Bibliography

Abman, R. and Lundberg, C. (2019), "Does Free Trade Increase Deforestation? The Effects of Regional Trade Agreements", *Journal of the Association of Environmental and Resource Economists* 7(1):35-72.

Abman, R. M., Lundberg, C. and Ruta, M. (2021), "The Effectiveness of Environmental Provisions in Regional Trade Agreements", Policy Research Working Paper Series No. 9601, Washington, D.C.: World Bank.

Acemoglu, D., Aghion, P., Bursztyn, L. and Hemous, D. (2012), "The Environment and Directed Technical Change", *American Economic Review* 102(1):131-166.

Adams, K. M., Benzie, M., Croft, S. and Sadowski, S. (2021) *Climate Change, Trade, and Global Food Security,* Stockholm: Stockholm Environment Institute (SEI).

Aguiar, A., Corong, E., van der Mensbrugghe, D., Bekkers, E., Koopman, R. and Teh, R. (2019), "The WTO Global Trade Model: Technical documentation", Staff Working Paper No. ERSD-2019-10, Geneva: WTO.

Air Transport Action Group (ATAG) (2020) *Balancing Growth in Connectivity with a Comprehensive Global Air Transport Response to the Climate Emergency,* Geneva: ATAG.

Akerman, A., Forslid, R. and Prane, O. (2021), "Imports and the CO_2 Emissions of Firms", CEPR Press Discussion Paper No. 16090, London: Centre for Economic Policy Research (CEPR).

Akimoto, K., Sano, F. and Tehrani, B. S. (2017), "The Analyses on the Economic Costs for Achieving the Nationally Determined Contributions and the Expected Global Emission Pathways", *Evolutionary and Institutional Economics Review* 14:193-206.

Alcalá, F. and Ciccone, A. (2004), "Trade and Productivity", *The Quarterly Journal of Economics* 119(2):613-646.

Aldy, J. E. and Stavins, R. N. (2012), "The Promise and Problems of Pricing Carbon: Theory and Experience", *The Journal of Environment and Development* 21(2):152-180.

Amiti, M., Dai, M., Feenstra, R. C. and Romalis, J. C. (2017), "How Did China's WTO Entry Benefit U.S. Consumers?", NBER Working Paper No. 23487, Cambridge (MA): National Bureau of Economic Research (NBER).

Amiti, M. and Konings, J. (2007), "Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia", *American Economic Review* 97(5):1611-1638.

Antweiler, W., Copeland, B. R. and Taylor, M. S. (2001), "Is Free Trade Good for the Environment?", *American Economic Review* 91(4):877-908.

Arndt, C., Arent, D., Hartley, F., Merven, B. and Mondal, A. H. (2019), "Faster Than You Think: Renewable Energy and Developing Countries", *Annual Review of Resource Economics* 11:149-168.

Arrow, K. J. (1962), "Economic Welfare and the Allocation of Resources for Invention", *The Rate and Direction of Inventive Activity: Economic and Social Factors,* Princeton (NJ): Princeton University Press.

Asia-Pacific Economic Cooperation (APEC) (2021) *Environmental Services in the APEC Region: Definition, Challenges and Opportunities,* Singapore: APEC.

Avi-Yonah, R. S. and Uhlmann, D. M. (2009), "Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming than Cap and Trade", *Stanford Environmental Law Journal* 28(1):3-50.

Bacchetta, M., Bekkers, E., Solleder, J.-M. and Tresa, E. (2022), "Environmental Goods Trade Liberalization: A Quantitative Modelling Study of Trade and Emission Effects", Unpublished Manuscript, Geneva: World Trade Organization.

Bacchetta, M., Milet, E. M. and Monteiro, J.-A. (2019), *Making Globalization More Inclusive: Lessons from Experience with Adjustment*. Geneva: World Trade Organization (WTO).

Badoc-Gonzales, B. P., Mandigma, M. B. S. and Tan, J. J. (2022), "SME Resilience as a Catalyst for Tourism Destinations: a Literature Review", *Journal of Global Entrepreneurship Research*.

Bailey, R. and Wellesley, L. (2017), *Chokepoints and Vulnerabilities in Global Food Trade*, London: Chatham House.

Banerjee, S. N., Roy, J. and Yasar, M. (2021), "Exporting and Pollution Abatement Expenditure: Evidence from Firm-level Data", *Journal of Environmental Economics and Management* 105, 102403.

Barker, T., Junankar, S., Pollitt, H. and Summerton, P. (2007), "Carbon Leakage from Unilateral Environmental Tax Reforms in Europe, 1995–2005", *Energy Policy* 35(12):6281-6292.

Barrot, J.-N. and Sauvagnat, J. (2016), "Input Specificity and the Propagation of Idiosyncratic Shocks in Production Networks", *The Quarterly Journal of Economics* 131(3):1543-1592.

Barrows, G. and Ollivier, H. (2021), "Foreign Demand, Developing Country Exports, and CO_2 Emissions: Firm-level Evidence from India", *Journal of Development Economics* 149:102587.

Batista, F. and Gilbert, J. (2021), "Waterways Are Drying Up Making Navigation Difficult In Key South American Crop-Shipping Ports", *Bloomberg*, 27 April 2021.

Baumeister, S. (2020), "Mitigating the Climate Change Impacts of Aviation Through Behavioural Change", *Transportation Research Procedia* 48:2006-2017.

Beejadhur, Y. A., Kelleher, K., Kelly, T., Howells, M., Alfstad, T., Farrell, S., Smith, J., Neumann, J. E., Strzepek, K. M., Emanuel, K. and Willwerth, J. (2017) *The Ocean Economy in Mauritius: Making It Happen, Making It Last*, Washington, D.C.: World Bank.

Beinhocker, E., Farmer, J. D. and Hepburn, C. (2021), "Going Big and Fast on Renewables Would Save Trillions in Energy Costs", *Washington Post*, 21 September 2021.

Bekkers, E. and Cariola, G. (2022), "Comparing Different Approaches to Tackle the Challenges of Global Carbon Pricing", Staff Working Paper No. ERSD-2022-10, Geneva: WTO.

Bekkers, E., Metivier, J., Tresa, E. and Yilmaz, A. N. (2022), "The Role of International Trade in Decarbonizing the Global Economy", Unpublished Manuscript, Geneva: World Trade Organization.

Bellora, C. and Fontagné, L. (2022), "EU in Search of a WTO-compatible Carbon Border Adjustment Mechanism", CEPII Working Papers No. 2022-01, Paris: Centre d'Études Prospectives et d'Informations Internationales (CEPII).

Benz, S. and Yalcin, E. (2013), "Quantifying the Economic Effects of an EU-Japan Free Trade Agreement", CESifo Working Paper Series No. 4319, Münich: Center for Economic Studies and Institute for Economic Research (CESifo).

Benzie, M. and Harris, K. (2021), "Transboundary Climate Risk and Adaptation", Science for Adaptation, Policy Brief #2, Geneva: World Adaptation Science Program (WASP).

Biango, A., Hamilton, J. M. and Tol, R. S. J. (2007), "The Impact of Climate Change on Domestic and International Tourism: A Simulation Study", *The Integrated Assessment Journal* 7(1):25-49.

Bloom, N., Draca, M. and Van Reenen, J. (2016), "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity", *Review of Economic Studies* 83(1):87-117.

Boehm, C. E., Flaaen, A. and Pandalai-Nayar, N. (2019), "Input Linkages and the Transmission of Shocks: Firm-level Evidence from the 2011 Tōhoku Earthquake", *Review of Economics and Statistics* 101(1):60-75.

Böhringer, C., Balistreri, E. J. and Rutherford, T. F. (2012), "The Role of Border Carbon Adjustment in Unilateral Climate Policy: Overview of an Energy Modeling Forum Study (EMF 29)", *Energy Economics* 34:S97-S110.

Böhringer, C., Carbone, J. C. and Rutherford, T. F. (2016), "The Strategic Value of Carbon Tariffs", *American Economic Journal: Economic Policy* 8(1):28-51.

Böhringer, C., Fischer, C. and Rosendahl, K. E. (2010), "The Global Effects of Subglobal Climate Policies", *The BE Journal of Economic Analysis & Policy* 10(2):1-35.

Böhringer, C., Fischer, C., Rosendahl, K. E. and Rutherford, T. F. (2022), "Potential Impacts and Challenges of Border Carbon Adjustments", *Nature Climate Change* 12:22–29.

Böhringer, C., Peterson, S., Rutherford, T. F., Schneider, J. and Winkler, M. (2021), "Climate Policies After Paris: Pledge, Trade and Recycle: Insights From the 36th Energy Modeling Forum Study (EMF36)", *Energy Economics* 103, 105471.

Bosello, F., Eboli, F. and Pierfederici, R. (2012), "Assessing the Economic Impacts of Climate Change – an Updated CGE Point of View", FEEM Working Paper No. 2.2012, Milan: Fondazione Eni Enrico Mattei (FEEM).

Bosello, F. and Parrado, R. (2022), "Climate Change Impacts and Market-Driven Adaptation: The Costs of Inaction Including Market Rigidities", in Markandya, A. and Rübbelke, D. (eds.), *Climate and Development,* Singapore: World Scientific Publishing.

Bosetti, V., Carraro, C., de Cian, E., Massetti, E. and Tavoni, M. (2013), "Incentives and Stability of International Climate Coalitions: An Integrated Assessment", *Energy Policy* 55:44-56.

Bosio, E. and Djankov, S. (2020), "How Large Is Public Procurement", *Let's Talk Development*, Washington, D.C.: World Bank.

Boston Consulting Group (BCG) and HSBC (2021), *Delivering Net Zero Supply Chains: The Multi-Trillion Dollar Key to Beat Climate Change,* London: BCG.

BP (2017), *BP Statistical Review of World Energy 2017,* London: BP.

Brakarz, B. (2020), "Low-Carbon Farming in Brazil Can Benefit Farmers and Curb Climate Change", IDB Sustainability Blog, Washington, D.C.: Inter-American Development Bank (IDB).

Brandi, C. (2017), *Trade Elements in Countries' Climate Contributions under the Paris Agreement,* Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Brändle, G., Schönfisch, M. and Schulte, S. (2021), "Estimating Long-term Global Supply Costs for Low-carbon Hydrogen", Applied Energy 302, 117481.

