

## TRADE AND ENVIRONMENT

TI: The Design and Implementation of an International Trading Scheme for Greenhouse Gas Emissions

AU: Zhang, -ZhongXiang

SO: Environment-and-Planning-C:-Government-and-Policy; 18(3), June 2000, pages 321-37.

AB: The inclusion of emissions trading in the Kyoto Protocol reflects an important decision to address climate-change issues through flexible market mechanisms. The author addresses a number of policy issues that must be considered in designing and implementing an international greenhouse gas (GHG) emissions-trading scheme. These include: how much of a Party's assigned amount of GHG emissions can be traded internationally; emissions-trading models; competitiveness concerns in the allocation of emissions permits; banking and borrowing; liability for noncompliance; how to enlarge the emissions-trading system; and bubbles. Although the focus is exclusively on emissions trading, its relationship with the clean development mechanism, joint implementation, and bubbles are discussed wherever necessary. By providing some new insights, the author aims to contribute to the design and operationalization of an international emissions-trading scheme.

TI: Policy-Making in Nested Institutions: Explaining the Conservation Failure of the EU's Common Fisheries Policy

AU: Payne, -Dexter-C.

SO: Journal-of-Common-Market-Studies; 38(2), June 2000, pages 303-24.

AB: The widely recognized conservation failure of the Common Fisheries Policy (CFP) is largely due to the nested institutional context in which fishermen's issues are negotiated. Divergent Member State interests regarding the competence of Community institutions have led to the selection and maintenance of ineffective policies. I propose a three-level game to draw out the implications of policy-making within nested institutions. To substantiate this explanation, I show how the guiding principles of the CFP have created and heightened Prisoner's Dilemma game incentives among both Member States and fishermen, yet have been retained due to divergent Member State interests.

TI: The Effects of Environmental Regulations on Foreign Direct Investment

AU: List, -John-A.; Co, -Catherine-Y.

SO: Journal-of-Environmental-Economics-and-Management; 40(1), July 2000, pages 1-20.

AB: This paper employs a conditional logit model to estimate the effects of state environmental regulations on foreign multinational corporations' new plant location decisions from 1986 to 1993. The relationship between site choice and state environmental regulations is explored, using four measures of regulatory stringency. We find evidence that heterogeneous environmental policies across states do matter. (c) 2000 Academic Press

TI: Environmental Regulation and Economic Integration

AU: Vogel, -David

SO: Journal-of-International-Economic-Law; 3(2), June 2000, pages 265-79.

AB: This article explores the relationship between economic integration and environmental regulation. It begins by observing that fears that economic competition would lead to a regulatory "race toward the bottom" appear to have proven unwarranted: increased economic integration has proven compatible with the general strengthening of environmental standards. It then explains why economic interdependence has not led sub-national, national, and regional governments to compete by lowering their environmental standards. The article then explores various mechanisms by which economic integration has contributed to the strengthening of regulatory standards. It concludes by discussing the shortcomings of existing mechanisms of global environmental governance and specifying the circumstances under which regulatory coordination can promote more effective environmental governance.

TI: The Trade-Labor Nexus: Developing Countries' Perspectives

AU: Salazar-Xirinachs, -Jose-M.

SO: Journal-of-International-Economic-Law; 3(2), June 2000, pages 377-85.

AB: The Seattle Ministerial Meeting highlighted the diverging positions of industrialized and developing countries on trade and labor. This note describes and analyzes the main arguments of Latin American and Caribbean (LAC) countries regarding the inclusion of labor issues in the WTO negotiations. The author draws on his experience as Trade Minister of Costa Rica and participant in numerous diplomatic discussions on the subject of this note.

TI: Car Culture and Global Environmental Politics

AU: Paterson, -Matthew

SO: Review-of-International-Studies; 26(2), April 2000, pages 253-70.

TI: Trade Liberalization, Transboundary Pollution, and the Global Pollution Agreement

AU: Liang, -Wen-Jung

SO: Taiwan-Economic-Review; 28(2), June 2000, pages 185-202.

AB: This paper develops a two-country, two-good, general-equilibrium model using a dual approach to examine the impacts of trade liberalization in commodities and in pollution permits on pollution levels and welfare. The paper's focus is on how the price elasticity of Northern import demand affects pollution levels through the real income effect. It shows that trade liberalization in commodities may reduce worldwide pollution levels, worsen Southern welfare, and improve Northern welfare. Moreover, allowing pollution permits to be tradable internationally may increase worldwide pollution levels. This paper also shows that the South will benefit from the system of carbon trading, whereas its impact on Northern welfare is ambiguous.

TI: Regional Cooperation and the Environment: Do "Dirty" Industries Migrate?

AU: Xu, -Xinpeng; Song, -Ligang

SO: Weltwirtschaftliches-Archiv/Review-of-World-Economics; 136(1), 2000, pages 137-57.

AB: This study develops an alternative method to investigate trade in embodied environmental factor services (EEFS) and applies it to bilateral trade between APEC economies. The issue of regional cooperation and the environment is addressed by investigating trade in

EEFS between APEC economies in the last three decades. We observe a "cascading" pattern in net exports of EEFS between East Asian economies. However, we do not observe similar pattern in the trade between North American economies. The results should be interpreted with caution since the application of US sectoral pollution intensity data to other countries may lead to biased estimation of trade in EEFS.

TI: Trade Liberalization and Agricultural Chemical Use: United States and Mexico

AU: Williams, -Shon-P.; Shumway, -C.-Richard

SO: American-Journal-of-Agricultural-Economics; 82(1), February 2000, pages 183-99.

AB: To anticipate the likely effects of recent trade agreements with Mexico on the environment and food safety, this paper examines changes in agricultural chemical use. Econometric estimation and simulation suggest that the combined effects of the North American Free Trade Agreement (NAFTA), economic growth, research investment, and farm policy are expected to increase chemical usage substantially in the United States and undoubtedly lead to greater groundwater contamination. In Mexico, the expected effects are a substantial increase in fertilizer use but a decrease in pesticide use. Increases in private research investment are expected to increase the use of both types of chemicals, but increases in public research investment in the United States are not.

TI: The Effect of Environmental Taxes on the Volume of International Trade

AU: Kohn, -Robert-E.

SO: Ecological-Economics; 34(1), July 2000, pages 77-87.

