

# GLOBAL PLATFORM ON CLIMATE CHANGE, TRADE & SUSTAINABLE ENERGY





## ABOUT ICTSD'S GLOBAL PLATFORM ON CLIMATE CHANGE, TRADE, AND SUSTAINABLE ENERGY: Contributing to Long-Term Collaborative Action on Climate Change and Sustainable Development



The fourth assessment report by the Intergovernmental Panel on Climate Change (IPCC), the Stern Review of the economics of climate change, the Bali Action Plan and multiple authoritative studies have all highlighted the critical role that economic instruments, markets, and regulatory tools will play in efforts to address climate change. Addressing climate change requires no less than a fundamental transformation in the way in which energy is sourced and used today: a redefinition of what we produce, trade, and consume. In a globalized, interdependent world, such an enterprise requires bold and innovative policies and the enabling regulatory frameworks to support them.

Indeed, the challenge for climate and trade policy is how to steer a transition of such magnitude without compromising development and growth prospects as well as how to equitably manage the impact on competitiveness. This requires a range of deliberate policies and international institutions to ensure that social primary goods are generated and that natural resource use is conducted in ways that don't compromise their renewal and ensure the integrity of natural energy and biological functions.



The Global Platform on Climate Change, Trade, and Sustainable Energy (the Global Platform) of the International Centre for Trade and Sustainable Development (ICTSD) focuses on the linkages between climate change, sustainable energy, and trade policy. It mobilizes technical and political expertise to address these interlocking issues to foster strong multilateral regimes on trade and climate change that promote the transition to a low-carbon economy and a sustainable energy future.

Through research and analysis and policy dialogues, the Global Platform advances the analytical capacity of stakeholders, supports their interaction with policy makers, and builds effective cross-disciplinary understanding so that solutions can be built and agreed by the international community in the climate change and trade policy processes. Through these actions, it aims at creating policy coherence.

Activities undertaken under the Global Platform are clustered in seven key areas:

- generative dialogue between trade **policy and climate change** communities;
- enabling a scale up of innovation, diffusion, and **technology** transfer through trade policy;
- accelerating trade of **climate-friendly goods and services**;
- ensuring incorporation of **agriculture** and **biofuels** in sustainable strategies;

- defining policy tools and mechanisms to make **adaptation** possible;
- addressing **carbon leakage and competitiveness** through equitable policies; and
- dealing with de-carbonization of **transportation and bunker fuels**.

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## I. GENERATIVE DIALOGUE BETWEEN TRADE POLICY AND CLIMATE CHANGE COMMUNITIES

Most decision makers in the trade policy sphere continue to regard climate change issues as outside the realm of their jurisdiction. In contrast, many negotiators on the climate change front regard trade policy as an essential tool to address climate change regardless of the possible inconsistencies vis-a-vis multilateral trade rules. Some caution against trade protectionism in the name of climate change mitigation. Given this divide, the ICTSD Global Platform on Climate Change, Trade, and Sustainable Energy (the Global Platform) provides a bridge between the various stakeholders from the trade and climate change communities to promote understanding of one another's concerns and enable appreciation of how the decisions in one field affect policies in the other.

While the importance of the linkages has become increasingly obvious, what remains essential is analytical and evidence-based understanding of how and why these linkages create policy dilemmas. In many circles, how to solve the challenges involved—politically, legally, and economically—remains unclear. Through research and analysis as well as policy dialogues, the Global Platform reaches a wide spectrum of stakeholders, deepening their understanding of the issues and their capacity to establish coherent outcomes on trade and climate change.

## Research and Analysis

***Trade, Climate Change and Poverty***, by ICTSD (forthcoming, March 2010).

The objective of this paper is to create a better understanding of the linkages between trade, climate change and poverty. We will highlight expected challenges for the poor, but also try to identify some opportunities

***Sectoral Approaches to Climate Change Mitigation: Competitiveness, Trade and Development Issues in Small Developing Countries***, Information Note No. 11, October 2009. 5

This information note focuses on the competitiveness, trade and development concerns of small developing countries regarding sectoral approaches to climate change mitigation.