Branger, F. and Quirion, P. (2014), "Would Border Carbon Adjustments Prevent Carbon Leakage and Heavy Industry Competitiveness Losses? Insights from a Meta-analysis of Recent Economic Studies", *Ecological economics* 99:29-39.

Branstetter, L. and Maskus, K. E. (2022), "Global Knowledge Flows, Absorptive Capacity, and Capability Acquisition: Old Ideas, Recent Evidence, and New Approaches", in Taubman, A. and Watal, J. (eds.), *Trade in Knowledge,* Cambridge (UK): Cambridge University Press.

Brenton, P. and Chemutai, V. (2021) *The Trade and Climate Change Nexus: The Urgency and Opportunities for Developing Countries,* Washington, D.C.: World Bank.

Bretschger, L., Lechthaler, F., Rausch, S. and Zhang, L. (2017), "Knowledge Diffusion, Endogenous Growth, and the Costs of Global Climate Policy", *European Economic Review* 93:47-72.

Brottem, L. V. (2016), "Environmental Change and Farmer-Herder Conflict in Agro-Pastoral West Africa", *Human Ecology* 44(5):547-563.

Burch, S., Andrachuk, M., Carey, D., Frantzeskaki, N., Schroeder, H., Mischkowski, N. and Loorbach, D. (2016), "Governing and Accelerating Transformative Entrepreneurship: Exploring the Potential for Small Business Innovation on Urban Sustainability Transitions", *Current Opinion in Environmental Sustainability* 22:26-32.

Burke, M., Hsiang, S. and Miguel, E. (2014), "Climate and Conflict", NBER Working Paper No. 20598, Cambridge (MA): National Bureau of Economic Research (NBER).

Burniaux, J.-M., Château, J. and Sauvage, J. (2011), "The Trade Effects of Phasing Out Fossil-Fuel Consumption Subsidies", OECD Trade and Environment Working Papers No. 2011/05, Paris: Organisation for Economic Co-operation and Development (OECD).

Bustos, P. (2011), "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms", *American Economic Review* 101(1):304-340.

Cadot, O., Gourdon, J. and van Tongeren, F. (2018), "Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches", OECD Trade Policy Papers No. 215, Paris: Organisation for Economic Co-operation and Development (OECD).

Carbone, J. C. and Rivers, N. (2020), "The Impacts of Unilateral Climate Policy on Competitiveness: Evidence from Computable General Equilibrium Models", *Review of Environmental Economics and Policy* 11(1):24-42.

Center for International Environmental Law (CIEL) (2019), *Plastic and Climate: The Hidden Costs of a Plastic Planet,* Washington, D.C.: CIEL.

Cerdeiro, D. A. and Komaromi, A. (2021), "Trade and Income in the Long Run: Are There Really Gains, and Are They Widely Shared?", *Review of International Economics* 29(4):703-731.

Cernat, L. and Boucher, D. (2021), "Multilateral Cooperation Behind the Trade War Headlines: How Much Trade is Freed Up?", CEPS Policy Insights No. PI2021-03, Brussels: Centre for European Policy Studies (CEPS).

Chakraborty, S. K. and Mazzanti, M. (2020), "Energy Intensity and Green Energy Innovation: Checking Heterogeneous Country Effects in the OECD", *Structural Change and Economic Dynamics* 52(C):328-343.

Chen, C., Nobel, I., Hellmann, J., Coffee, J., Murillo, M. and Chawla, N. (2015), "University of Notre Dame Global Adaptation Index: Country Index Technical Report", Notre Dame (IN): University of Notre Dame.

Cherniwchan, J. (2017), "Trade Liberalization and the Environment: Evidence from NAFTA and US Manufacturing", *Journal of International Economics* 105:130-149.

Cherniwchan, J., Copeland, B. R. and Taylor, M. S. (2017), "Trade and the Environment: New Methods, Measurements, and Results", *Annual Review of Economics* 9(1):59-85.

Cherniwchan, J. and Najjar, N. (2022), "Do Environmental Regulations Affect the Decision to Export?", *American Economic Journal: Economic Policy* 14(2):125-60.

Cherniwchan, J. and Taylor, M. S. (2022), "International Trade and the Environment: Three Remaining Empirical Challenges", NBER Working Paper No. 30020, Cambridge (MA): National Bureau of Economic Research (NBER).

Christensen, J. (2020), "How Decarbonizing Shipping Could Unlock a Global Energy Transition", World Economic Forum Annual Meeting 2020, Geneva: World Economic Forum.

Climate Policy Initiative (2021), *Global Landscape of Climate Finance 2021*, San Francisco: Climate Policy Initiative.

Cockburn, J., Robichaud, V. and Tiberti, L. (2018), "Energy Subsidy Reform and Poverty in Arab Countries: A Comparative CGE-Microsimulation Analysis of Egypt And Jordan", *Review of Income and Wealth* 64(S1):S249-S273.

Cole, M. and Elliott, R. (2003), "Determining the Trade-Environment Composition Effect: the Role of Capital, Labor and Environmental Regulations", *Journal of Environmental Economics and Management* 46(3):363-383.

Cole, M., Elliott, R. J. R. and Zhang, L. (2017), "Foreign Direct Investment and the Environment", *Annual Review of Environment and Resources* 42(1):465-487.

Conte, B., Desmet, K., Nagy, D. K. and Rossi-Hansberg, E. (2021), "Local Sectoral Specialization in a Warming World", *Journal of Economic Geography* 21(4):493-530.

Copeland, B. R., Shapiro, J. S. and Taylor, M. S. (2022), "Globalization and the Environment", in Gopinath, G., Helpman, E. and Rogoff, K. (eds.), *Handbook of International Economics,* Amsterdam: North Holland.

Copeland, B. R. and Taylor, M. S. (2004), "Trade, Growth, and the Environment", *Journal of Economic Literature* 42(1):7-71.

Cornelis, E. (2019), "History and Prospect of Voluntary Agreements on Industrial Energy Efficiency in Europe", *Energy Policy* 132(C):567-582.

Cosbey, A., Dröge, S., Fischer, C. and Munnings, C. (2020), "Developing Guidance for Implementing Border Carbon Adjustments: Lessons, Cautions, and Research Needs from the Literature", *Review of Environmental Economics and Policy* 13(1):3-22.

Costa Rican Tourism Board (Instituto Costarricense de Turismo – ICT) (2022a) Información de las Divisas Generadas por el Turismo en Costa Rica, San José: ICT.

Costa Rican Tourism Board (Instituto Costarricense de Turismo – ICT) (2022b) Anuario Estadístico de Turismo 2021, San José: ICT.

Costa Rican Tourism Board (Instituto Costarricense de Turismo – ICT) (2022c) Encuesta Aérea de No Residentes, Aeropuerto Internacional Daniel Oduber Quirós, San José: ICT.

Crain, N. V. and Crain, W. M. (2010), *The Impact of Regulatory Costs on Small Firms,* Easton: Lafayette College.

Cramton, P., MacKay, D. J., Ockenfels, A. and Stoft, S. (2017), *Global Carbon Pricing: the Path to Climate Cooperation*, Cambridge (MA): MIT Press.

Crippa, M., Janssens-Maenhout, G., Guizzardi, D. and Galmarini, S. (2016), "EU Effect: Exporting Emission Standards for Vehicles Through the Global Market Economy", *Journal of Environmental Management* 183:959-971.

Cristea, A., Hummels, D., Puzzello, L. and Avetisyan, M. (2013), "Trade and the Greenhouse Gas Emissions from International Freight Transport", *Journal of Environmental Economics and Management* 65(1):153-173.

Cui, J., Tam, O. K., Wang, B. and Zhang, Y. (2020), "The Environmental Effect of Trade Liberalization: Evidence from China's Manufacturing Firms", *The World Economy* 43(12):3357-3383.

David, M. and Sinclair-Desgagné, B. (2005), "Environmental Regulation and the Eco-Industry", *Journal of Regulatory Economics* 28:141-155.

David, P. (2002), *Technical Choice Innovation and Economic Growth: Essays on American and British Experiences in the Nineteenth Century*, Cambridge (UK): Cambridge University Press.

de Alwis, J. M. D. D. J. (2015), "Environmental Consequence of Trade Openness for Environmental Goods", *Sri Lankan Journal of Agricultural Economics* 16(1):79-98.

de Melo, J. (2020), "For an Environmentally Friendly Trade Policy in Mauritius", Enterprising Africa Blog.

Dechezleprêtre, A., Gennaioli, C., Martin, R., Muûls, M. and Stoerk, T. (2022), "Searching for Carbon Leaks in Multinational Companies", *Journal of Environmental Economics and Management* 112, 102601.

Dechezleprêtre, A. and Glachant, M. (2014), "Does Foreign Environmental Policy Influence Domestic Innovation? Evidence from the Wind Industry", *Environmental and Resource Economics* 58(3):391-413.

Dechezleprêtre, A., Glachant, M. and Ménière, Y. (2008), "The Clean Development Mechanism and the International Diffusion of Technologies: An Empirical Study", *Energy Policy* 36(4):1273-1283.

Dechezleprêtre, A. and Sato, M. (2017), "The Impacts of Environmental Regulations on Competitiveness", *Review of Environmental Economics and Policy* 11(2):183-206.

Delgado, M. and Kyle, M. (2022), "Trade in Intellectual Property-intensive Goods", in Taubman, A. and Watal, J. (eds.), *Trade in Knowledge,* Cambridge (UK): Cambridge University Press.

Dell, M., Jones, B. F. and Olken, B. A. (2012), "Temperature Shocks and Economic Growth: Evidence From the Last Half Century", *American Economic Journal: Macroeconomics* 4(3):66-95.

Dellink, R., Chateau, J., Lanzi, E. and Magne, B. (2017), "Long-term Economic Growth Projections in the Shared Socioeconomic Pathways", *Global Environmental Change* 42:200-214.

Dellink, R., Hwang, H., Lanzi, E. and Chateau, J. (2017), *International Trade Consequences of Climate Change,* Paris:

Organisation for Economic Co-operation and Development (OECD).

Dellink, R., Lanzi, E. and Chateau, J. (2019), "The Sectoral and Regional Economic Consequences of Climate Change to 2060", *Environmental and Resource Economics* 72(2):309-363.