AB: This paper is a response to Ropke's (1994) question whether environmental taxes increase or decrease the volume of international trade. Using a three-country Heckscher-Ohlin-Samuelson model, it is shown that the effect can be in either direction. In the absence of pollution haven and three-country effects that reverse natural comparative advantage, environmental taxes decrease (increase) the volume of trade between any two countries when the tax is larger in the country that exports (imports) the pollutive good. The environmental tax can also generate strong trade effects between two of the countries, changing production costs and thereby reversing the expected tax effect on a third country. The effects on trade are likely to be smaller when comparable pollution damage is global rather than local.

TI: Maneuvering Space for Environmental Policy in LDC Primary Export Sectors

AU: Kox, -Henk-L.-M.

SO: Journal-of-Developing-Areas; 33(4), Summer 1999, pages 515-30.

TI: The European Union as Trade Actor and Environmental Activist: Contradictory Roles?

AU: Bretherton, -Charlotte; Vogler, -John

SO: Journal-of-Economic-Integration; 15(2), June 2000, pages 163-94.

AB: The European Union has increasingly become an actor in its own right in the politics of the international economy. By virtue of its Common Commercial Policy it has always been a formidable trade policy actor, but over the last twenty years the EC has also developed extensive environmental policy competences and the Union has aspired to

a leadership role in negotiations on global sustainability. This article describes the complex and multifaceted character of the EU as an external trade and environmental policy actor. It then considers cases where the two roles complement or contradict each other including; the Committee on Trade and Environment of the WTO, the Basel Convention, "leghold traps" and the Biosafety Protocol for genetically modified organisms. The article concludes that, while disputes within the Union tend to be resolved in favour of trade interests, policy on the latter has been significantly influenced by the Union's newer concern with environmental sustainability.

TI: Does Trade Always Harm the Global Environment? A Case for Positive Interaction

AU: Alpay,-Savas

SO: Oxford-Economic-Papers; 52(2), April 2000, pages 272-88.

AB: We demonstrate that there are links between international trade and environmental control, heretofore unappreciated, which might substantially alter the efficacy of various governmental policies to control pollution. One concern about national environmental policies is that, whereas the benefits of certain types of abatement might be international or even worldwide, the costs will be borne strictly by the consumers and firms of the country which institutes the policy. As a result, for those types of pollution which are global (such as greenhouse gases) there will be too little pollution abatement. Our first result is that this pessimistic conclusion may be unwarranted. In a 2 x 2 Ricardian model, we also show cases where the non-cooperative contribution of countries to global environmental protection, contrary to the conventional results, exceeds that of the cooperative one due to associated changes in the terms of trade. Thus, international trade is not always a threat to global environment.

TI: Russian Energy Sector and the Kyoto Protocol

AU: Ploujnikov,-O.; Berdin,-V.; Kokorin,-A.

SO: Pacific-and-Asian-Journal-of-Energy; 9(2), December 1999, pages 193-208.

TI: El Banco Mundial y el desarrollo sustentable. Algunas reflexiones sobre su perspectiva. (Some Reflections on the Outlook for World Bank and Sustainable Development. With English summary.)

AU: Tunon,-Claudio-Demo, et-al.

SO: Problemas-del-Desarrollo; 30(118), July-Sept. 1999, pages 9-34.

AB: According to the World Bank, the origin of the socio-economic and environmental crisis lies in the fact that population growth rates are higher than those of economic progress, while ownership of natural resources and the environment is either in the hands of the State or poorly defined. It therefore believes that sustainable development will be achieved by promoting economic growth while regarding the environment as a new variable. To this end, it intends to use privatization, the free market, the control of externalities by states, participation by non-governmental organizations and the gender perspective, among other strategies. In as much as this proposal is not innovative as regards the development paradigm promoted for fifty years, and certain examples in Latin America, one can assume that the World Bank proposal will not solve the severe worldwide socio-economic and environmental crisis.

TI: GATS and the Kyoto Mechanisms: Open Markets for Climate Change Mitigation Services?

AU: Springer,-Urs

SO: Aussenwirtschaft; 55(1), March 2000, pages 65-84.

AB: The Kyoto mechanisms Joint Implementation (JI) and Clean Development Mechanism (CDM) involve many services. In the General Agreement on Trade in Services (GATS), WTO members have committed to liberalize several service sectors. However, in the "environmental services" sector, which includes most services found in the JI/CDM value chain, only few countries have made commitments. Hence, companies delivering such services do not have market access in many countries, which leads to higher costs of JI/CDM services. Therefore, in the next WTO negotiation round environmental and energy services must be defined more accurately and further liberalization steps taken.

TI: Defending the Consumer's Right to a Clean Environment in the Face of Globalisation. The Case of Extraterritorial Environmental Protection Under European Community Law

AU: Hedemann-Robinson,-Martin

SO: Journal-of-Consumer-Policy; 23(1), March 2000, pages 25-61.

TI: Trade and the Environment: A Critical Assessment and Some Suggestions for Reconciliation

AU: Neumayer,-Eric

SO: Journal-of-Environment-and-Development; 9(2), June 2000, pages 138-59.

AB: This article critically assesses three ways in which trade might harm the environment. First, trade liberalization might exacerbate existing levels of resource depletion and environmental pollution. Second, open borders might allow companies to migrate to "pollution havens," thus undermining high environmental standards in host countries. Third, the dispute settlement system of the World Trade Organization (WTO) might favor trade over environmental interests in case of conflict. It is shown that although trade liberalization can lead to an increase in environmental degradation, pollution havens are not a statistically significant phenomenon. As concerns aimed measures at domestic environmental protection, the dispute settlement system in the WTO is not biased against environmental interests. The relationship is more complicated with respect to measures aimed at extrajurisdictional environmental protection and with respect to trade restrictions for health reasons under the Agreement on Sanitary and Phytosanitary Measures. The article concludes with some constructive suggestions on how trade and the environment can be reconciled in future trade negotiations.

TI: Subsidiarity and Governance Challenges for the WTO: Environmental and Labour Standards

AU: Rollo,-Jim; Winters,-L.-Alan

SO: World-Economy; 23(4), April 2000, pages 561-76.

TI: Strategic Policy and Environmental Quality: Helping the Domestic Industry to Provide Credible Information

AU: Rege,-Mari

SO: Environmental-and-Resource-Economics; 15(3), March 2000, pages 279-96.

AB: This paper shows that a country can improve an industry's competitiveness by requiring domestic firms to produce at the

environmental standards at which they claim to produce or otherwise impose a penalty on those firms found cheating. Competitiveness will improve because this regulation will help the domestic industry to provide credible information about the environmental quality of its production. The credible information will differentiate domestic products from other products on the world market, and in this way increase consumers' willingness to pay for domestic products. Even if the government has no preferences for environmental quality, it has incentives to regulate its cheaters in order to help the domestic industry to provide credible information and thereby improve competitiveness.