***Climate Change and Trade on the Road to Copenhagen***, policy discussion paper, ICTSD Trade and Sustainable Energy Series, December 2008.

This paper examines the various trade and climate change policy interlinkages with a view to identifying a positive agenda for trade and trade policies to contribute to a successful global climate change agreement and its implementation.

***Climate Change and Trade on the Road to Copenhagen***, Information Note No. 6, May 2008.

This information note provides information on the most salient and pressing policy linkages between climate change and trade. It was produced for the seminar on WTO-Trade and Climate convened by the Ministry of Foreign Affairs of Denmark in June 2008.

***Climate, Equity and Global Trade***, edited by ICTSD, ICTSD Programme on Trade and Environment, Selected Issue Brief No. 1, December 2007.

This set of issue briefs was put together by ICTSD with a view to look beyond some of the rhetoric in the debate on trade and climate change, and to identify some of the emerging issues from an equity and development perspective.

***The WTO and Energy: WTO Rules and Agreements of Relevance to the Energy Sector***, by Yulia Selivanova, ICTSD Programme on Trade and Environment, Issue Paper No. 1, August 2007.

This paper attempts to put energy in the context of international trade and provide some clarity as to how international trade rules apply to this sector.

***Linking Trade, Climate Change and Energy***, Trade and Environment Series, selected Issue Briefs, 2006.

This special collection of issue briefs summarizes ICTSD's analysis of the key links between trade, climate change and energy, explains more specifically some of the most important issues facing policy-makers concerned with international policy on energy and trade, and focuses on bioenergy, looking both at the global picture and at experiences in Africa, Asia and Brazil.

To download the papers, go to <http://ictsd.net/climate-change/linkage-between-trade-policy-and-climate-change-communities/>.

## II. ENABLING THE SCALING UP OF INNOVATION, DIFFUSION, AND TECHNOLOGY TRANSFER THROUGH TRADE POLICY

Effectively addressing climate change through mitigation and adaptation calls for the scaling up of innovation, diffusion, and transfer of pertinent technologies. Responding to the impact of climate change and enabling a transition to a low-carbon economy demands an exhaustive exploration of all possible mechanisms and legal and business models concerned; as well as a solid understanding of enabling regulatory frameworks, including those for intellectual property. So far, much of the discussion has lacked a solid empirical basis and an informed policy perspective. This is precisely the gap on which ICTSD's Global Platform focuses in the field of technology.

An informal mechanism, ICTSD's Initiative on Climate Technology and Trade assembles prominent experts and policy makers to develop a research agenda and identify gaps and priorities through the following activities:

- the examination of relevant mechanisms of transfer of technology;
- the identification of enabling obstacles and potential points of intervention; and
- the articulation of measures that could be considered in the United Nations Framework Convention on Climate Change context.

The initiative strives to generate solutions-focused and policy-oriented outcomes. To this end, the United Nations Environment Programme, the European Patent Office, and ICTSD joined forces to deliver by the United Nations Conference on Climate Change in Copenhagen a patent landscape in the area of energy generation, a survey of licensing practices in the same area, and, ultimately, a database containing patent information on green technologies. Post-Copenhagen, the group will pursue a similar undertaking with respect to other sectors (i.e.: buildings and construction and transport).



## Research and Analysis

***Technologies for Climate Change and Intellectual Property: Issues for Small Developing Countries***, Information Note No. 12, October 2009.

This information note aims to provide an initial review of the links between transfer of technology, intellectual property and climate change from the perspective of LDCs and outline some of the relevant measures that could be developed in support of a post-Kyoto climate regime.

***Access to Climate Change Technology by Developing Countries: A Practical Strategy***, by Cynthia Cannady, ICTSD Programme on Intellectual Property Rights and Sustainable Development, Issue Paper No. 25, September 2009.