Dijkstra, B. R. and Anuj, M. J. (2016), "Liberalizing Trade in Environmental Goods", Environmental Economics and Policy Studies 18:499–526.

Dingel, J. I., Meng, K. C. and Hsiang, S. M. (2019), "Spatial Correlation, Trade, and Inequality: Evidence From the Global Climate", NBER Working Paper No. 25447, Cambridge (MA): National Bureau of Economic Research (NBER).

Dominioni, G. and Esty, D. (2022), "Cushing, Designing Effective Border-Carbon Adjustment Mechanisms: Aligning the Global Trade and Climate Change Regimes", *Arizona Law Review* 65(1).

Dorband, I. I., Jakob, M., Matthias, K. and Steckel, J. C. (2019), "Poverty and Distributional Effects of Carbon Pricing in Low- And Middle-Income Countries – A Global Comparative Analysis", *World Development* 115:246-257.

Dröge, S. (2011), "Using Border Measures to Address Carbon Flows", *Climate Policy* 11(5):1191-1201.

Dröge, S., van Asselt, H., Brewer, T., Grubb, M., Ismer, R., Kameyama, Y., Mehling, M., Monjon, S., Neuhoff, K. and Quirion, P. (2009), *Tackling Leakage in a World of Unequal Carbon Prices,* London: Climate Strategies.

Duval, Y. and Hardy, S. (2021), "Climate Change and Trade Facilitation: Estimating Greenhouse Gas Emission Savings from Implementation of Cross-Border Paperless Trade in Asia and the Pacific", *Journal of Asian Economic Integration* 3(2):190-210.

Dvorak, P. and Hirtenstein, A. (2022), "Europe's Energy Crisis Threatens to Slow Green Transition; Continent Might Not Be Moving as Fast as Promised to Shift Way From Fossil Fuels", *The Wall Street Journal* 1 August 2022.

Eberle, U. J., Rohner, D. and Thoening, M. (2020), "Heat and Hate: Climate Security and Farmer-Herder Conflicts in Africa", CEPR Discussion Papers No. 15542, London: Centre for Economic Policy Research (CEPR).

Eboli, F., Parrado, R. and Roson, R. (2010), "Climate Change Feedback on Economic Growth: Explorations with a Dynamic General Equilibrium Model", *Environment and Development Economics* 15(5):515-533.

Edmonds, J., Forrister, D., Clarke, L., de Clara, S. and Munnings, C. (2019), *The Economic Potential of Article 6 of the Paris Agreement and Implementation Challenges,* Washington, D.C.: International Emissions Trading Association (IETA), University of Maryland and Carbon Pricing Leadership Coalition (CPLC).

Elliott, J., Foster, I., Kortum, S., Jush, G. K., Munson, T. and Weisbach, D. (2013), "Unilateral carbon taxes, border tax adjustments and carbon leakage", *Theoretical Inquiries in Law* 14(1):207-244.

Ellis, J. (2010), *The Effects of Fossil-Fuel Subsidy Reform: A Review of Modelling and Empirical Studies,* Geneva: International Institute for Sustainable Development (IISD).

Enhanced Integrated Framework (EIF) (2022), *EIF Annual Report 2021,* Geneva: WTO.

Environmental Business International (EBI) (2017), *Global Environmental Industry*, San Diego (CA): Environmental Business International.

Eskeland, G. S. and Harrison, A. E. (2003), "Moving to Greener Pastures? Multinationals and the Pollution Haven Hypothesis", Journal of Development Economics 70(1):1-23.

Eurostat (2009), *The Environmental Goods and Services Sector: A Data Collection Handbook,* Luxembourg: European Commission (EC).

Eurostat (2016), *Environmental Goods and Services Sector Accounts – Practical Guide*, Luxembourg: Publications Office of the European Union.

Fadly, D. and Fontes, F. P. (2019), "Geographical Proximity and Renewable Energy Diffusion: An Empirical Approach", *Energy Policy* 129(C):422-435.

Falcao, T. (2020), "Toward Carbon Tax Internationalism: The EU Border Carbon Adjustment Proposal", *Tax Notes International* 98(9).

Faria, W. R. and Almeida, A. N. (2016), "Relationship Between Openness to Trade and Deforestation: Empirical Evidence from the Brazilian Amazon", *Ecological economics* 121:85-97.

Fell, H. and Linn, J. (2013), "Renewable Electricity Policies, Heterogeneity, and Cost Effectiveness", *Journal of Environmental Economics and Management* 66(3):688-707.

Finon, D. (2019), "Carbon Policy in Developing Countries: Giving Priority to Non-Price Instruments", *Energy Policy* 132:38-43.

Fischer, C. and Fox, A. K. (2007), "Output-based Allocation of Emissions Permits for Mitigating Tax and Trade Interactions", *Land Economics* 83(4):575-599.

Food and Agriculture Organization of the United Nations (FAO) (1996), *Food Security: Some Macroeconomic Dimensions,* Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO) (2018a), *The State of Agricultural Commodity Markets 2018. Agricultural Trade, Climate Change and Food Security,* Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO) (2018b), *The State of Food Security and Nutrition in the World 2018: Building Climate Resilience for Food Security and Nutrition,* Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO) (2018c), *The Impact of Disasters and Crises on Agriculture and Food Security – 2017,* Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO), United Nations Development Programme (UNDP) and United Nations Environment Program (UNEP) (2021), *A Multi-Billion Dollar Opportunity - Repurposing Agricultural Support to Transform Food Systems,* Rome: FAO.

Forschungsinstitut für Biologischen Landbau (FiBL) (2022), "Global Organic Market: Unprecedented Growth in 2020", Frick: FiBL.

Fowlie, M., Petersen, C. and Reguant, M. (2021), "Border Carbon Adjustments When Carbon Intensity Varies Across Producers: Evidence from California", *American Economic Association Papers and Proceedings* 111:401-405.

Frankel, J. A. and Romer, D. H. (1999), "Does Trade Cause Growth?", *American Economic Review* 89(3):379-399.

Free, C. M., Thorson, J. T., Pinsky, M. L., Wiedenmann, J. and Jensen, O. P. (2019), "Impacts of Historical Warming on Marine Fisheries Production", *Science* 363(6430):979-983.

Friedt, F. L. (2021), "Natural Disasters, Aggregate Trade Resilience, and Local Disruptions: Evidence from Hurricane Katrina", *Review of International Economics* 29(5):1081-1120.

Gadhok, I., Mermigkas, G., Hepburn, J., Bellmann, C. and Krivonos, E. (2020), *Trade and Sustainable Development Goal 2 - Policy Options and Their Trade-offs,* Rome: Food and Agriculture Organization of the United Nations (FAO).

Garrett-Peltier, H. (2017), "Green Versus Brown: Comparing the Employment Impacts of Energy Efficiency, Renewable Energy, and Fossil Fuels Using an Input-output Model", *Economic Modelling* 61:439-447.

Garrido, L., Fazekas, D., Pollitt, H., Smith, A., Berg von Linde, M., McGregor, M. and Westphal, M. (2019) *Unlocking the Inclusive Growth Story of the 21st Century: Accelerating Climate Action in Urgent Times – Technical Note,* Cambridge (UK): Cambridge Econometrics.

Garsous, G. and Worack, S. (2021), "Trade as a Channel for Environmental Technologies Diffusion: The Case of the Wind Turbine Manufacturing Industry", OECD Trade and Environment Working Papers No. 2021/01, Paris: Organisation for Economic Co-operation and Development (OECD).

Gephart, J. A., Henriksson, P. J. G., Parker, R. W. R., Shepon, A., Gorospe, K. D., Bergman, K., Eshel, G., Golden, C. D., Halpern, B. S., Hornborg, S., Jonell, M., Metian, M., Mifflin, K., Newton, R., Tyedmers, P., Zhang, W., Ziegler, F. and Troell, M. (2021), "Environmental Performance of Blue Foods", *Nature* 597:360-365.

Gheewala, S. H. and Mungkung, R. (2013), "Product Carbon Footprinting and Labeling in Thailand: Experiences From an Exporting Nation", Carbon Management 4(5):547-554.

Ghisetti, C. and Quatraro, F. (2017), "Green Technologies and Environmental Productivity: A Cross-sectoral Analysis of Direct and Indirect Effects in Italian Regions", *Ecological economics* 132(C):1-13.

Ghosh, D. and Shah, J. (2015), "Supply Chain Analysis Under Green Sensitive Consumer Demand and Cost Sharing Contract", *International Journal of Production Economics* 164:319-329.

Giordani, P. E., Rocha, N. and Ruta, M. (2012), "Food Prices and the Multiplier Effect of Export Policy", Staff Working Paper ERSD-2012-08, Geneva: World Trade Organization (WTO).

Global Center on Adaptation (GCA) (2019), *Adapt Now: A Global Call for Leadership on Climate Resilience,* Rotterdam: GCA.

Global Center on Adaptation (GCA) (2021), *State and Trends in Adaptation Report 2021. How Adaptation Can Make Africa Safer, Greener and More Prosperous in a Warming World,* Rotterdam: GCA.

Gorodnichenko, Y., Svejnar, J. and Terrell, K. (2010), "Globalization and Innovation in Emerging Markets", *American Economic Journal: Macroeconomics* 2(2):194-226.

Gouel, C. and Laborde, D. (2021), "The Crucial Role of Domestic and International Market-mediated Adaptation to Climate Change", *Journal of Environmental Economics and Management* 106, 102408.

Goulder, L. H., Hafstead, M. A. C., Kim, G. and Long, X. (2019), "Impacts of a Carbon Tax Across Us Household Income Groups: What Are the Equity-Efficiency Trade-Offs?", *Journal of Public Economics* 175:44-64.

Goulder, L. H. and Schein, A. R. (2013), "Carbon Taxes Versus Cap and Trade: A Critical Review", *Climate Change Economics* 4(3):1-28.

Granguillhome, R., Hernandez, M., Lach, S., Masaki, T. and Rodríguez-Castelán, C. (2021), *Lake Chad Regional Economic Memorandum: Development for Peace,* Washington, D.C.: World Bank.

Grether, J.-M., Mathys, N. A. and de Melo, J. (2009), "Scale, Technique and Composition Effects in Manufacturing SO_2 Emissions", *Journal of Environmental and Resource Economics* 43(2):257-274.