TI: Crecimiento y comercio Norte-Sur: Transferencia tecnologica versus mejora de los ecosistemas. (Growth and North-South Trade: Technology Transfer versus Improvement of Ecosystems. With English summary.)

AU: Cabo-Garcia,-Francisco-Jose; Escudero-Puebla,-Elena; Martin-Herran,-Guiomar

SO: Informacion-Comercial-Espanola-Revista-de-Economia; 0(782), Nov.-Dec. 1999, pages 7-19.

AB: This paper studies the relationship between biodiversity and economic growth in a model covering North-South trade. The model addresses two different scenarios in connection with the transfer of capital from North to South. In the first of these, capital transfers give rise to technological improvements that enhance the efficiency of production processes in the South; in the second scenario, in turn, these transfers are earmarked to increase the maximum capacity of the various species that the Southern ecosystem can carry. Differential game theory is used to prove the existence and optimality of development patterns involving sustained economic growth that respects biodiversity.

TI: An Environmental Perspective on Seattle

AU: Esty,-Daniel-C.

SO: Journal-of-International-Economic-Law; 3(1), March 2000, pages 176-78.

TI: Internalizing International versus Domestic Damages of a Pure Global Pollutant: An Extension of Musgrave and Shibata

AU: Kohn,-Robert-E.

SO: Public-Finance; 52(2), 1997, pages 198-209.

TI: Tariff Policy and Environmental Quality of Imports. (In Chinese. With English summary.)

AU: Kuo,-Horn-In; Hwang,-Hong

SO: Taiwan-Economic-Review; 28(1), March 2000, pages 43-72.

AB: In practice, the green tariff preference concept has often been applied to settle trade disputes relating to environmental protection. This paper analyzes the correlation between import tariffs and the environmental quality of imports. We find that it is ambiguous whether a lower tariff leads to a higher environmental quality of imports since the existence of this phenomenon hinges on the effects of the environmental quality of imports on the marginal utility of the imports. Specifically, if the better environmental quality of imports can mitigate the decline in the marginal utility of the imports, then a lower tariff necessarily raises the environmental quality of the imports; moreover, the quality will be even higher in the long run. This paper also investigates, in a slightly different setting, the

effect of the environmental quality of imports on optimal tariffs. In general, if consumers are not conscious of environmental protection, then the optimal tariff policy is to levy a high (low) tariff on imports with low (high) environmental standards.

TI: Agri-environmental Relationships and the Choice of Policy Mechanism

AU: Hodge,-Ian

SO: World-Economy; 23(2), February 2000, pages 257-73.

TI: International Trade and Environmental Quality: A Survey

AU: Jayadevappa,-Ravishankar; Chhatre,-Sumedha

SO: Ecological-Economics; 32(2), February 2000, pages 175-94.

TI: Economia, Entropia e Sustentabilidade: Abordagem e Visoes de Futuro da Economia da Sobrevivencia. (With English summary.)

AU: Mueller,-Charles-C.

SO: Estudos-Economicos; 29(4), 1999, pages 513-50.

AB: The paper evaluates the economics of survival--a school of thought that emphasizes the preservation of the opportunities of future generations on an extended time horizon. It examines the school's approach on the interactions between the economic system and the environment, and its main analytical concepts, particularly that of entropy. It shows that the concern of the school's founders was mainly with the consequences of a serious depletion of natural resources--particularly those of the earth's energy capital. Recently, however, emphasis was placed on problems stemming from the fragility of the global system in face of growing disturbances imposed by mankind's entropic acceleration. There are vital environmental functions, especially the preservation of ecosystem resiliency, and it is argued that a continued expansion of the scale of the economy may bring about irreversible damages to these fundamental functions.

TI: Porter's Hypothesis on Environmental Policy in an Oligopoly Model with Cost Asymmetry Caused by Innovation

AU: Feess,-Eberhard; Taistra,-Gregor

SO: Jahrbucher-fur-Nationalokonomie-und-Statistik; 220(1), January 2000, pages 18-31.

AB: Porter's hypothesis that a national leadership in environmental policy can increase the international competitiveness of domestic industries is analyzed in a two-period model with Cournot competition. It is assumed that an environmentally friendly technology leads to a decrease of unit costs in the second period. We demonstrate that a leadership can trigger the adoption of a green technology that increases the domestic firm's profits even if aggregated unit costs are higher, and if the firm does not innovate voluntarily. The optimal domestic policy, the timing of the foreign firm's innovation, and the effect of environmental policy on the firms' profits all depend on three factors: the probability that the policy is imitated, the difference in unit costs caused by the different technologies, and the significance of different unit costs depending on the inverse demand function.

TI: Environmental Implications of International Trade and Uneven Development: Toward a Critique of Environmental Economics

AU: Liodakis,-George

SO: Review-of-Radical-Political-Economics; 32(1), March 2000, pages 40-79.

AB: The main premises and the environmental implications of neoclassical trade theory and environmental economics are put under Marxist scrutiny. An attempt is then made to develop an alternative Marxist approach in investigating the specific significance of the capitalist mode of production and, more specifically, the environmental implications of international trade and uneven development. As argued, environmental degradation is largely the result of capitalist development and not of "underdevelopment" or poverty in Southern countries. It is further argued that international trade is ruled by absolute and not comparative advantage. This has important environmental implications insofar as the non-optimal effects of specialization, in terms of resource use, and the imbalancing effects of free trade tend to exacerbate the environmental problem.

TI: Jute, Polypropylene, and the Environment: A Study in International Trade and Market Failure

AU: Boyce, -James-K.

SO: Bangladesh-Development-Studies; 23(1-2), March-June 1995, pages 49-66.

AB: In recent decades the international market for jute has been hard-hit by competition with polypropylene, a synthetic material produced mainly in the industrialized countries. The production of polypropylene generates considerable pollution: the environmental impacts of jute appear to be modest by comparison. In other words, jute appears to have a comparative environmental advantage. If so, the internalization of environmental impacts in market prices--for example, via pollution taxes or tariffs--would improve jute's competitive position vis-a-vis polypropylene. This case contradicts the common assumption that tradable goods produced in developing countries have higher environmental costs than competing products of the industrialized countries.