This paper examines various approaches that have been suggested for facilitating access to climate change technology by developing countries, including compulsory licensing, patent pools, patent databases and structured voluntary licensing “mechanisms”. It details the practical problems facing these approaches and argues for a two-pronged strategy based on a climate change technology innovation strategy (CCTIS), and on “win-win” development collaboration agreements for climate change technology between developed and developing countries.

***Innovation and Technology Transfer to Address Climate Change: Lessons from the Global Debate on Intellectual Property and Public Health***, by Frederick M. Abbott, ICTSD Programme on Intellectual Property Rights and Sustainable Development, Issue Paper No. 24, June 2009.

This paper examines different categories of IPRs and the ways they may have different effects and implications for climate EGS as compared with pharmaceutical technologies. It also points to a number of lessons that can be drawn from the public health-related negotiations, at the World Trade Organization (WTO) and other forums, which may be useful to negotiators and policy makers in addressing climate change, transfer of technology and IPRs.

***Technology Transfer in the TRIPS Age: The Need for New Types of Partnerships between the Least Developed and Most Advanced Economies***, by Dominique Foray, ICTSD Programme on Intellectual Property Rights and Sustainable Development, Issue Paper No. 23, May 2009.

The paper advances the need for greater use of public-private partnerships (PPPs) as a mechanism for ensuring the effectiveness of the technology transfer, particularly for Least Developed Countries (LDCs), where foreign direct investment (FDI) and trade remain at a low level and their limited absorptive capacities make it unlikely that the few foreign

technologies that are transferred will disseminate throughout the economy. The paper makes mention of the Cleaner Production Centers as a successful example of technology platform.

***Intellectual Property and Access to Clean Energy Technologies in Developing Countries: An Analysis of Solar Photovoltaic, Biofuel and Wind Technologies***, by John Barton, ICTSD Programme on Trade and Environment, Issue Paper No. 2, December 2007.

The paper explores whether or not there are intellectual property barriers to access clean technologies and know-how in developing countries in three clean energy sectors: solar photo-voltaic (PV), bio-mass for fuel and wind energy technologies. The paper concentrates on technologically advanced Brazil, China and India. According to the paper, there seems to be insignificant IP barriers to developing nation access. However, because of the global concentration in some of the industries, all countries should be alert to the risks of cartel behavior.

***UNEP-EPO-ICTSD Study on Patents and Environmentally Sound Technologies: Some Preliminary Findings*** (forthcoming, December 2009).

***Intellectual Property Rights and International Technology Transfer to Address Climate Change: Foundations, Problems and Potential Solutions***, by Keith E. Maskus and Ruth L. Okediji (forthcoming, December 2009).

## Expert Group Under the ICTSD Climate Technology and Trade Initiative

**Matthew Bateson**, Managing Director Energy & Climate Focus Area, World Business Council on Sustainable Development, Geneva, Switzerland

**John Barton** (posthumous), Professor of Law, Emeritus, Stanford Law School

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**Dominique Foray**, Director of the Chair of Economics and Management of Innovation and Dean of the College of Management of Technology at EPFL, Lausanne University, Switzerland



**Taka Hiraishi**, Co-Chair, IPCC Task Force on National Greenhouse Gas Inventories, Japan  
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**Lynn Krieger Mytelka**, Distinguished Research Professor at Carleton University, Ottawa, 9  
Canada

**Maria Nolan**, Chief Officer, Secretariat of the Multilateral Fund for the Implementation of  
the Montreal Protocol

**Ruth Okediji**, William L. Prosser Professor of Law and Solly Robins Distinguished Research  
Fellow, University of Minnesota Law School, United States

**Pedro Roffe**, Senior Fellow, ICTSD, Chile

**Padmashree Gehl Sampath**, Researcher, Knowledge and industrial dynamics research  
group, UNU-MERIT, India

**Dalindyebo Shabalala**, Managing Attorney of CIEL's Geneva office, and Director of CIEL's  
Intellectual Property and Sustainable Development Project

Participants in the initiative are involved in a personal capacity and not as representatives of  
an institution or government.

