way be put into question.” The only recommendation approved by the Conference was that “the WTO and ILO Secretariats continue their existing collaboration.”33

Subsequently, even the latter clause was clarified by the WTO Director-General, who explained that it only allowed the two organizations to exchange information on certain issues, such as whether ILO initiatives are consistent with international trade rules. At the conclusion of the ministerial meeting, the conference’s chairman stated: “Some delegates had expressed the concern that this text may lead the WTO to acquire a competence to undertake further work on the relationship between trade and core labor standards. I want to assure these delegations that this text will not permit such a development.”34

Linkages between trade and labor again surfaced at the 1999 WTO Ministerial Conference in Seattle, which was intended to launch a new trade round. While the

31 For an extended discussion of how these provisions and other mechanisms could be utilized to incorporate labor standards into the WTO, see Turnell (2001).
32 Quoted in Charnovitz (2002), 259.
33 Quoted in ibid., 261.
34 Quoted in ibid.
WTO had not granted formal observer status to the ILO, its secretariat was invited to send observers to Seattle, which it did. One of the many disagreements that surfaced at the Seattle meetings had to do with whether the new trade round should promote worker rights. Unions from both the US and the EU, as well as the International Confederations of Free Trade Unions, urged the WTO to include a “social clause” in new trade rules.

But the EU and the US were unable to agree upon a joint proposal. In any event, their effort suffered a setback when President Clinton stated in an interview that he wanted to see “core labor standards... be a part of every trade agreement” and that he favored “a system in which sanctions would come to countries violating” any of its provisions.35 Developing countries, which feared that any discussion of labor within the WTO would create a slippery slope leading to the restriction of their exports, viewed the President’s comments as vindicating their strong opposition to any mention of labor issues in a new trade agreement, and it was omitted.

For its part, the ILO has established numerous standards regarding employment practices. Like the Singapore Declaration, the ILO provides that labor standards “should not be used for protectionist trade purposes” or call into question a nation’s comparative advantage. This language suggests that some kinds of trade restrictions based on a country’s violation of core labor standards might be legitimate under ILO rules, but none have been or are likely to be adopted due to the influence of developing countries in the ILO. But in any event, any such restrictions are unlikely to survive WTO scrutiny. As Steve Charnovitz concludes, “The WTO... is never going to be a good forum for pursuing the goal of higher labor standards,” because there is no agreement among its member states that it should.36 Robert Howse adds: “the WTO’s main role with respect to labour standards is, through interpretations of legal provisions, to constrain the use of trade measures as a means of putting economic pressure on countries or firms to comply with such standards” (Howse 1999, 147).

2.5.1 Other Trade-Labor Linkages

Trade and labor linkages have, however, emerged in other contexts. Concerned that the Chinese government was ignoring or flouting its own labor laws for products produced in its export-focused Special Economic Zones, the 2001 Protocol on the Accession of the People’s Republic of China to the WTO required China to enforce the “uniform administration of Chinese Law,” throughout all its territories. While this document did not explicitly address labor laws, it does suggest that the WTO recognizes that a country’s failure to enforce its labor laws could distort trade.

35 Ibid., 280.
36 Ibid., 263.
The negotiations for the accession of Cambodia and Vietnam to the WTO also indirectly addressed these countries’ labor standards by reviewing whether or not their domestic policies adhered to the “rule of law.” In the case of Vietnam, the US wanted the Working Party’s report on its accession to note that Vietnam had not ratified eight of the ILO’s core labor standards. This proposal was strongly and effectively opposed by Vietnam and thus its accession documents contain no reference to labor standards. However, the government of Vietnam subsequently acknowledged that it needed to make a greater effort to implement ILO conventions, suggesting that the American effort was not without some impact.

The EU’s Generalized System of Preferences-Plus grants more favorable market access to countries that have developed better human rights and labor policies and practices and was expanded to recognize countries engaged in efforts to combat drug production and trafficking. It was challenged by India after the EU extended special trade privileges to Pakistan in 2001. The Indian government claimed that this was discriminatory, and the following year, it requested the establishment of a WTO dispute panel to determine whether the criteria used by the EU to award Generalized System of Preferences (GSP) privileges was compatible with WTO rules. However, India subsequently withdrew its complaint. India has long been among the most vocal opponents of including labor rights within the scope of the WTO, and it presumably was reluctant to have the WTO address this issue, lest it provoke a broader examination of the relationship between worker rights and the WTO.