TI: Global Trade Integration and Economic Convergence of Developing Countries

AU: Amponsah, -William; Colyer, -Dale; Jolly, -Curtis

SO: American-Journal-of-Agricultural-Economics; 81(5), 1999, pages 1142-48.

TI: Biodiversity, Trade and International Agreements

AU: Barbier, -Edward-B.

SO: Journal-of-Economic-Studies; 27(1-2), 2000, pages 55-74.

AB: The global market failure problem of international biodiversity loss can be mitigated through the use of trade interventions or by the creation of new international markets and institutions for the global environmental benefits generated by the biodiversity conserved by host countries. However, it may be difficult to reach a mutually agreed "trade for nature" deal when the biodiversity in the host country is threatened mainly by habitat conversion. On the other hand, if the threat is from over-exploitation, unilateral trade interventions by the recipient countries are also likely. Although there may be strong incentives for the latter countries to negotiate an international biodiversity agreement, if such incentives exist, then these countries may act unilaterally to compensate host countries for their conservation efforts. Rich countries therefore need convincing that they are likely to gain from reducing global biodiversity loss.

TI: Untying the Knots of International Environmental Agreements  
AU: Ross, -Anthony-Clunies  
SO: Journal-of-Economic-Studies; 27(1-2), 2000, pages 94-110.

TI: Economic Dimensions of Technological and Global Responses to the Kyoto Protocol  
AU: Grubb, -Michael  
SO: Journal-of-Economic-Studies; 27(1-2), 2000, pages 111-25.  
AB: This paper examines economic aspects of the Kyoto protocol on climate change, focusing on the protocol's longer-term impact and possible global evolution. Specifically, the analysis considers the economics of likely technological responses to the protocol and the implication of international dissemination of technologies and institutional practices, including the wider future development of policies and commitments. It is argued that these factors, in tandem with the protocol's provisions on the clean development mechanism, technology transfer, and the structure of rolling commitment periods, mean that the protocol offers an effective basis for long-term solutions to the problem of climate change.

TI: Corporate Interest and Trade Liberalization: The North American Free Trade Agreement and Environmental Protection  
AU: Grossman, -Perry  
SO: Organization-and-Environment; 13(1), March 2000, pages 61-85.  
AB: This article examines rhetoric by corporations about the inclusion of environmental issues in the North American Free Trade Agreement (NAFTA). It provides a greater understanding of corporate pressure on regulatory measures by indicating how corporate actions change in relation to social movement and state actions. The author develops a cultural political economy perspective to show how issues are not fixed but are shaped by power relations and ongoing meaning construction. In doing so, he argues for the integration of theories of the firm with theories of the state to reveal the relationship between organizations and their social and political environment. The author shows how corporate rhetoric in the NAFTA debate does not fit neatly into prevailing theories of organizational and political sociology and suggests, instead, a political economy perspective that indicates a dynamic cultural process by which corporations attempt to ensure profit maximization under changing circumstances.

TI: Trade, Transition Paths, and Sustainable Economies  
AU: Perkins, -Patricia-E.  
SO: Canadian-Journal-of-Development-Studies; 20(3), 1999, pages 593-608.  
AB: The main criticisms of trade from a sustainability viewpoint are that it accelerates resource depletion and pollution, harms income distribution both locally and internationally, and undermines democratic institutions. After considering the relationship between trade and "sustainability," this paper discusses a number of feedback mechanisms which promote the kind of trade that is more sustainable-- for the South as well as the North. The role of technological change, a model of the relationship between production and "sustaining services," data needs and research priorities are also discussed.

TI: Globalisation, Transport and the Environment: New Perspectives for Ecological Economics

AU: van-Veen-Groot,-Danielle-B.; Nijkamp,-Peter  
SO: Ecological-Economics; 31(3), December 1999, pages 331-46.  
AB: This article aims to offer an overview of key issues centred around the relationship between globalisation and transport-related environmental decay in the ecological economics literature of the past decade, followed by an exploration of new research endeavours. The scientific contribution of 10 years of Ecological Economics to issues of environmental sustainability in relation to international trade and transport is certainly not impressive. Hence, also contributions from other environmental economics journals are considered. Two themes which apparently have received less attention in the ecological economics literature are addressed, namely (1) the influence of global trade on the environment and (2) the environmental effects of international transport induced by trade. The total effect of globalisation and transportation on the environment originates from complex changes in the scale, structural, technological and product effects of our industrial system. Various conflicts between global trade/transportation and the environment are pointed out on the basis of these four effects. The paper argues that the net effects of these changes are still uncertain. Ecological economics, however, should contribute to the challenging task of analysing more thoroughly the effects of global trade and transport on the environment.

TI: Emissions Trading for Global Warming  
AU: Johnston,-James-L.  
SO: Regulation; 21(4), Fall 1998, pages 19-23.

TI: Nation-States and Common Markets: The Institutional Conditions for Acceptance  
AU: Duina,-Francesco; Blithe,-Frank  
SO: Review-of-International-Political-Economy; 6(4), Winter 1999, pages 494-530.  
AB: The polarized debate on the future of the nation-state in common markets singularly focuses on who controls supra national decision making. Scholars of the European Union, for instance, have for long disagreed over the extent to which nation-states control the European Commission. We believe that common markets can erode the authority of the nation-state through a second venue: with the promulgation of rules that, upon proper implementation, reach deep into national legislative and administrative authority and strip the nation-state of its ability to regulate important aspects of social life. When viewed from this perspective, the nation-state appears strangely positioned. In the European Union and Mercosur states at times yield to and at times refuse transnational rules. We propose an explanation for these implementation patterns. The explanation will, in our view, contribute more to a genuine understanding of current state-market conditions than any additional claim for or against the hegemony of common markets. Our hypothesis is institutional, centering on the challenges that transnational rules pose on the policy legacies and interest group organization of nation-states. To test our views, we turn to the European Union and the fate of a major environmental directive in Italy, Great Britain and Spain.

TI: Canada and the Kyoto Protocol  
AU: Grant,-John  
SO: Canadian-Business-Economics; 7(4), December 1999, pages 42-47.

TI: Regional Environmental Impacts of NAFTA on the Automotive Sector  
AU: Kirton, -John; Rugman, -Alan-M.  
SO: Canadian-Journal-of-Regional-Science; 21(2), Summer 1998, pages 227-54.