Ad hoc members of the initiative to facilitate mutually supportive interaction with other  
technology related processes undertaken in the UNFCCC:

**Jukka Uosukainen**, Director General, Finland Ministry of Environment, Chair of the EGTT

**William Kojo Agyemang-Bonsu**, National Climate Change Coordinator, Environment  
Protection Agency, Ghana, Member of the EGTT





### III. ACCELERATING TRADE OF CLIMATE-FRIENDLY GOODS AND SERVICES

Addressing climate change and energy security requires massive and rapid deployment of more efficient, cleaner technologies that promote clean growth and economic gain. Carefully crafted trade policies could contribute to a rapid diffusion and transfer of clean technologies around the world and provide new incentives for innovation and investment in climate-friendly technologies.



Through targeted research, analysis, and policy dialogues, ICTSD's Global Platform on Climate Change, Trade, and Sustainable Energy (the Global Platform) provides options for liberalizing trade in environmental goods and services that effectively contribute to sound environmental management while preserving developing countries' ability to promote industry and economic development. The project has identified and classified key climate-friendly environmental goods.



In this regard, the Global Platform launched a mapping exercise of commercially available technologies and goods as well as those undergoing R&D (with a strong prospect of commercialization in a five- to ten-year time horizon) in three sectors: renewable energy supply, buildings, and transport. Once peer reviewed by Intergovernmental Panel on Climate Change lead experts, these mapping studies set the stage for customs classification and a subsequent detailed analysis of their market drivers, trade flows, and trade barriers.

To clarify the role of trade in the dissemination of climate-friendly technologies, the Global Platform draws from the expertise of trade and environmental specialists. Experts from such institutions as the Energy Research Centre of the Netherlands; the Energy and Resources Institute in India; the Energy Research Institute in China; the Intergovernmental Panel on Climate Change; and the Organization for Economic Cooperation and Development all contribute to this ongoing research on climate-friendly technologies.

## Research and Analysis

***The Liberalisation of Environmental Goods and Services: Issues for Developing Countries***, Information Note No. 14, October 2009.

This information note surveys the key issues surrounding liberalized trade in climate-friendly goods. The focus is on goods relevant to climate mitigation.

***Mapping Climate Mitigation Technologies and Associated Goods within the Buildings Sector***, by Anandajit Goswami, Mitali Dasgupta and Nitya Nanda, ICTSD Programme on Trade and Environment, 2009.

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This paper identifies technologies that can contribute most significantly to reducing greenhouse gases in the residential and commercial buildings sector.

***Mapping Climate Mitigation Technologies and Associated Goods Within the Renewable Energy Supply Sector***, by Paul Lako, ICTSD Programme on Trade and Environment, 2008.

This paper identifies state-of-the-art renewable energy technologies to reduce greenhouse gas emissions.

***HS Codes and the Residential and Commercial Buildings Sector***, by Izaak Wind, ICTSD Programme on Trade and Environment, 2009.

This paper identifies customs codes widely used in international trade for commercially available goods relevant to climate change mitigation in the residential and commercial buildings sector. The identification of these codes will facilitate an understanding of how these goods are classified for the purposes of international trade and subsequently enables an analysis of their trade flows as well as the trade barriers they face.

***HS Codes and the Renewable Energy Sector***, by Izaak Wind, ICTSD Programme on Trade and Environment, 2008.

This paper identifies customs codes widely used in international trade for commercially available goods relevant to climate change mitigation in the renewable energy supply sector. The identification of these codes will facilitate an understanding of how these goods are classified for the purposes of international trade and subsequently enables an analysis of their trade flows as well as the trade barriers they face.

***Environmental Priorities and Trade Policy for Environmental Goods: A Reality Check***, by Veena Jha, ICTSD Trade and Environment Series, Issue Paper No. 7, September 2008.

Through rigorous empirical analysis and econometric modeling, this paper tries to correlate environmental knowledge generated through the UNEP Global Environmental Outlook and relevant environmental performance indices with trade statistics in a set of 153 environmental goods being discussed at the World Trade Organization (WTO). The paper also looks at the implications of these findings in informing a meaningful negotiating strategy on environmental goods at the WTO.