Gries, T. and Redlin, M. (2020), "Trade and Economic Development: Global Causality and Development- and Openness-related Heterogeneity", *International Economics and Economic Policy* 17(4):923-944.

Gupta, A. and Mason, M. (2014), "Transparency and International Environmental Politics", in Betsill, M. M., Hochstetler, K. and Stevis, D. (eds.), *Advances in International Environmental Politics*, London: Palgrave Macmillan.

Gutiérrez, E. and Teshima, K. (2018), "Abatement Expenditures, Technology Choice, and Environmental Performance: Evidence from Firm Responses to Import Competition in Mexico", *Journal of Development Economics* 133:264-274.

Hallegatte, S., Rentschler, J. and Rozenberg, J. (2020), *Adaptation Principles: A Guide for Designing Strategies for Climate Change Adaptation and Resilience,* Washington, D.C.: World Bank.

Hamilton, J. M., Maddison, D. and Tol, R. (2005), "The Role of Climate Information in Tourist Destination Choice Decision-Making", in Gössling, S. and Hall, C. M. (eds.), *Tourism and Global Environmental Change,* London: Routledge.

Haraguchi, M. and Lall, U. (2015), "Flood Risks and Impacts: A Case Study of Thailand's Floods in 2011 and Research Questions for Supply Chain Decision Making", *International Journal of Disaster Risk Reduction* 14:256-272.

Harford, T. (2017), *Fifty Things that Made the Modern Economy*, London: Little Brown.

He, Q., Fang, H., Wang, M. and Peng, B. (2015), "Trade Liberalization and Trade Performance of Environmental Goods: Evidence from Asia-Pacific Economic Cooperation Members", *Applied Economics* 47(29):3021-3039.

Henders, S., Persson, U. M. and Kastner, T. (2015), "Trading Forests: Land-use Change and Carbon Emissions Embodied in Production and Exports of Forest-risk Commodities", *Environmental Research Letters* 10(12):125012.

Henn, C., Papageorgiou, C., Romero, J. M. and Spatafora, N. (2020), "Export Quality in Advanced and Developing Economies: Evidence from a New Data Set", *IMF Economic Review* 68(2):421-451.

Hertel, T. W. (2018), "Climate Change, Agricultural Trade and Global Food Security", Background Paper for The State of Agricultural Commodity Markets (SOCO), Rome: Food and Agriculture Organization of the United Nations (FAO).

High-Level Commission on Carbon Prices (2017), *Report of the High-Level Commission on Carbon Prices,* Washington, D.C.: World Bank.

Hojnik, J., Ruzzier, M. and Manolova, T. S. (2018), "Internationalization and Economic Performance: The Mediating Role of Eco-Innovation", *Journal of Cleaner Production* 171:1312-1323.

Holladay, J. S. and LaPlue, L. D. (2021), "Decomposing Changes in Establishment-level Emissions With Entry and Exit", *Canadian Journal of Economics* 54(3):1046-1071.

Hook, L. (2021), "UK Start-up Plans World's Longest Subsea Electric Cable with Morocco", *Financial Times*, 26 September 2021.

Horlick, G. N. (2014), "Trade Remedies and Development of Renewable Energy", E15Initiative, Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum (WEF).

Houghton, R. A., House, J. I., Pongratz, J., van der Werf, G. R., DeFries, R. S., Hansen, M. C., Le Quéré, C. and Ramankutty, N. (2012), "Carbon Emissions from Land Use and Land-cover Change", *Biogeosciences* 9(12):5125-5142.

Howse, R. (2010), *Climate Mitigation Subsidies and the WTO Legal Framework: A Policy Analysis,* Manitoba: International Institute for Sustainable Development (IISD).

Hu, X., Pollitt, H., Pirie, J., Mecure, J.-F., Liu, J., Meng, J. and Tao, S. (2020), "The Impacts of the Trade Liberalization of Environmental Goods on Power System and CO_2 Emissions", *Energy Policy* 140:1-8.

Hunt, C. A., Durham, W. H., Driscoll, L. and Honey, M. (2015), "Can ecotourism deliver real economic, social, and environmental benefits? A study of the Osa Peninsula, Costa Rica", Journal of Sustainable Tourism 23(3):339-357.

Imbruno, M. and Ketterer, T. D. (2018), "Energy Efficiency Gains from Importing Intermediate Inputs: Firm-level Evidence from Indonesia", Journal of Development Economics 135:117-141.

Intergovernmental Panel on Climate Change (IPCC) (2000), *Methodological and Technological Issues in Technology Transfer*, Cambridge (UK): Cambridge University Press.

Intergovernmental Panel on Climate Change (IPCC) (2007a), *Climate Change 2007: Synthesis Report*, Geneva: IPCC.

Intergovernmental Panel on Climate Change (IPCC) (2007b), *Climate Change 2007: Mitigation of Climate Change, Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Geneva: IPCC.

Intergovernmental Panel on Climate Change (IPCC) (2014a), *Climate Change 2014: Impacts, Adaptation, and Vulnerability,* Geneva: IPCC.

Intergovernmental Panel on Climate Change (IPCC) (2014b), *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Geneva: IPCC.

Intergovernmental Panel on Climate Change (IPCC) (2021), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Geneva: IPCC.

Intergovernmental Panel on Climate Change (IPCC) (2022a), *Climate Change 2022: Mitigation of Climate Change,* Cambridge (UK): Cambridge University Press.

Intergovernmental Panel on Climate Change (IPCC) (2022b), *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,* Geneva: IPCC.

International Civil Aviation Organization (ICAO) (2017), "Frequently Asked Questions (FAQs) related to Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)", Montreal: ICAO.

International Civil Aviation Organization (ICAO) (2019), *2019 Environmental Report: Destination Green: The Next Chapter,* Montreal: ICAO.

International Energy Agency (IEA) (2020), *Iron and Steel Technology Roadmap: Towards More Sustainable Steelmaking,* Paris: IEA.

International Energy Agency (IEA) (2021), *Net Zero by 2050 - A Roadmap for the Global Energy Sector*, Paris: IEA.

International Energy Agency (IEA) (2022a), *Special Report on Solar PV Global Supply Chains*, Paris: IEA.

International Energy Agency (IEA) (2022b), *World Energy Investment 2022*, Paris: IEA.

International Energy Agency (IEA) (2022c), *Global Energy Review: CO_2 Emissions in 2021 – Global Emissions Rebound Sharply to Highest Ever Level,* Paris: IEA.

International Energy Agency (IEA) (2022d), *Energy Subsidies: Tracking the Impact of Fossil-fuel Subsidies*, Paris: IEA.

International Labour Organization (ILO) (2018), *World Employment and Social Outlook 2018: Greening with Jobs,* Geneva: ILO.

International Labour Organization (ILO) and World Trade Organization (WTO) (2017), *Investing in Skills for Inclusive Trade*, Geneva: WTO.

International Maritime Organization (IMO) (2019), "GreenVoyage2050", International Maritime Organization, May 2019, London.

International Maritime Organization (IMO) (2020), *Fourth IMO GHG Study 2020*, London: IMO.

International Monetary Fund (IMF) (2022), *World Economic Outlook: War Sets Back the Global Recovery*, Washington, D.C.: IMF.

International Renewable Energy Agency (IRENA) (2021), *World Energy Transitions Outlook 2021: 1.5°C Pathway*, Abu Dhabi: IRENA.

International Renewable Energy Agency (IRENA) (2022), *World Energy Transitions Outlook 2022: 1.5°C Pathway*, Abu Dhabi: IRENA.

International Renewable Energy Agency (IRENA) and International Labour Organization (ILO) (2022), *Renewable Energy and Jobs – Annual Review 2022*, Abu Dhabi and Geneva: IRENA and ILO.

International Road Transport Union (IRU) (2020), "Accelerating the Decarbonisation of Road Transport Through the Faster Update of Alternative Fuels", Geneva: IRU.

International Road Transport Union (IRU) (2021), "IRU Green Compact 2050", Geneva: IRU.

International Trade Centre (ITC) (2021), *SME Competitiveness Outlook 2021: Empowering the Green Recovery*, Geneva: ITC.

International Transport Forum (ITF) (2021a), *ITF Transport Outlook 2021*, Paris: Organisation for Economic Co-operation and Development (OECD).

International Transport Forum (ITF) (2021b), *Decarbonising Air Transport: Acting Now for the Future*, Paris: Organisation for Economic Co-operation and Development (OECD).

Irwin, D. A. (2019), "Does Trade Reform Promote Economic Growth? A Review of Recent Evidence", PIIE Working Paper No. 19-9, Washington, D.C.: Peterson Institute for International Economics (PIIE).

Izaguirre, C., Losada, I. J., Camus, P., Vigh, J. L. and Stenek, V. (2021), "Climate Change Risk to Global Port Operations", Nature Climate Change 11(1):14-20.

Jägermeyr, J., Müller, C., Ruane, A. C., Elliott, J., Balkovic, J., Castillo, O., Faye, B., Foster, I., Folberth, C., Franke, J. A., Fuchs, K., Guarin, J. R., Heinke, J., Hoogenboom, G., Iizumi, T., Jain, A. K., Kelly, D., Khabarov, N., Lange, S., Lin, T.-S., Liu, W., Mialyk, O., Minoli, S., Moyer, E. J., Okada, M., Phillips, M., Porter, C., Rabin, S. S., Scheer, C., Schneider, J. M., Schyns, J. F., Skalsky, R., Smerald, A., Stella, T., Stephens, H., Webber, H., Zabel, F. and Rosenzweig, C. (2021), "Climate Impacts on Global Agriculture Emerge Earlier in New Generation of Climate and Crop Models", Nature Food 2(11):873-885.

Jacobson, M., Delucchi, M., Bauer, Z., Goodman, S., Chapman, W., Cameron, M., Bozonnat, C., Chobadi, L., Clonts, H., Enevoldsen, P., Erwin, J., Fobi, S., Goldstrom, O., Hennessy, E., Liu, J., Lo, J., Meyer, C., Morris, S., Moy, K. and Yachanin, A. (2017), "100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World", Joule 1(1):108-121.

Jaeger, J., Westphal, M. I. and Park, C. (2020), "Lessons Learned on Green Stimulus: Case Studies from the Global Financial Crisis", WRI Working Paper. Washington, D.C.: World Resources Institute (WRI).