When the US used India’s 2004 trade policy review to stress the relationship between labor rights and trade, India responded to the WTO’s review of the American report by emphasizing that the ILO, not the WTO, was the appropriate forum to address a country’s labor policies and practices. It also stated that the reviews of country compliance with the WTO should not address non-trade issues. However, several industrialized countries have used the trade policy review process to press developing countries to improve their compliance with internationally accepted labor standards within export processing zones, and in the context of the Doha trade negotiations, the United States stated the implementation of core labor standards was relevant for trade policy reviews. In 2004, Australia used the WTO’s review of the EU to express its concern about the EU’s efforts to use regional, bilateral, and bi-regional trade agreements to pursue social and environmental objectives, but it did not pursue the matter.

In the Uruguay Round, members agreed to require that export processing zones be phased out, on the grounds that they represented an unfair government subsidy to exports. Since firms in many of these zones have been exempted from national labor laws, and since workers in them are generally paid lower wages, this agreement can, indirectly, be viewed as an effort on the part of the WTO to raise labor standards. But developing countries below a certain income level were permitted to delay their compliance with this requirement and they subsequently requested a further extension.
2.5.2 Analysis

The WTO remains reluctant to accommodate either environmental or labor trade linkages. But there are important distinctions in both its formal and informal linkages between the two. While the WTO has sought some accommodation with MEAs and environmental NGOs, it has been much more resistant to linking trade rules to labor practices. Thus the WTO has established a Committee on Trade and Environment, but not one on trade and labor. Similarly, it has issued several reports on the former issues but none on the latter.

The WTO has agreed to accord the secretariats of several MEAs observer status and there is regular interaction between the staffs of MEAs and the WTO. But the extent of interaction between the ILO and the WTO is much more limited and the former does not have observer status. Likewise, while the WTO has reached out to NGOs, it has not undertaken a similar outreach effort to labor unions or labor confederations. Most importantly, while the WTO has placed the relationship between trade rules and environmental protection on its negotiating agenda—even if it has been unable to reach any agreement—it has been strongly resistant to doing so with respect to any possible labor linkages.

One reason for this difference is that linkages between trade and labor are potentially much more disruptive to the core mission of the WTO—which is to lower international trade barriers—than linkages between trade and the environment. A second is that while developing countries have resisted both types of linkages, their opposition to labor ones has been much stronger: they regard the possibility of any trade restrictions based on wages or working conditions as a core threat to their international competitiveness. Third, while some environmental problems or practices cross national boundaries, this is not the case with labor issues, whose impact is primarily domestic. Finally, the fact that several MEAs contain trade restrictions, and future ones may do so as well, brings them into potential conflict with WTO rules. This is not the case for the ILO, which does not use trade measures as a means of enforcing its standards.

2.6 Trade and Human Rights

There are linkages between international trade agreements and human rights. The GATT/WTO contains two provisions that address human rights linkages, one directly and another indirectly. First, GATT Article XXI(b) permits trade restrictions “relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment.” Both the GATT and the

37 Quoted in Pauwelyn (2003), 1185–1186.
WTO also permit signatories to waive their WTO obligations to address international human rights concerns in cases when trade may exacerbate human rights abuses, provided that such waivers are approved by three-quarters of the member states. In addition, according to Article 103 of the UN Charter, trade restrictions imposed by the UN Security Council supersede all international agreements, including the WTO, thus making the UN the only international body to which the WTO is obligated to defer under international law.

While labor practices and human rights are often linked, trade restrictions that explicitly focus on only the latter have proven relatively non-contentious and several have been invoked. Article XXI was invoked to support trade sanctions by several countries against South Africa and Somalia on the grounds that they violated the human rights of their own people, suggesting a somewhat broader interpretation of this provision than when it was originally incorporated into the GATT. WTO members have also restricted trade from other members on human rights grounds without even invoking Article XXI. For example, the United States banned new investment in Burma on human rights grounds and both the US and the EU have imposed trade restrictions on that country. But Burma has not attempted to challenge these restrictions, presumably because it does not want its human rights practices to be subject to global scrutiny in a dispute settlement proceeding.