AB: Despite fears that NAFTA would generate a regulatory "race to the bottom" in terms of environmental standards and practices, the outcome in the automotive sector has been a "push to the top" inspired by NAFTA's consciousness-raising, institutions, dispute settlement mechanisms and incentives. This paper reviews North American environmental regulatory regimes before and after NAFTA. Progress in the NAFTA era is due to three factors: 1) an intensified move to full scale rationalisation and integration of the industry with a corresponding production incentive to have a uniform set of relevant environmental standards in all three countries; 2) a new wave of high level regulatory harmonisation; and 3) the rapid spread of harmonisation from the assembly to the parts and then aftermarket sectors, and from manufacturing standards, to fuel standards and then inspection, maintenance and other operating standards. Still, the intergovernmental, trilateral institutions and processes created by NAFTA are not performing up to their potential, and further steps are needed to adequately assist the automotive industry with the environmental regulatory challenges it faces.

TI: International Trade and Environmental Policy: How Effective Is 'Eco-dumping'?

AU: Xu, -Xinpeng

SO: Economic-Modelling; 17(1), January 2000, pages 71-90.

AB: This paper examines the effects of environmental regulations on the international competitiveness of domestic industries. A generalised GDP function, which incorporates both technology changes and increasing returns to scale is set up and a flexible translog function form is used to approximate this GDP function. A seemingly unrelated regression estimation technique is employed to estimate a system of sectoral share equations derived from the generalised GDP function. The basic hypothesis is that while the environmental factor is not a significant determinant of the international competitiveness of environmentally sensitive industries, technology is. The result supports this hypothesis and suggests that so-called eco-dumping is not an effective strategy in this context.

TI: Environmental Improvement with Trade Liberalization

AU: Bommer, -Rolf; Schulze, -Gunther-G.

SO: European-Journal-of-Political-Economy; 15(4), November 1999, pages 639-61.

AB: Past studies predict that trade liberalization agreements (and NAFTA in particular) harm the environment. These studies have focused on adjustments in production and have assumed that environmental policy is exogenously given. We show why trade liberalization and improved environmental quality are mutually compatible--when environmental policy is recognized as politically endogenous. We also present empirical evidence to support the basic assumptions underlying the consistency of more liberal trade policy and an improved environment.

TI: A Multilateral Agreement on Investment: Would It Undermine Subnational Environmental Protection?

AU: Singer, -Thomas-O.; Stumberg, -Robert

SO: Journal-of-Environment-and-Development; 8(1), March 1999, pages 5-23.

AB: Investors in the United States and other countries have a significant and growing stake in overseas business operations. The U.S. government is a leading proponent of a proposed OECD agreement to protect foreign investors from "discriminatory and distorting" government practices and to assure the free flow of capital across international borders. This agreement, a proposed Multilateral Agreement on Investment (MAI), would give cross-border investors greater protections than currently provided by NAFTA and the Uruguay Round agreements. OECD negotiators have stated that one of their goals is to curtail the powers of subnational governments in ways that go beyond NAFTA and the World Trade Organization. This article's purpose is to examine the potential impact of a proposed MAI on state and local environmental policies and practices and identify actions state policy makers can take to preserve their authority to accommodate local preferences in protecting natural resources and the environment.

TI: Trade Competition and Pollution Standards: "Race to the Bottom" or "Stuck at the Bottom"?

AU: Porter, -Gareth

SO: Journal-of-Environment-and-Development; 8(2), June 1999, pages 133-51.

AB: A major argument for upward harmonization of national industrial pollution standards is that unregulated trade competition among countries with wide disparities in standards will exert downward pressure on standards, particularly in the countries with the most stringent standards (the "race to bottom" thesis). But empirical evidence indicates that it is in the rapidly industrializing countries themselves, rather than in the countries with higher standards, that competitiveness concerns exert downward pressure on standards, creating a "stuck at the bottom" problem. The greater sensitivity of rapidly industrializing countries to competitiveness pressures can be explained by the unresponsiveness of their political institutions. This article calls for a radically different approach to the problem of standards and trade competition, proposing an agreement on common minimum standards to be negotiated solely among the rapidly industrializing countries themselves.

TI: Openness, Sustainability, and Public Participation: New Designs for Transboundary River Basin Institutions

AU: Milich, -Lenard; Varady, -Robert-G.

SO: Journal-of-Environment-and-Development; 8(3), September 1999, pages 258-306.

AB: The world's transboundary environmental institutions typically are driven from the top, function behind closed doors, disregard sustainability, and rely on technical fixes or regulatory mechanisms. This article compares those approaches, as manifested in various river basin commissions, to a new, more democratic model being tested in the U.S.-Mexico border region. Water factors into many transboundary environmental problems. More than 300 river basins are shared by two or more countries. The authors examine seven international river basin compacts, sketch four common conceptual paradigms, and argue that these models mostly ignore local needs and public inputs and sometimes also fail in their explicit objectives. The border between the United States and Mexico offers a more promising design. There, as a result of the 1993 North American Free Trade Agreement, a new, innovative authority,

the Border Environmental Cooperation Commission (BECC), has emerged. This institution has been fashioned to protect local interests and to sustain its activities environmentally and financially. We examine how well the BECC has fulfilled its promise of openness, transparency, and binationality, and conclude that properly adapted, the model's roots--openness, transparency, capacity building, bottom-up design, and sustainability--could take hold in other transboundary areas.

TI: Trade and Environment: An Empirical Analysis of the Technology Effect in the Steel Industry

AU: Reppelin-Hill, -Valerie

SO: Journal-of-Environmental-Economics-and-Management; 38(3), November 1999, pages 283-301.

AB: The objective of this paper is to study the impact of free trade on global environmental quality by focusing on the technology effect, that is, the relationship between trade openness and the adoption/diffusion of clean technologies. The paper attempts to empirically verify the existence of the technology effect by looking at the relationship between trade policy regime, or openness, and the speed of clean technology diffusion in the steel industry. Focusing on a cleaner steel technology, the electric arc furnace (EAF), in 30 steel-producing countries over 25 years, the results show that EAF technology is diffused faster in countries that have more open trade policy regimes, thereby supporting the existence of the technology effect for the industry considered. (c) 1999 Academic Press

TI: Reconciling the Conflict between the 'Pollution-Haven' Hypothesis and an Emerging Trajectory of International Technology Transfer

AU: Letchumanan, -Raman; Kodama, -Fumio

SO: Research-Policy; 29(1), January 2000, pages 59-79.