Jakob, M., Chen, C., Fuss, S., Marxen, A., Rao, N. D. and Edenhofer, O. (2016), "Carbon Pricing Revenues Could Close Infrastructure Access Gaps", *World Development* 84:254-265.

Janssens, C., Havlík, P., Krisztin, T., Baker, J., Frank, S., Hasegawa, T., Leclère, D., Ohrel, S., Ragnauth, S., Schmid, E., Valin, H., Van Lipzig, N. and Maertens, M. (2020), "Global Hunger and Climate Change Adaptation Through International Trade", *Nature Climate Change* 10(9):829-835.

Jenkins, J. D. (2014), "Political Economy Constraints on Carbon Pricing Policies: What Are the Implications for Economic Efficiency, Environmental Efficacy, and Climate Policy Design?", *Energy Policy* 69:467-477.

Jenkins, J. D. and Karplus, V. J. (2017), "Carbon Pricing under Political Constraints", in Arent, D., Arndt, C., Miller, M., Tarp, F. and Zinaman, O. (eds.), *The Political Economy of Clean Energy Transitions,* Oxford: Oxford Scholarship Online.

Jensen, J. and Tarr, D. (2003), "Trade, Exchange Rate, and Energy Pricing Reform in Iran: Potentially Large Efficiency Effects and Gains to the Poor", *Review of Development Economics* 7(4):543-562.

Johnstone, N. and Serret, Y. (2006), *The Distributional Effects of Environmental Policy*, Cheltenham: Edward Elgar Publishing.

Jones, B. F. and Olken, B. A. (2010), "Climate Shocks and Exports", *American Economic Review* 100(2):454-59.

Kampel, K. (2017), "Options for Disciplining the Use of Trade Remedies in Clean Energy Technologies", Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Karamanos, P. (2001), "Voluntary Environmental Agreements: Evolution and Definition of a New Environmental Policy Approach", *Journal of Environmental Planning and Management* 44(1):67-84.

Kasman, B., Lupton, J. and Hensley, D. (2011), *Global Data Watch*, November 11, 2011, New York: JP Morgan Economic Research.

Kasteng, J. (2014), "Trade Remedies on Clean Energy: A New Trend in Need of Multilateral Initiatives", E15Initiative, Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum (WEF).

Kavlak, G., McNerney, J. and Trancik, J. E. (2018), "Evaluating the Causes of Cost Reduction in Photovoltaic Modules", *Energy Policy* 123:700-710.

Keen, M., Parry, I. and Roaf, J. (2021), "Border Carbon Adjustments: Rationale, Design and Impact", IMF Working Paper No. 2021/239, Washington, D.C.: International Monetary Fund (IMF).

Keysser, L. T. and Lenzen, M. (2021), "1.5°C Degrowth Scenarios Suggest the Need for New Mitigation Pathways", *Nature Communications* 12.

Kimenyi, M., Adibe, J., Djire, M., Jirgi, A. J., Kergna, A., Deressa, T. T. and Westbury, A. (2014), "The Impact of Conflict and Political Instability on Agricultural Investments in Mali and Nigeria", Brookings Africa Growth Initiative Working Paper No. 17, Washington, D.C.: Brookings Institution.

Kjellstrom, T., Holmer, I. and Lemke, B. (2009), "Workplace Heat Stress, Health and Productivity - an Increasing Challenge for Low and Middle-income Countries During Climate Change", *Global health action* 2(1).

Klewitz, J. and Hansen, E. G. H. (2014), "Sustainability-oriented Innovation of SMEs: A Systematic Review", *Journal of Cleaner Production* 65:57-75.

Koks, E. E., Rozenberg, J., Zorn, C., Tariverdi, M., Vousdoukas, M., Fraser, S. A., Hall, J. W. and Hallegatte, S. (2019), "A Global Multi-Hazard Risk Analysis of Road and Railway Infrastructure Assets", *Nature Communications* 10(1):2677.

Kristofersson, D., Gunnlaugsson, S. and Valtysson, H. (2021), "Factors Affecting Greenhouse Gas Emissions in Fisheries: Evidence from Iceland's Demersal Fisheries", *International Council for the Exploration of the Sea Journal of Marine Science* 78(7):2385-2394.

Kruse-Andersen, P. K. and Sørensen, P. B. (2022), "Optimal Energy Taxes and Subsidies Under a Cost-Effective Unilateral Climate Policy: Addressing Carbon Leakage", *Energy Economics* 109.

Kuhl, L. (2020), "Technology Transfer and Adoption for Smallholder Climate Change Adaptation: Opportunities and Challenges", *Climate and Development* 12(4):353-368.

Kumar, L. and Taylor, S. (2015), "Exposure of Coastal Built Assets in the South Pacific to Climate Risks", *Nature Climate Change* 5(11):992-996.

Lall, U., Johnson, T., Colohan, P., Aghakouchak, A., Brown, C., McCabe, G., Pulwarty, R. and Sankarasubramanian, A. (2018), "Water", in Reidmiller, D. R., Avery, C. W., Easterling, D. R., Kunkel, K. E., Lewis, K. L. M., Maycock, T. K. and Stewart, B. C. (eds.), *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II,* Washington, D.C.: U.S. Global Change Research Program (USGCRP).

Lazard (2019), *Levelized Cost of Energy Analysis (LCOE) – Version 13.0,* Hamilton (BM): Lazard.

Le Moigne, M. and Ossa, R. (2021), "Buy Green Not Local: How International Trade Can Help Save Our Planet", Kühne Center Impact Series No. 03-21, Zürich: Kühne Center for Sustainable Globalization, University of Zürich.

Lenzen, M., Keysser, L. T. and Hickel, J. (2022), "Degrowth Scenarios for Emissions Neutrality", *Nature Food* 3:308-309.

Levinson, A. (2009), "Technology, International Trade, and Pollution from US Manufacturing", *American Economic Review* 99(5):2177-2192.

Levinson, A. (2015), "A Direct Estimate of the Technique Effect: Changes in the Pollution Intensity of US Manufacturing, 1990–2008", *Journal of the Association of Environmental and Resource Economists* 2(1):43-56.

Levinson, A. and Taylor, M. S. (2008), "Unmasking the Pollution Haven Effect", *International Economic Review* 49(1):223-254.

Lockwood, M. (2015), "Fossil Fuel Subsidy Reform, Rent Management and Political Fragmentation in Developing Countries", *New Political Economy* 20(4):475-494.

Lonergan, E. and Sawers, C. (2022), *Supercharge Me: Net Zero Faster*, Newcastles (UK): Agenda Publishing.

Loungani, P., Saurabh, M., Papageorgiou, C. and Wang, K. (2017), "World Trade in Services: Evidence from A New Dataset", IMF Working Paper No.17/77, Washington, D.C.: International Monetary Fund (IMF).

Lubin, D. A. and Esty, D. C. (2010), "The Sustainability Imperative", *Harvard Business Review*, May 2020 Issue.

Magnani, E. (2000), "The Environmental Kuznets Curve, environmental protection policy and income distribution", Ecological economics 32(3):431-443.

Malerba, D. and Wiebe, K. S. (2021), "Analysing the Effect of Climate Policies on Poverty Through Employment Channels", *Environmental Research Letters* 16:035013.

Managi, S. (2006), "International Trade, Economic Growth and the Environment in High- and Low-income Countries", *International Journal of Global Environmental Issues* 6(4).

Managi, S., Hibiki, A. and Tsurumi, T. (2009), "Does Trade Openness Improve Environmental Quality?", *Journal of Environmental Economics and Management* 58(3):346-363.

MarketsandMarkets (2022), *Environmental Technology Market – Global Forecast to 2026*, Pune: MarketsandMarkets.

Martin, L. A. (2011), "Energy Efficiency Gains From Trade: Greenhouse Gas Emissions and India's Manufacturing Sector", Unpublished Manuscript, Berkeley (CA): University of California.

Martinez-Zarzoso, I. and Oueslati, W. (2018), "Do Deep and Comprehensive Regional Trade Agreements Help in Reducing Air Pollution?", *International Environmental Agreements: Politics, Law and Economics* 18(6):743-777

Mattingly, J. E. (2017), "Corporate Social Performance: A Review of Empirical Research Examining the Corporation–Society Relationship Using Kinder, Lydenberg, Domini Social Ratings Data", *Business & Society* 56:796-839.

McKinsey & Company (2020), *Agriculture and Climate Change: Reducing Emissions Through Improved Farming Practices*, New York: McKinsey & Company.

McKinsey & Company (2021), *Net-Zero Power: Long Duration Energy Storage For a Renewable Grid*, New York: McKinsey & Company.

McKinsey Global Institute (2020), *Physical Hazards and Socioeconomic Impacts: Could Climate Become the Weak Link in Your Supply Chain?,* New York: McKinsey Global Institute.

McKinsey Global Institute (2022), *The Net-Zero Transition: What It Would Cost, What It Could Bring,* New York: McKinsey Global Institute.

McLaren, J. (2012), *International Trade*, New Jersey: Wiley.

Mehling, M. A., Metcalf, G. E. and Stavins, R. N. (2018), "Linking Heterogeneous Climate Policies (Consistent with the Paris Agreement)", *Environmental Law* 48(4):647-698.

Mehling, M. A., van Asselt, H., Das, K., Dröge, S. and Verkuijl, C. (2019), "Designing Border Carbon Adjustments for Enhanced Climate Action", *American Journal of International Law* 11(3):433-481.

Metcalf, G. E. and Weisbach, D. A. (2009), "Design of a Carbon Tax", University of Chicago Public Law Working Paper No. 254, Chicago: University of Chicago.

Misch, F. and Wingender, P. (2021), "Revisiting Carbon Leakage", IMF Working Papers No. 207, Washington, D.C.: International Monetary Fund (IMF).

Moerenhout, T. and Irschlinger, T. (2020), *Exploring the Trade Impacts of Fossil Fuel Subsidies,* Geneva: International Institute for Sustainable Development (IISD).

Monteiro, J.-A. (2016), "Typology of Environment-Related Provisions in Regional Trade Agreements", Staff Working Paper No. ERSD-2016-13, Geneva: World Trade Organization (WTO).

Monteiro, J.-A. (2022a), "Provisions on Natural Disasters in Regional Trade Agreements", Unpublished Manuscript, Geneva: World Trade Organization (WTO).