The WTO has never adjudicated a trade dispute that focused on a trade restriction based on a member states’ human rights practices, and it is unclear if the WTO has either the competence or the legal jurisdiction to conclude that a human rights norm has been violated, especially as they fall outside the terms on which a country joined the WTO. In 2005, the UN High Commissioner for Human Rights stated that member states obligations toward their own populations could fall within the compass of the “public morals,” “public order” and “human life,” exemptions of Article XX. But no signatory state has ever attempted to justify trade restrictions by reference to any of these clauses, and it is thus unclear how a dispute panel would assess such an effort.

While the WTO and the UN Commission on Human Rights are both based in Geneva, they are unable to meet to coordinate policies, because unlike in the case of the secretariats of MEAs, the WTO has not granted a mandate for them to do so. Nonetheless, there have been communications and some meetings between their respective staffs. For its part, the UN High Commission has issued several reports that examined the impact of trade agreements on a broad array of human rights practices.

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38 See Marceau (2002), 753–814.
40 For an analysis of the limitations of the WTO in enforcing human rights provisions, see Marceau (2002), 753–814.
2.6.1 Other Trade and Human Rights Linkages

As in the case of labor standards, human rights linkages have indirectly emerged in the context of the accession of several states with problematic human rights practices. WTO members have generally not used accession deliberations to pressure applicants to change their human rights practices, and no country has ever been denied WTO membership because it inadequately protects human rights. However, WTO members have successfully demanded that Cambodia, Saudi Arabia, and China strengthen their adherence to the rule of law, which has implications not only for business regulations, but for the legal rights of citizens, as well as the treatment of workers (Aaronson 2007b, 12–14).

2.6.2 The Kimberly Process Exemption

As noted above, both the GATT and the WTO permit signatories to waive their WTO obligations to address international human rights concerns when trade may exacerbate human rights abuses, provided that such waivers are approved by three-quarters of the member states. In 2003, following the UN’s call for a ban on trade in “conflict” or “blood” diamonds—funds from whose sales had been used to promote civil unrest in African countries—WTO member states approved a waiver that permitted countries to ban trade in diamonds that had not been certified by the Kimberly Process (KP).41

The KP is an international certification scheme established by 39 countries, all but two of which are WTO members, and which collectively account for about 98% of production and trade in rough diamonds. It was established in 2002, with the cooperation of the diamond industry following pressure by activists, to break the link between trade in diamonds and armed conflict, especially in Angola, Sierra Leone, and Liberia. More than 50 member states have applied for such a waiver, and they have accordingly banned imports of diamonds from countries which had not signed the KP.

This represents the first and only time that the WTO has approved a waiver to protect human rights. It also marks the first, and to date, the only time, that the WTO has accorded legal recognition to an international business code to promote corporate social responsibility. However, what distinguishes the KP from all other CSR codes is that governments, as well as firms, enforce its trade restrictions. The former clearly brings the KP within the scope of the WTO.

However, it is not clear that a WTO waiver was in fact necessary. As the UN Security Council had previously imposed embargos on conflict diamonds from Angola, Sierra Leone, and Liberia, the Kimberly Process trade restrictions would have been justified under international law as these embargoes were legally

41 For a more detailed discussion of the KP, see Vogel (2009), 172–173.
binding on all UN members. Moreover, as sales from the diamonds were used to supply military establishments—albeit non-state ones—restricting their imports could have also been justified under Article XXI. Thus while the WTO waiver has been applauded by human rights advocates as a sign of the WTO’s increased willingness to accommodate human rights concerns, it can also be interpreted as an example of the WTO’s ongoing effort to maintain its hierarchical relationship with all other international organizations. Moreover, the waiver does not extend to any trade restriction for rough diamonds from countries that have signed the KP, even though there have been numerous violations of its provisions by the latter.