AB: Many developing countries have relied on technology transfer through foreign direct investment (FDI) from developed countries as a primary means of technology acquisition. However, recent increased global eco-consciousness and linking of trade and investment with environmental issues has the potential of disrupting these investment flows. This paper investigates the validity of the "pollution-haven" hypothesis (which claims that an open market regime will encourage the flow of generally low-technology polluting industries to developing countries) from a neo-technology trade perspective. In the process, an emerging trajectory of international technology transfer favoring high-technology industries is established. This paper concludes that positive measures enhancing FDI is not only crucial for technology upgrading, but at the same time brings about enhanced environmental welfare through transfer of eco-friendly products and production processes.

TI: Strategic Environmental Policy in an Open Economy

AU: Weder, -Rolf

SO: Aussenwirtschaft; 54(3), September 1999, pages 417-38.

AB: This paper assesses a recent argument which suggests that open economies may be well advised to pursue a strategic environmental policy. This policy deliberately deviates from the traditional rule (set an environmental standard such that marginal benefits from reduced pollution equal marginal abatement costs) in order to spur international competitiveness of domestic firms. The paper shows that there may exist opportunities for countries to increase domestic welfare by implementing "weak" or "strict" environmental standards.

However, these are usually second-best as well as beggar-thy-neighbour policies which are extremely sensitive to the exact nature of competition and market structure.

TI: Achieving a 10% Cut in Europe's Carbon Dioxide Emissions Using Additional Excise Duties: Coordinated, Uncoordinated and Unilateral Action Using the Econometric Model E3ME

AU: Barker,-Terry

SO: Economic-Systems-Research; 11(4), December 1999, pages 401-21.

AB: Coordinated, uncoordinated and unilateral policies to reduce carbon dioxide emissions by 10% in 11 member states of the European Union (EU) by 2010 are compared with unilateral policies in each member state. The paper presents the results from four projections using a large-scale, integrated, regionalized E3 model of the EU (not a general equilibrium model) estimated on time series, cross-section data for 1968-93 with international trade treated as between each member state and a European transport and distribution network. The 10% reduction is achieved by additional excise duties incremented every year from 1999 to 2010, according to the carbon contents of fuels, with special treatment of electricity (taxed on outputs not inputs) and with revenues recycled via reductions in employers' social security contributions. Multilateral coordinated policies require a common tax rate of 156 Ecus per tonne carbon (1999 prices), which rises to an average of 162 Ecu/tonne, with a wide range between regions when policies are uncoordinated. All the tax shift projections show double dividends of emission reduction and employment gain for all member states. Unilateral policies do not show much carbon leakage and they show smaller gains for output and employment. The results are compared with those from a general equilibrium model (GEM-E3), tackling the same topic.

TI: The Ivory Bandwagon: International Transmission of Interest-Group Politics

AU: Kaempfer,-William-H.; Lowenberg,-Anton-D.

SO: Independent-Review; 4(2), Fall 1999, pages 217-39.

TI: International Environmental Agreements: How the Policy Instrument Affects Equilibrium Emissions and Welfare

AU: Endres,-Alfred; Finus,-Michael

SO: Journal-of-Institutional-and-Theoretical-Economics; 155(3), October 1999, pages 527-50.

AB: Two countries, differing with respect to opportunity cost of abatement and environmental damage cost, negotiating joint emission reductions are considered. The bargaining process is analyzed in two policy regimes: Emission tax and transferable discharge permits. Emissions and welfare of the bargaining equilibria under these regimes are compared to each other and to the social optimum. The conditions for the superiority of the tax over the permit regime and vice versa are specified.

TI: Joint Implementation of Greenhouse Gas Abatement under the Kyoto Protocol's 'Clean Development Mechanism': Its Scope and Limits

AU: Parson,-Edward-A.; Fisher-Vanden,-Karen

SO: Policy-Sciences; 32(3), September 1999, pages 207-24.

AB: The Kyoto Protocol on climate change includes four flexibility mechanisms, which pursue lower-cost global reduction of greenhouse gas

emissions through voluntary international re-distribution of abatement effort. We consider the operation of one of these, the Clean Development Mechanism (CDM), which grants transferable credit for abatement achieved by individual projects in countries without national emission targets. An uncredited pilot phase in effect since 1995 provides only limited guidance for projecting the operation of the credited CDM. Under the CDM, intractable difficulties of accounting for project-level effects are likely to bias project activity toward particular project types for which exaggeration-resistant accounting rules are most readily available. This bias will favor retrofits over new investments, and will consequently limit the CDM to a modest contribution to required abatement in developing countries. Use of CDM credits as instruments of domestic policy in investor countries, as well as instruments of international policy, may mitigate this bias and the associated limitation. So may the use of projects based on novel technologies of carbon management.

TI: Costing an International Public Good: The Case of the Baltic Sea

AU: Markowska,-Agnieszka; Zylicz,-Tomasz

SO: Ecological-Economics; 30(2), August 1999, pages 301-16.

AB: The paper discusses an economically efficient and internationally equitable provision of a specific public good. The good in question, the Baltic Sea, satisfies a number of needs, but economic values implied may be different in various countries polluting and using the Sea. The level of eutrophication has been identified as a key characteristic of the Baltic Sea relevant for its value. The Chander-Tulkens model of cost-sharing is used to determine a hypothetical allocation of abatement costs across the countries around the sea. The application of the model is based on estimates of national abatement costs as well as national willingness to pay for reduced eutrophication. Estimating willingness to pay in a collection of countries (some of which undergo a transition from centrally planned systems) has been the main challenge of this study. The results were derived from a coordinated series of contingent valuation surveys in Lithuania, Poland and Sweden, combined with benefit transfer studies to cover the rest of the region. Predictions of cost-sharing schemes obtained from the Chander-Tulkens model are confronted with actual data on abatement expenditures and international assistance. Several recommendations on how to optimize the Baltic-wide programmes conclude the paper.

TI: Environmental Policy and Industrial Competitiveness: The Pollution-Haven Hypothesis Reconsidered

AU: Bommer,-Rolf

SO: Review-of-International-Economics; 7(2), May 1999, pages 342-55.

AB: The pollution-haven hypothesis suggests that strict environmental standards reduce domestic producers' competitiveness and result in relocation to countries with more lenient standards. This paper examines the question of whether relocation is always caused by reduced competitiveness at home. By using a signaling approach, it is shown that relocation can be undertaken for purely strategic reasons. Relocation is the producer's tool of indirect rent-seeking to convince the policymaker to refrain from a further tightening of environmental control. It is also shown that trade liberalization increases the probability of strategic relocation.

TI: The Costs of Carbon Sequestration: A Revealed-Preference Approach

AU: Stavins, -Robert-N.  
SO: American-Economic-Review; 89(4), September 1999, pages 994-1009.