Monteiro, J.-A. (2022b), "Provisions on Environmental Technologies in Regional Trade Agreements", Unpublished Manuscript, Geneva: World Trade Organization (WTO).

Monteiro, J.-A. and Trachtman, J. P. (2020), "Environmental Laws", in Mattoo, A., Rocha, N. and Ruta, M. (eds.), *Handbook of Deep Trade Agreements*, Washington, D.C.: World Bank.

Moolna, A. (2021), "A Blue Economy Sustainable Future for Mauritius?", Moka: Charles Telfair Centre.

Munari, F. (2020), "Lifting the Veil: COVID-19 and the Need to Re-consider Airline Regulation", *European Papers* 5(1):533-559.

Naam, R. (2020), "Solar's Future Is Insanely Cheap", RamezNaam.com, 14 May 2020.

Naegele, H. and Zaklan, A. (2019), "Does the EU ETS Cause Carbon Leakage in European Manufacturing?", *Journal of Environmental Economics and Management* 93:125-147.

Nahm, J. M., Miller, S. M. and Urpelainen, J. (2022), "G20's US$14-Trillion Economic Stimulus Reneges on Emissions Pledges", Nature, 2 March 2022.

Nath, I. (2022), "Climate Change, the Food Problem, and the Challenge of Adaptation through Sectoral Reallocation", Census Working Paper No. CES-21-29, Washington, D.C.: United States Census Bureau.

Nellemann, C., Verma, R. and Hislop, L. (2011), *Women at the Frontline of Climate Change: Gender Risks and Hopes,* Arendal: United Nations Environment Program (UNEP) and Global Resource Information Database (GRID)-Arendal.

Nemet, G., Jakob, M., Steckel, J. C. and Edenhofer, O. (2017), "Addressing Policy Credibility Problems for Low-Carbon Investment", *Global Environmental Change* 42:47-57.

Nieto, A., Alonso, G. and Cubas, J. (2019), "Analysis of the Trends in Air Traffic and CO_2 Emissions Within the European Union", Madrid: 8th European Conference for Aeronautics and Space Sciences (EUCASS).

Nimubona, A.-D. (2012), "Pollution Policy and Trade Liberalization of Environmental Goods", *Environmental and Resource Economics* 53:323-346.

Nordås, H. K. and Steenblik, R. (2021), "Environmental Services in the APEC Region: Definition, Challenges and Opportunities", Singapore: Asia-Pacific Economic Cooperation (APEC).

Nordhaus, W. D. (2013), *The Climate Casino: Risk, Uncertainty, and Economics for a Warming World*, New Haven (CT): Yale University Press.

Nordhaus, W. D. (2014), *A Question of Balance: Weighing the Options on Global Warming Policies*, New Haven (CT): Yale University Press.

Nordhaus, W. D. (2015), "Climate Clubs: Overcoming Free-Riding in International Climate Policy", *American Economic Review* 105(4):1339-70.

Nordström, H. and Vaughan, S. (1999), "Trade and Environment", WTO Special Studies No. 4, Geneva: World Trade Organization (WTO).

Nyong, A. (2007), "Climate-Related Conflicts in West Africa", *Environmental Change and Security Program Report*(12):36-43.

Nyong, A., Fiki, C. and McLeman, R. (2006), "Drought-Related Conflicts, Management and Resolution in the West African Sahel: Considerations for Climate Change Research", *Die Erde* 137(3):223.

Organisation for Economic Co-operation and Development (OECD) (1999), *Future Liberalisation of Trade in Environmental Goods and Services: Ensuring Environmental Protection as well as Economic Benefits*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2015), "Local-Content Requirements in the Solar- And Wind-Energy Global Value Chains", *Overcoming Barriers to International Investment in Clean Energy,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2016), *Environmental Labelling and Information Schemes,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2017), *Private Finance For Climate Action: Estimating the Effects of Public Interventions,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2021), *Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2022a), *Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2022b), *Agricultural Policy Monitoring and Evaluation 2022*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2022c), *Global Plastics Outlook: Policy Scenarios to 2060*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2022d), *Trade in Embodied CO_2 ($TECO_2$) Database,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) and Eurostat (1999), *The Environmental Goods and Services Industry: Manual for Data Collection and Analysis,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD), International Energy Agency (IEA), Nuclear Energy Agency (NEA) and International Transport Forum (ITF) (2015), *Aligning Policies for a Low-Carbon Economy,* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) and World Trade Organization (WTO) (2022), *Aid for Trade at a Glance 2022: Empowering Connected, Sustainable Trade,* Paris: OECD.

Papageorgiou, C., Spatafora, N. and Wang, K. (2015), "Diversification, Growth, and Volatility in Asia", Policy Research Working Paper No. 7380, Washington D.C.: World Bank.

Parry, I., Black, S. and Roaf, J. (2021), "Proposal for an International Carbon Price Floor Among Large Emitters", *IMF Climate Notes* 2021/001, Washington, D.C.: International Monetary Fund (IMF).

Patel, S. (2022), "The Vital Link: How HVDC Is Modernizing the Grid", POWER, June Issue.

Peace, J. and Ye, J. (2020), *Market Mechanisms: Options for Climate Policy,* Arlington: Center for Climate and Energy Solutions.

Pendrill, F., Persson, U. M., Godar, J., Kastner, T., Moran, D., Schmidt, S. and Wood, R. (2019), "Agricultural and Forestry Trade Drives Large Share of Tropical Deforestation Emissions", *Global Environmental Change* 56:1-10.

Perkins, R. and Neumayer, E. (2012), "Does the 'California Effect' Operate Across Borders? Trading- And Investing-up in Automobile Emission Standards", *Journal of European Public Policy* 19(2):217-237.

Peszko, G., van der Mensbrugghe, D., Golub, A., Ward, J., Zenghelis, D., Marijs, C., Schopp, A., Rogers, J. A. and Midgley, A. (2020), "Challenges, Risks, and Opportunities of a Low-Carbon Transition", *Diversification and Cooperation in a Decarbonizing World: Climate Strategies for Fossil Fuel-Dependent Countries,* Washington, D.C.: World Bank.

Piermartini, R. and Rubínová, S. (2022), "Knowledge Spillovers through International Supply Chains", in Taubman, A. and Watal, J. (eds.), *Trade in Knowledge,* Cambridge (UK): Cambridge University press.

Pintassilgo, P. (2003), "A Coalition Approach to the Management of High Seas Fisheries in the Presence of Externalities", *Natural Resource Modeling* 16(2):175-197.

Popp, D. (2011), "International Technology Transfer, Climate Change, and the Clean Development Mechanism", *Review of Environmental Economics and Policy* 5(1):131-152.

Qin, Q., Jiang, M., Xie, J. and He, Y. (2021), "Game Analysis of Environmental Cost Allocation in Green Supply Chain Under Fairness Preference", *Energy Reports* 7:6014-6022.

Rajan, R. (2021), "A Global Incentive to Reduce Emissions", Project Syndicate, 31 May 2021.

Ramsay, D. (2021), "In Lesotho, Looking to Expand from Farming", Trade for Development News, Geneva: Enhanced Integrate Framework (EIF).

Rausch, S. and Yonezawa, H. (2021), "Green Technology Policies Versus Carbon Pricing: An Intergenerational Perspective", Economics Working Paper Series No. 21/362, Zürich: Swiss Federal Institute of Technology Zürich (ETHZ) Center of Economic Research (CER).

Rentschler, J., Kornejew, M. and Bazilian, M. (2017), "Fossil Fuel Subsidy Reforms and Their Impacts on Firms", *Energy Policy* 108(C):617-623.

Reyna, J., Vadlamani, S., Chester, M. and Yingyan, L. (2016), "Reducing Emissions at Land Border Crossings Through Queue Reduction and Expedited Security Processing", *Transportation Research Part D: Transport and Environment* 49:219-230.

Richter, P. M. and Schiersch, A. (2017), "CO_2 Emission Intensity and Exporting: Evidence From Firm-level Data", *European Economic Review* 98:373-391.

Ritchie, H., Roser, M. and Rosado, P. (2020), "CO_2 and Greenhouse Gas Emissions", OurWorldInData.org.

Rixen, C., Stoeckli, V. and Ammann, W. (2003), "Does Artificial Snow Production Affect Soil and Vegetation of Ski Pistes? A Review", Perspectives in Plant Ecology, Evolution and Systematics 5(4):219-230.

Roberts, A., Choer Moraes, H. and Ferguson, V. (2019), "Toward a Geoeconomic Order in International Trade and Investment", *Journal of International Economic Law* 22(4):655-676.

Rojas-Romagosa, H., Bekkers, E. and Francois, J. F. (2015), "Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route", CPB Discussion Paper 307, The Hague: Netherlands Bureau for Economic Policy Analysis (CPB).

Rose, R. M. (2015), "The Impact of Climate Change on Human Security in the Sahel Region of Africa", *Donnish Journal of African Studies and Development* 1(2):9-14.

Rosenbloom, D., Markard, J., Geels, F. W. G. and Fuenfschilling, L. (2020), "Why Carbon Pricing Is Not Sufficient to Mitigate Climate Change — And How 'Sustainability Transition Policy' Can Help", Proceedings of the National Academy of Sciences (PNAS) 117(16):8664-8668.

Roson, R. and van der Mensbrugghe, D. (2012), "Climate Change and Economic Growth: Impacts and Interactions", *International Journal of Sustainable Economy* 4(3):270-285.

Roy, J. and Yasar, M. (2015), "Energy efficiency and exporting: Evidence from firm-level data", Energy Economics 52:127-135.

Sampson, T. (2022), "Technology Transfer in Global Value Chains", CESifo Working Paper No. 9532, Münich: Center for Economic Studies and Institute for Economic Research (CESifo).

Sauvage, J. (2014), "The Stringency of Environmental Regulations and Trade in Environmental Goods", OECD Trade and Environment Working Papers No. 2014/03, Paris: Organisation for Economic Co-operation and Development (OECD).

Sauvage, J. and Timiliotis, C. (2017), "Trade in Services Related to the Environment", OECD Trade and Environment Working Papers No. 2017/02, Paris: Organisation for Economic Co-operation and Development (OECD).

Schenker, O. (2013), "Exchanging Goods and Damages: The Role of Trade on the Distribution of Climate Change Costs", *Environmental and Resource Economics* 54(2):261-282.