2.7 Corporate Social Responsibility

The lack of binding international agreements that adequately govern environmental practices, labor conditions, and human rights has led activists to pressure global firms to adopt voluntary agreements that fill this global governance gap. There are now more than 300 industry codes, most of which address labor and environmental standards. Virtually all global firms based in the US or the EU have agreed to be bound by one or more of them and several have developed their own codes of conduct for their agricultural, natural resources, and manufacturing suppliers in developing countries.

While several governments as well as international governmental organizations such as the UN and the OECD have played an important role in developing many of these codes, and many governments have actively encouraged global firms to sign on to them, they are not considered to fall within the scope of the WTO because they are typically not enforced by governments. Indeed, that is precisely why many have been adopted: they incorporate precisely the kind of trade non-trade linkages that the WTO has been reluctant to permit states to enforce.

However, many “civil regulations” blur the boundaries between voluntary and mandatory regulations, hard and soft law, and public and private rule setting. For example, some public sector procurement policies give preference to products that meet the standards of various CSR codes, while in other cases government-sponsored social labels have been based on a product’s conformity with CSR standards.

2.7.1 Eco-Labels and Product Certifications

The increasing importance of product certification standards reveals the blurred boundaries between many “private” and “public” regulatory policies. The use of

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42 This criticism of the WTO is detailed in Pauwelyn (2003), 1177–1207.
such labels by governments or quasi-governmental organizations has proliferated as a way to encourage more environmentally responsible production and consumption.\textsuperscript{44} Eco-labeling programs have been established by several countries, including Germany, Canada, Japan, the US, Sweden, the Nordic countries, Austria, Australia, New Zealand, Korea, France, the Netherlands, Singapore, and India, as well as by the EU. At the same time, there has been a dramatic increase in private certifications, most notably for wood and agricultural products.\textsuperscript{45}

Technically, both public eco-labels and private product certifications fall under the scope of the Technical Barriers to Trade Agreement (TBT). “Voluntary standards implemented either by central government, local governments, non-governmental bodies or regional bodies are in fact covered by... Annex 2 of the TBT Agreement” (emphasis added) (Vossenaar 1997, 32–33). Such labels or product certifications have considerable potential to distort trade by either intentionally or inadvertently favoring domestic products. For example, some eco-labels require foreign producers to meet environmental standards which are not relevant in the exporting country, or mandate the use of production technologies that are more readily available in the importing country. Moreover, many eco-labels and product certifications incorporate process and production methods (PPMs) over a product’s life cycle. This means that countries could run afoul of WTO rules that require like products to be treated equally.

One eco-label has been subject to an informal trade dispute.\textsuperscript{46} In 1992, Austria required that all wood products contain a label indicating whether or not they contained tropical timber. It also announced plans to establish a quality mark to designate timber and timber products made from sustainable forests in order to deter people from buying tropical timber. The Austrian action was strongly attacked at a meeting of the GATT Council by ASEAN, two of whose members, Malaysia and Indonesia, accounted for 80 % of tropical timber exports. They argued that it was discriminatory since the labeling requirement only applied to products made from imported (i.e. tropical) wood, and thus was primarily designed to encourage consumers to switch to wood products produced from forests in Austria. While no formal complaint was filed with the GATT, Austrian officials believed that if one were filed, they would lose. Accordingly, under pressure from the GATT, they agreed to drop the mandatory labeling requirement. Instead, they made all timber producers eligible for a quality mark that certified that their wood was harvested sustainably, thus complying with the WTO requirement that domestic and imported products be treated equally.

For its part, the EU, which makes extensive use of eco-labels, has argued that they do not fall under the terms of the TBT Agreement because consumers are still free to determine whether or not they wish to purchase them. Moreover, unlike the

\textsuperscript{44} For a detailed discussion of these labels and their policy impact, see Zarrilli (1997) and OECD (1997).
\textsuperscript{45} See Conroy (2007).
\textsuperscript{46} For this trade dispute, see Vogel (1995), 130.
Austrian regulations, other eco-labels are voluntary: firms can decide whether or not they wish to have their products certified. Many developing countries do not find these claims persuasive; they regard their growing use as a way of giving a competitive advantage to domestic producers, who often play a critical role in defining the criteria on which they are based and awarded. In response, a growing number of developing countries have worked with domestic producers to develop their own certification standards.