TI: Valuation of Biodiversity within a North-South Trade Model  
AU: Cabo, -Francisco  
SO: Environment-and-Development-Economics; 4(3), July 1999, pages 251-77.

AB: Under a General Equilibrium model of International Trade, industrialized countries export capital intensive goods, while developing countries export natural resource intensive goods. Biodiversity is viewed as the number of species conserved while producing these goods. Higher conservation increases demand, but lowers goods supply. Consumers value biodiversity as the weighted sum of all the different species. If producers of both goods conserve more species, the South's terms of trade will rise in relation to the North's. Furthermore, we believe that a switch in consumer preferences, to a more homogeneous valuation of the species, is likely. This change would drop the South's terms of trade. Therefore, under these circumstances, this region is facing a risk. In conserving additional species, the South would be better off, both because its terms of trade increases and because the risk associated with a switch in preferences decreases.

TI: Trade Liberalization and the Environment in Costa Rica  
AU: Abler, -David-G.; Rodriguez, -Adrian-G.; Shortle, -James-S.  
SO: Environment-and-Development-Economics; 4(3), July 1999, pages 357-73.

AB: This study examines the environmental impacts of trade liberalization in Costa Rica. A CGE model is constructed which includes eight environmental indicators covering deforestation, pesticides, overfishing, hazardous wastes, inorganic wastes, organic wastes, greenhouse gases, and air pollution. Three trade liberalization scenarios are examined. Two sets of analyses are conducted for each scenario, one in which technologies do not change in response to trade liberalization and the other in which total factor productivity in each sector changes in response to changes in imports of machinery and equipment. To account for uncertainty regarding values of the model's parameters, a Monte Carlo experiment is conducted for each policy option. The impacts of trade liberalization on the environmental indicators are generally negative in sign but small or moderate in magnitude, both when technology is constant and when technology is allowed to vary.

TI: Is Trade Liberalization Harmful to the Environment? An Alternative View

AU: Tsai, -Pan-Long  
SO: Journal-of-Economic-Studies; 26(2-3), 1999, pages 201-08.  
AB: The standard definition of ecological dumping, the marginal cost of abatement is less than the marginal damage from the pollution, does not catch well the concern of the environmentalists. Comparing environmental quality before and after trade liberalization, this paper uses a partial equilibrium strategic trade framework to show that trade liberalization can improve environmental quality. This result holds under both Cournot and Bertrand competition, and for both partial and complete trade liberalization.

TI: Transferts financiers et optimum cooperatif international en matiere de pollutions-Stocks. (Sidepayments and Optimal International Cooperation as Regards Stock Pollutant. With English summary.)

AU: Germain,-Marc; Toint,-Philippe-L.; Tulkens,-Henry

SO: L'Actualite-Economique/Revue-D'Analyse-Economique; 75(1-2-3), March-June-Sept. 1999, pages 427-46.

AB: It is well known that the transnational character of many environmental problems requires cooperation amongst the countries involved, if a social optimum is at all to be achieved. Most of the numerous contributions that deal with the problems raised by this cooperation only deal with pollutants that do not accumulate. On the other hand, a lot of contributions which deal with the dynamic dimension of the problem when the pollutant accumulates leave aside the issue of the voluntary implementation of the international optimum. The aim of the present contribution is to overtake the two above limitations. Using both cooperative game theory and differential game theory, we define by means of sidepayments a sharing scheme of the abatement costs between countries that make cooperation both individually rational and coalitionally stable.

TI: International Environmental Policy: Problems and Possible Solutions

AU: Kirchgassner,-Gebhard

SO: Aussenwirtschaft; 54(2), June 1999, pages 269-90.

AB: Because there is no corresponding supranational institution, it is more difficult to provide solutions for international (global) than for national environmental problems. On the international level, only bargaining solutions are possible, but due to the smaller number of actors they are easier to achieve than on the national level. Such bargaining solutions are easier to achieve if different subjects can be combined within one agreement, such that (nearly) every participant receives a net benefit. This reduces the necessity for explicit compensations and, therefore, makes such treaties politically more feasible and increases their stability. In this paper, possible solutions for international environmental problems are discussed in cases when there are few and in cases when many countries are involved. In addition, problems of international liability regulations are discussed.

TI: Harmonization of Environmental Policies for Agriculture under NAFTA

AU: Bohman,-Mary; Lindsey,-Patricia-J.

SO: Canadian-Journal-of-Agricultural-Economics; 45(4), December 1997, pages 383-91.

TI: Resolving Transboundary Pollution Externalities by Linkage to Trade

AU: Hauer,-Grant; Runge,-C.-Ford

SO: Canadian-Journal-of-Agricultural-Economics; 45(4), December 1997, pages 393-402.

TI: International Tradable Carbon Dioxide Permits and Their Application under the Kyoto Protocol

AU: Schwartz,-Rachel-J.

SO: Journal-of-Public-and-International-Affairs; 10(0), Spring 1999, pages 80-98.

AB: The Kyoto Protocol has set binding targets for the reduction of greenhouse gas emissions by a large group of developed nations for the first time. This paper looks at the different policy instruments that may be used to help reach these goals, focusing on the tradable emissions permit scheme outlined by the Protocol. International trading of CO2 credits is explicitly allowed under the Protocol, but the mechanisms for monitoring, certifying, and enforcing compliance has not yet been developed. In order to encourage countries to participate in such a scheme, a supranational organization--either an existing agency or a newly created one--must take on these responsibilities. While the first five-year budget period does not begin until 2008, countries must begin making transitions now. Procedures must be drawn up for the accounting of reductions, dispute resolution, and penalties for noncompliance. Options for individual countries to meet their reduction targets are also discussed.

TI: Can Trade Liberalization Have Environmental Benefits in Developing Country Agriculture? A Sri Lankan Case Study

AU: Bandara, -Jayatilleke-S.; Coxhead, -Ian

SO: Journal-of-Policy-Modeling; 21(3), May 1999, pages 349-74.

AB: In an economy dominated by agriculture, trade policy reforms and associated changes may induce substantial reallocation of land between more and less erosive uses. However, the direction and magnitude of such a shift is difficult to predict due to the presence of existing policy distortions and of world market power in agricultural exports: moreover, changes occurring within agriculture may have economy-wide welfare effects through markets for factors and commodities. We use an applied general equilibrium model to evaluate and quantify the likely impacts of an across-the-board tariff reduction in Sri Lanka. In a related analysis, we examine the economic and environmental implications of technical progress in an important export sector, tea. We find that both types of change increase the demand for land in tea, a relatively less erosive sector, and thus have environmental as well as economic benefits for the Sri Lankan economy.