Schenker, O. and Stephan, G. (2014), "Give and Take: How the Funding of Adaptation to Climate Change Can Improve the Donor's Terms-of-trade", *Ecological Economics* 106:44-55.

Seppanen, O., Fisk, W. J. and Faulkner, D. (2003), "Cost Benefit Analysis of the Night-time Ventilative Cooling in Office Building", Berkeley (CA): Lawrence Berkeley National Laboratory.

Shahnazi, R. and Shabani, Z. D. (2019), "The Effects of Spatial Spillover Information and Communications Technology on Carbon Dioxide Emissions in Iran", *Environmental Science and Pollution Research* 26(23):24198-24212.

Shapiro, J. S. (2016), "Trade Costs, CO_2, and the Environment", *American Economic Journal: Economic Policy* 8(4):220-254.

Shapiro, J. S. (2021), "The Environmental Bias of Trade Policy", *The Quarterly Journal of Economics* 136(2):831-886.

Shapiro, J. S. and Walker, R. (2018), "Why Is Pollution From US Manufacturing Declining? The Roles of Environmental Regulation, Productivity, and Trade", *American Economic Review* 108(12):3814-3854.

Sherlock, M. F. (2019), *The Plug-In Electric Vehicle Tax Credit,* Washington, D.C.: Congressional Research Service (CRS).

Shu, P. and Steinweider, C. (2019), "The Impact of Trade Liberalization on Firm Productivity and Innovation", in Lerner, J. and Stern, S. (eds.), *Innovation Policy and the Economy,* Chicago: University of Chicago Press.

Sinn, H.-W. (2012), *The Green Paradox: A Supply-Side Approach to Global Warming*, Cambridge (MA).

Skouloudis, A., Tsalis, T., Nikolaou, I., Evangelinos, K. and Leal Filho, W. (2020), "Small & Medium-Sized Enterprises, Organizational Resilience Capacity and Flash Floods: Insights from a Literature Review", *Sustainability* 12(18):1-12.

Skovgaard, J. and van Asselt, H. (2019), "The Politics of Fossil Fuel Subsidies and Their Reform: Implications for Climate Change Mitigation", *WIREs Climate Change* 10(4).

Slastanova, N., Palus, H., Sulek, R., Parobek, J. and Slastanova, K. (2021), "The Benefits of Applying the Green Purchasing", *SHS Web of Conferences* 92(2):06037.

Sleeter, B. M., Loveland, T., Domke, G., Herold, N., Wickham, J. and Wood, N. (2018), "Land Cover and Land-Use Change", in Reidmiller, D. R., Avery, C. W., Easterling, D. R., Kunkel, K. E., Lewis, K. L. M., Maycock, T. K. and Stewart, B. C. (eds.), *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II,* Washington, D.C.: U.S. Global Change Research Program (USGCRP).

Smil, V. (2017), *Energy Transitions: Global and National Perspectives*, Santa Barbara (CA): ABC-Clio.

Somanathan, E., Somanathan, R., Sudarshan, A. and Tewari, M. (2021), "The Impact of Temperature on Productivity and Labor Supply: Evidence from Indian Manufacturing", *Journal of Political Economy* 129(6):1797-1827.

Sovacool, B. K., Kester, J., Noel, L. and de Rubens, G. Z. (2019), "Energy Injustice and Nordic Electric Mobility: Inequality, Elitism, and Externalities in the Electrification of Vehicle-to-Grid (V2G) Transport", *Ecological economics* 157:205-217.

Springmann, M. and Freund, F. (2022), "Options for Reforming Agricultural Subsidies From Health, Climate, and Economic Perspectives", *Nature Communications* 13.

Stavins, R. N. (2022), "The Relative Merits of Carbon Pricing Instruments: Taxes versus Trading", *Review of Environmental Economics and Policy* 16(1).

Steenblik, R. (2005), "Environmental Goods: A Comparison of the APEC and OECD Lists", OECD Trade and Environment Working Paper No. 04, Paris: Organisation for Economic Co-operation and Development (OECD).

Steenblik, R., Drouet, D. and Stubbs, G. (2005), "Synergies Between Trade in Environmental Services and Trade in Environmental Goods", OECD Trade and Environment Working Papers No. 2005/1, Paris: Organisation for Economic Co-operation and Development (OECD).

Steenblik, R. P. (2020), *Code Shift: The Environmental Significance of the 2022 Amendments to the Harmonized System,* Winnipeg: International Institute for Sustainable Development (IISD).

Stephenson, S. (2013), "Addressing Local Content Requirements in a Sustainable Energy Trade Agreement", Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Stern, N. (2017a), *Why Are We Waiting?: The Logic, Urgency, and Promise of Tackling Climate Change*, Cambridge (MA) and London: MIT Press.

Stern, D. I. (2017b), "The Environmental Kuznets Curve", *Oxford Research Encyclopedias,* Oxford: Oxford University Press.

Stern, N. and Stiglitz, J. (2022), "The economics of immense risk, urgent action and radical change: towards new approaches to the economics of climate change", *Journal of Economic Methodology*:1-36.

Stiglitz, J. E. (2015), "Overcoming the Copenhagen Failure with Flexible Commitments", *Economics of Energy and Environmental Policy* 4:29-36.

Sumaila, U. R., Skerritt, D., Schuhbauer, A., Ebrahim, N., Li, Y., Kim, H. S., Mallory, T. G., Lam, V. W. L. and Pauly, D. (2019), "A Global Dataset on Subsidies to the Fisheries Sector", *Data in Brief* 27(104706).

Swiss Re Institute (2021), *The Economics of Climate Change: No Action Not an Option,* Zürich: Swiss Re Institute.

Tafoya, K. A., Brondizio, E. S., Johnson, C. E., Beck, P., Wallace, M., Quirós, R. and Wasserman, M. D. (2020), "Effectiveness of Costa Rica's Conservation Portfolio to Lower Deforestation, Protect Primates, and Increase Community Participation", Frontiers in Environmental Science 8:580724.

Tamini, L. D. and Sorgho, Z. (2018), "Trade in Environmental Goods: Evidence From an Analysis Using Elasticities of Trade Costs", *Environmental and Resource Economics* 70(1):53-75.

Tenggren, S., Olsson, O., Vulturius, G., Carlsen, H. and Benzie, M. (2020), "Climate Risk in a Globalized World: Empirical Findings from Supply Chains in the Swedish Manufacturing Sector", *Journal of Environmental Planning and Management* 63(7):1266-1282.

The Royal Society (2020), *Digital Technology and the Planet: Harnessing Computing to Achieve Net Zero*, London: The Royal Society.

Thube, S. D., Delzeit, R. and Henning, C. H. C. A. (2022), "Economic Gains From Global Cooperation in Fulfilling Climate Pledges", *Energy Policy* 160, 112673.

Tietenberg, T. (2010), *Emissions Trading: Principles and Practice*, New York: Routledge.

Tigchelaar, M., Battisti, D. S., Naylor, R. L. and Ray, D. K. (2018), "Future Warming Increases Probability of Globally Synchronized Maize Production Shocks", *Proceedings of the National Academy of Sciences* 115(26):6644-6649.

Tollefson, J. (2022), "What the War in Ukraine Means for Energy, Climate and Food", *Nature* 604.

Torrance, A. W., West, J. D. and Friedman, L. C. (2022), "Global Ebbs and Flows of Patent Knowledge", in Taubman, A. and Watal, J. (eds.), *Trade in Knowledge,* Cambridge (UK): Cambridge University Press.

Tothova, M. (2005), "Liberalisation of Trade in Environmentally Preferable Products", OECD Trade and Environment Working Papers No. 06, Paris: Organisation for Economic Co-operation and Development (OECD).

United Nations Conference on Trade and Development (UNCTAD) (1995), *Environmentally Preferable Products (EPPs) as a Trade Opportunity for Developing Countries*, Geneva: UNCTAD.

United Nations Conference on Trade And Development (UNCTAD) (2014), T*rade Remedies: Targeting the Renewable Energy Sector*, Geneva: UNCTAD.

United Nations Conference on Trade And Development (UNCTAD) (2019), *Commodity Dependence, Climate Change and the Paris Agreement*, Geneva: UNCTAD.

United Nations Conference on Trade and Development (UNCTAD) (2021), *Trade and Development Report Update (March 2021): Out of the Frying Pan... Into the Fire?*, Geneva: UNCTAD.

United Nations Development Programme (UNDP) (2016), *Climate Change and Labour: Impacts of Heat in the Workplace,* New York: UNDP.

United Nations Environment Program (UNEP) (2005), *The Trade and Environmental Effects of Ecolabels: Assessment and Response*, Nairobi: UNEP.

United Nations Environment Program (UNEP) (2021a), *Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered*, Nairobi: UNEP.

United Nations Environment Program (UNEP) (2021b), *Adaptation Gap Report 2021: The Gathering Storm – Adapting to Climate Change in a Post-Pandemic World*, Nairobi: UNEP.

United Nations Environment Program (UNEP) and German Development Institute (DIE) (2017), *Green Industrial Policy: Concept, Policies, Country Experiences*, Geneva and Bonn: UNEP and DIE.

United Nations Framework Convention on Climate Change (UNFCCC) (2016a), *Technology and the UNFCCC: Building the Foundation for Sustainable Development*, Bonn: UNFCCC.

United Nations Framework Convention on Climate Change (UNFCCC) (2016b), *The Concept of Economic Diversification in the Context of Response Measures*, Bonn: UNFCCC Secretariat.

United Nations Framework Convention on Climate Change (UNFCCC) (2021), *NDC Synthesis Report*, Bonn: UNFCCC Secretariat.

United States International Trade Commission (USITC) (2013), *Environmental and Related Services*, Washington, D.C.: USITC.

van Asselt, H. and Skovgaard, J. (2021), "Reforming Fossil Fuel Subsidies Requires a New Approach to Setting International Commitments", *One Earth* 4(11):1523-1526.

Vanzetti, D., Knebel, C. and Peters, R. (2018), "Non-Tariff Measures and Regional Integration in ASEAN", Unpublished Manuscript, Geneva: United Nations Conference on Trade and Development (UNCTAD).

Venmans, F., Ellis, J. and Nachtigall, D. (2020), "Carbon Pricing and Competitiveness: Are they at Odds?", *Climate Policy* 20(9):1070-1091.