In 1998, Colombia asked both the WTO Committee on Trade and Environment and the Committee on Technical Barriers to ensure that eco-labeling schemes do not distort trade. WTO documents prepared in advance of the Doha ministerial meetings emphasized that “eco-labeling efforts should not become disguised trade restrictions or impede market access to developing country producers.” The Doha Ministerial Declaration, which was prepared by the CTE, stated:

Most Members agreed that voluntary, participatory, market-based and transparent environmental labeling schemes were potentially efficient economic instruments in order to inform consumers about environmentally friendly products. Moreover, they tended, generally, to be less trade restrictive than other instruments.

While the WTO clearly regards eco-labels as “standards” that fall within the scope of the TBT, no WTO Committee or official statement has addressed the conformity of private product certifications with WTO rules, nor have any other eco-labels been formally challenged as trade barriers. Thus, de facto, the WTO has provided both with considerable policy space.

### 2.8 Conclusion

This chapter has explored several of the important linkages between trade and human security that have been addressed or come to the attention of the GATT/WTO. These linkages have emerged through several mechanisms: the criteria for membership in these organizations, the terms of the trade agreements themselves, the terms of new trade negotiations, the deliberations of WTO bodies such as the CTE, policy positions taken by the WTO, and the decisions of trade-dispute panels.

The linkages between trade and national security have been the strongest: the GATT, dominated by the United States and its European allies, effectively used membership criteria as an instrument of the Cold War. As noted in several of the chapters in this volume, such linkages have been equally important in trade agreements and negotiations within Asia. Linkages between trade and human security have been weakest in the case of labor. This has been primarily due to strong opposition by developing countries, whose growing influence in the WTO.

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47 Quoted in Aaronson (2007a), 650.
48 Quoted in Melser and Robertson (2005), 52.
has enabled them to effectively challenge the policy preferences of the US and the EU.

Environmental and human rights linkages fall in between. The former have been highly controversial, and the WTO has been reasonably successful in striking a rough balance between the highly diverse preferences of its membership. Human rights linkages have proven less contentious. The WTO has been able to give into limited demands to grant them sufficient policy space, while those few countries whose trade has been restricted on human rights grounds have understandably been hesitant to challenge them. The growth of private global business codes, CSR product certifications, and government sponsored eco-labels can be usefully understood as an effort to strengthen labor and environmental trade linkages without running afoul of GATT/WTO rules—an effort that has been relatively effective to date.

But the lack of adequate environmental linkages, the absence of labor linkages, and the relative weakness of human rights linkages in the WTO, along with the inability of the WTO to successfully conclude the current Doha trade round, have led the US and the EU to enter into a growing number of bilateral and regional trade agreements that do incorporate them. As documented in the chapters in this volume by Ahnlid and Aggarwal, many of these trade agreements, along with preferential trade policies by both the EU and the United States that “reward” good labor or human rights practices by their trading partners, not only require the enactment and enforcement of public policies that protect human security, but also include provisions requiring that firms adhere to voluntary business standards, such as those adopted by the OECD. Because these agreements are primarily bilateral, the US and the EU have been able to shape their terms—something they have been unable to do in the context of WTO negotiations. These trade agreements, along with voluntary business codes, represent a form of forum shifting or an end run around the WTO by advocates of linkages between trade and human security. They have emerged, in part, as a substitute for these linkages within the WTO. As a result, the WTO has not only become less relevant to those who wish to strengthen such linkages, but also to the promotion of trade liberalization in general.

References

Aaronson, Susan. 2007b. Seeping in slowly: How human rights concerns are penetrating the WTO. World Trade Review 6(3).

49 For an extended discussion of these trade agreements and why they were adopted, see Hafner-Burton (2009). For the use of CSR standards in several trade agreements, see Aaronson (2007a), 638–639.
Gabler, Melissa. 2010. Norms, institutions and social learning: An explanation for weak policy integration in the WTO’s committee on trade and environment. *Global Environmental Politics* 10(2).


Turnell, Sean. 2001. Core labor standards and the WTO, no. 0103, research papers, Macquarie University, Department of Economics.


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