TI: What to Expect from an International System of Tradable Permits for Carbon Emissions

AU: McKibbin, -Warwick-J.; Shackleton, -Robert; Wilcoxon, -Peter-J.

SO: Resource-and-Energy-Economics; 21(3-4), August 1999, pages 319-46.

AB: We use an econometrically-estimated multi-region, multi-sector general equilibrium model of the world economy to examine the effects of using a system of internationally-tradable emissions permits to control world carbon dioxide emissions. We focus, in particular, on the effects of the system on flows of trade and international capital. Our results show that international trade and capital flows significantly alter projections of the domestic effects of emissions mitigation policy, compared with analyses that ignore international capital flows, and that under some systems of international permit trading the United States is likely to become a significant permit seller, the opposite of the conventional wisdom.

TI: The Environment and International Trade Negotiations: Open Loops in the Developing World

AU: Tussie, -Diana

SO: World-Economy; 22(4), June 1999, pages 535-45.

TI: Spatial Sustainability, Trade and Indicators: An Evaluation of the 'Ecological Footprint.'

AU: van-den-Bergh,-Jeroen-C.-J.-M.; Verbruggen,-Harmen

SO: Ecological-Economics; 29(1), April 1999, pages 61-72.

AB: The search for frameworks and indicators of sustainable development has taken a prominent place in this journal. However, some specific aspects have received little or no attention, notably the spatial dimension and the role of international trade in indicator development. Moreover, many sustainable development indicators comprise implicit valuations, weighting schemes and policy objectives, which are insufficiently recognised as such. This contribution tries to highlight these issues by means of a review of a recently proposed indicator for ecological-economic analysis, namely the ecological footprint, that has been developed by Wackernagel and Rees. Its concept and calculation procedure are criticised on a number of points, and it is concluded that the Ecological Footprint is not the comprehensive and transparent planning tool as is often assumed. In explaining our position we will argue that spatial sustainability and regional sustainable development have not been precisely discussed so far, neither in the literature on trade and environment, nor in that on sustainable development. We will defend the view that trade can contribute positively and negatively to environmental unsustainability. Consequently, indicators and models are needed that allow for analysing interactions and trade-offs between such opposite effects.

TI: Trade and Environment

AU: Shahin,-Magda

SO: Journal-of-Economic-Cooperation-among-Islamic-Countries; 20(3), July 1999, pages 1-19.

TI: I vantaggi comparati dell'Italia. Gli effetti sull'occupazione. (With English summary.)

AU: Cipollone,-Piero

SO: Rivista-di-Politica-Economica; 89(6), June 1999, pages 69-109.

AB: In this paper I investigate the evolution of comparative advantages of Italy in international trade, and I evaluate its effects on the level and on the sectoral composition of industrial employment, in the period 1981-1995. The focus is on the hypothesis that Italian companies have been crowded out of the 'traditional sectors' by the competition of new comers in the international trade arena. I show that this effect has been small. In contrast, Italy's comparative disadvantages worsened in sectors with highly skilled labor force. By running a counterfactual exercise, based on input-output matrices, I compute the foreign trade contribution to employment which, according to my results, has been positive for all the years in the period. I also show that the sectoral composition of trade balance has played an important role in shaping the composition by sector of employment, and its evolution through time.

TI: Game-Theoretic Modelling of Transboundary Pollution

AU: Missfeldt,-Fanny

SO: Journal-of-Economic-Surveys; 13(3), July 1999, pages 287-321.

AB: Transboundary pollution is pollution that is emitted in one country, and deposited or causing harm in another country. Due to the absence of a supranational institution that could enforce international legislation, transboundary externalities cannot be approached in the same way as domestic pollution problems. In an attempt to find non-

traditional solutions to such -border problems, recent environmental economics literature incorporates behavioural assumptions with the help of game theory. This paper discusses how different types of transboundary pollution have been approached, and which static and dynamic game theoretic solution concepts have been evaluated. While full cooperation among countries yields the economically optimal outcome it is difficult to reach, because countries are faced with an inequitable sharing of the burden of pollution abatement and with the incentive to free-ride. Side payment schemes to aid burden sharing and strategies to circumvent free riding are reviewed. Issues such as transaction costs, information and motivation are briefly discussed.

TI: Do Stringent Environmental Regulations Reduce the International Competitiveness of Environmentally Sensitive Goods? A Global Perspective

AU: Xu,-Xinpeng

SO: World-Development; 27(7), July 1999, pages 1215-26.

AB: In this paper I examine whether stringent environmental standards reduce the international competitiveness of environmentally sensitive industries using a comprehensive dataset of trade flows of environmentally sensitive goods (ESGs) disaggregated at the four-digit level of the Standard International Trade Classification. The data relate 1965-95 and cover 34 countries, accounting for nearly 80% of world exports of ESGs in 1995. I find that export performance of ESGs for most countries remained unchanged between the 1960s and 1990s, despite the introduction of stringent environmental standards in most developed countries in the 1970s and 1980s.

TI: Winners and Losers in a World with Global Warming: Noncooperation, Altruism, and Social Welfare

AU: Caplan,-Arthur-J.; Ellis,-Christopher-J.; Silva,-Emilson-C.-D.

SO: Journal-of-Environmental-Economics-and-Management; 37(3), May 1999, pages 256-71.

AB: In this paper, global warming is an asymmetric transboundary externality which benefits some countries or regions and harms others. We use a simple two country model to analyze the effects of global warming on resource allocations, the global-warming stock, and national and global welfare. (c) 1999 Academic Press

TI: The Effect of Global Trade Liberalization on Toxic Emissions in Industry

AU: Ferrantino,-Michael-J.; Linkins,-Linda-A.

SO: Weltwirtschaftliches-Archiv/Review-of-World-Economics; 135(1), 1999, pages 128-55.

AB: Estimates of the output effects of the Uruguay Round and of a hypothetical agreement for free trade in manufactures are combined with estimates of the toxic intensity of industrial activities. Liberalization reduces global pollution moderately by eliminating overproduction in protected 'dirty' activities and by reallocating 'dirty' production from developing to developed countries. Parts of Asia, and the economies in transition, may become more polluted as a result of liberalization. Improvements in emission technology due to liberalization-induced income increases are estimated to be of second-order importance.