Verdolini, E., Anadon, L. D., Lu, J. and Nemet, G. F. (2015), "The Effects of Expert Selection, Elicitation Design, and R&D Assumptions on Experts' Estimates of the Future Costs of Photovoltaics", *Energy Policy* 80:233-243.

Wacziarg, R. and Welch, K. H. (2008), "Trade Liberalization and Growth: New Evidence", *The World Bank Economic Review* 22(2):187-231.

Wan, R., Nakada, M. and Takarada, Y. (2018), "Trade Liberalization in Environmental Goods", Resource and Energy Economics 51:44-66.

Wang, M., Mao, X., Xing, Y., Lu, J., Song, P., Liu, Z., Guo, Z., Tu, K. and Zusman, E. (2021), "Breaking Down Barriers on PV Trade Will Facilitate Global Carbon Mitigation", *Nature Communications* 12:1-16.

Weitzel, M., Hübler, M. and Peterson, S. (2012), "Fair, Optimal or Detrimental? Environmental vs. Strategic Use of Border Carbon Adjustment", *Energy Economics* 34:S198-S207.

Welton, G. (2011), "The Impact of Russia's 2010 Grain Export Ban", Oxfam Research Reports, Oxford (UK): Oxfam.

Wilke, M. (2011), "Feed-in Tariffs for Renewable Energy and WTO Subsidy Rules: An Initial Legal Review", Trade and Sustainable Energy Series Issue Paper No. 4, Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Wolf, F., Filho, W. L., Singh, P., Scherle, N., Reiser, D., Telesford, J., Miljković, I. B., Havea, P. H., Li, C., Surroop, D. and Kovaleva, M. (2021), "Influences of Climate Change on Tourism Development in Small Pacific Island States", *Sustainability* 13(8).

Wood, R., Grubb, M., Anger-Kraavi, A., Pollitt, H., Rizzo, B., Alexandri, E. and Tukker, A. (2020), "Beyond Peak Emission Transfers: Historical Impacts of Globalization and Future Impacts of Climate Policies on International Emission Transfers", *Climate Policy* 20:S14-S27.

World Bank (2008), *Biodiversity, Climate Change, and Adaptation: Nature-Based Solutions from the World Bank Portfolio*, Washington, D.C.: World Bank.

World Bank (2014), *Building Competitive Green Industries: the Climate and Clean Technology Opportunity for Developing Countries,* Washington, D.C.:

World Bank (2016), *High and Dry: Climate Change, Water, and the Economy,* Washington, D.C.: World Bank.

World Bank (2020), *World Development Report 2020: Trading for Development in the Age of Global Value Chains,* Washington, D.C.: World Bank.

World Bank (2021), *Resilience Rating System : A Methodology for Building and Tracking Resilience to Climate Change,* Washington, D.C.: World Bank.

World Bank (2022), *State and Trends of Carbon Pricing 2022*, Washington, D.C.: World Bank.

World Bank and World Trade Organization (WTO) (2020), *Women and Trade: The Role of Trade in Promoting Gender Equality,* Washington, D.C.: World Bank and WTO.

World Economic Forum (WEF) (2021) *Road Freight Zero: Pathways to Faster Adoption of Zero-Emission trucks*, Geneva: WEF.

World Health Organization (WHO) (2018), *COP24 Special Report: Health & Climate Change,* Geneva: WHO.

World Resource Institute (WRI) (2022), *World Greenhouse Gas Emissions: 2019,* Washington, D.C.: WRI.

World Trade Organization (WTO) (2010), "Background Note on Environmental Services", S/C/W/320, Geneva: WTO.

World Trade Organization (WTO) (2012), *World Trade Report 2012: Trade and Public Policies: A Closer Look at Non-Tariff Measures in the 21st Century*, Geneva: WTO.

World Trade Organization (WTO) (2013) *World Trade Report 2013. Factors Shaping the Future of World Trade*, Geneva: WTO.

World Trade Organization (WTO) (2016), *World Trade Report 2016: Levelling the trading field for SMEs,* Geneva: WTO.

World Trade Organization (WTO) (2017), *World Trade Report 2017: Trade, Technology and Jobs,* Geneva: WTO.

World Trade Organization (WTO) (2019), *World Trade Report 2019: The Future of Services Trade,* Geneva: WTO.

World Trade Organization (WTO) (2020a), *World Trade Report 2020: Government Policies to Promote Innovation in the Digital Age*, Geneva: WTO.

World Trade Organization (WTO) (2020b), *Short Answers to Big Questions on the WTO and the Environment*, Geneva: WTO.

World Trade Organization (WTO) (2021a), "Carbon Content of International Trade", Trade and Climate Change Information Brief No. 4, Geneva: WTO.

World Trade Organization (WTO) (2021b), "Climate Change in Regional Trade Agreements", Trade and Climate Change Information Brief No. 2, Geneva: WTO.

World Trade Organization (WTO) (2021c) *World Trade Report 2021: Economic Resilience and Trade*, Geneva: WTO.

World Trade Organization (WTO) (2021d), "Mapping Paper: Trade Policies Adopted to Address Climate Change", Trade and Climate Change Information Brief No. 1, Geneva: WTO.

World Trade Organization (WTO) (2021e) *Trade Policy Review, Report by Mauritius*, Geneva: WTO.

World Trade Organization (WTO) (2021f), "Trade Resilience in the Face of a Rising Burden of Natural Disasters", Trade and Climate Change Information Brief No. 3, Geneva: WTO.

World Trade Organization (WTO) (2022a), "Small Business and Climate Change", MSMEs Research Note No. 3, Geneva: WTO.

World Trade Organization (WTO) (2022b), *The Crisis in Ukraine: Implications of the War for Global Trade and Development*, Geneva: WTO.

World Trade Organization (WTO) (2022c), "What Yardstick for Net-Zero? How WTO TBT Disciplines Can Contribute to Effective Policies on Carbon Emission Standards and Climate Change Mitigation", Trade and Climate Change Information Brief No. 6, Geneva: WTO.

World Trade Organization (WTO) and International Renewable Energy Agency (IRENA) (2021), *Trading into a Bright Energy Future. The Case for Open, High-Quality Solar Photovoltaic Markets,* Geneva: WTO and IRENA.

World Trade Organization (WTO) and United Nations Environment Program (UNEP) (2009), *Trade and Climate Change,* Geneva: WTO and UNEP.

World Trade Organization (WTO) and United Nations Environment Program (UNEP) (2018), *Making Trade Work for the Environment, Prosperity and Resilience,* Geneva: WTO and UNEP.

Wrigley, E. A. (2010), *Energy and the English Industrial Revolution*, Cambridge (UK): Cambridge University Press.

Wurlod, J.-D. and Noailly, J. (2018), "The Impact of Green Innovation on Energy Intensity: An Empirical Analysis for 14 Industrial Sectors in OECD Countries", *Energy Economics* 71(C):47-61.

Xu, Y. and Xie, H. (2016), "Consumer Environmental Awareness and Coordination in Closed-Loop Supply Chain", *Open Journal of Business and Management* 4:427-438.

Yamano, N. and Guilhoto, J. (2020), "CO2 Emissions Embodied in International Trade and Domestic Final Demand: Methodology and Results Using the OECD Inter-Country Input-Output Database", OECD Science, Technology and Industry Working Papers No. 2020/11, Paris: Organisation for Economic Co-operation and Development (OECD).

Zugravu-Soilita, N. (2018), "The Impact of Trade in Environmental Goods on Pollution: What Are We Learning from the Transition Economies' Experience?", *Environmental Economics and Policy Studies* 20:785-827.

Zugravu-Soilita, N. (2019), "Trade in Environmental Goods and Air Pollution: A Mediation Analysis to Estimate Total, Direct and Indirect Effects", *Environmental and Resource Economics* 74:1125-1162.

World Trade Organization
154, rue de Lausanne
CH-1211 Geneva 2
Switzerland
Tel: +41 (0)22 739 51 11
www.wto.org

WTO Publications
Email: publications@wto.org

WTO Online Bookshop
http://onlinebookshop.wto.org

Report designed by Services Concept – Geneva.
Printed by the World Trade Organization.

Image credits:
Cover: © Laurent Weyl / Argos / Panos Pictures.
Page 16: © serts / Getty Images.
Page 26: © Ian Crocker / Shutterstock.
Page 50: © CHUNYIP WONG / Getty Images.
Page 78: © acilo / Getty Images.
Page 98: © Evgenii Kovalev / Getty Images.
Page 116: © Monty Rakusen / Getty Images.

Print ISBN 978-92-870-5395-4
Web ISBN 978-92-870-5396-1
Published by the World Trade Organization.

Note

WTO members are frequently referred to as "countries", although some members are not countries in the usual sense of the word but are officially "customs territories". The definition of geographical and other groupings in this report does not imply an expression of opinion by the WTO Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor the rights and obligations of any WTO member in respect of WTO agreements.

There are no WTO definitions of "developed" and "developing" economies. Members announce for themselves whether they are "developed" or "developing" economies. The references to developing and developed economies, as well as any other sub-categories of members used in this report, are for statistical purposes only, and do not imply an expression of opinion by the Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor the rights and obligations of any WTO member in respect of WTO agreements.

The data supplied in the *World Trade Report 2022* are valid as of 1 September 2022.

World Trade Report 2022

Climate change is having a profound impact on people's lives across the world. Mitigating and adapting to climate change will require major economic investment and coordinated action to transition to a sustainable, low-carbon economy. The *World Trade Report 2022* explores the complex interlinkages between climate change, international trade, and climate and trade policies.

Although international trade generates greenhouse gas emissions which contribute to climate-related natural disasters, it can also play an essential role in helping countries reduce emissions by increasing the availability and affordability of environmental goods, services and technologies. International trade can also play a key role in helping countries adapt to the impacts of climate change and build future resilience.

The *World Trade Report 2022* shows how international trade and trade rules can contribute to addressing climate change. Ensuring trade and climate change policies are mutually supportive requires global coordination and transparency about government measures. The WTO already plays an important role in helping countries tackle climate change by maintaining a predictable trading environment underpinned by WTO rules that allow for international trade in critical goods and services needed to cope with the consequences of climate change and to reduce emissions. Further international cooperation at the WTO could strengthen the mutual supportiveness of trade and climate change policies so that the world is better equipped to transition to a low-carbon economy.

ISBN 978-92-870-5396-1