***Liberalization of Trade in Environmental Goods for Climate Change Mitigation:***

***The Sustainable Development Context,*** by ICTSD, background paper to the Trade and Climate Change Seminar, June 18–20 2008, Copenhagen, Denmark.

This paper surveys the key issues surrounding liberalized trade in low-carbon goods. It asks what modalities are available for liberalizing trade in low-carbon goods, both within and outside the WTO, and also explain the need to complement any liberalizing package by a set of financial and technical assistance measures.

To download these papers, go to <http://ictsd.net/climate-change/accelerating-trade-and-diffusion-of-climate-friendly-goods-and-services/>.

**FORTHCOMING RESEARCH  
WILL FEATURE THE  
FOLLOWING TOPICS:**

- transport sector mapping;
- trade analysis for buildings;
- trade analysis for transport;
- trade analysis for energy supply;
- an information note on single end use goods; and
- a paper on energy-efficiency standards.



## IV. ENSURING INCORPORATION OF AGRICULTURE AND BIOFUELS IN SUSTAINABLE STRATEGIES

### Climate Change, Agriculture and Trade

While climate change presents an undeniable threat to agricultural production and food security, the agricultural sector significantly contributes to greenhouse gasses and needs to help mitigate climate change. At the same time, however, increased demands on the sector require that agricultural production more than double by 2050. Rather than pursuing a one-size-fits-all decrease in agricultural emissions, efforts should focus on policies that deliver win-win outcomes to enhance agriculture productivity, promote food security and sustainable livelihood, and that contribute to climate change mitigation and adaptation.

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An open and equitable trade system for food and agriculture is vital to food security and contributes to climate change adaptation and mitigation; it can help offset climate-induced production decreases in certain regions and facilitate the transfer of food and agricultural products from regions where their production requires relatively fewer greenhouse gas emissions to regions where production would result in higher emissions.



To help address these concerns, ICTSD and the International Food and Agricultural Trade Policy Council (IPC) have established an interdisciplinary panel of experts, the ICTSD-IPC Platform on Climate Change, Agriculture, and Trade: Promoting Policy Coherence. For further information on the ICTSD-IPC Platform on Climate Change, Agriculture, and Trade: Promoting Policy Coherence, see <http://ictsd.net/climate-change/agriculture-and-biofuels/pacct/>.

### Research and Analysis

***ICTSD-IPC Platform on Climate Change, Agriculture and Trade: Considerations for Policymakers***, October 2009.

***Greenhouse Gas Reduction Policies and Agriculture: Implications for Production Incentives and International Trade Disciplines***, by David Blandford and Tim Josling, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Issue Brief No. 1, August 2009.

This issue brief analyzes the implications of domestic policies designed to reduce GHG emissions from agriculture and to enhance the role of agriculture in mitigation efforts for agricultural production and existing and future WTO rules.

***Climate Change, Agriculture and Aid for Trade*** by Jodie Keane, Sheila Page, Alpha Kergna, and Jane Kennan, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Issue Brief No. 2 (forthcoming, December 2009).

This issue brief discusses ways in which developing countries whose agricultural sectors are affected by climate change can secure alternative sources of export earnings. More specifically, it investigates the possibility of linking climate change finance and Aid for Trade.

***Carbon and Agricultural Trade in Developing Countries***, by James Macgregor, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Issue Brief No. 3 (forthcoming, December 2009).

This issue brief analyzes carbon standards applicable to the agricultural sector, their impact on trade, and their impact on economic development in developing countries. Special attention is hereby given to private standards, which have been proliferating over the past years.

***The Role of Trade in Food and Agricultural Products in Climate Change Adaptation Costs***, by Gerald Nelson, Amanda Palazzo, Claudia Ringler, Mark Rosegrant, Timothy Sulser, and Miroslav Batka, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Issue Brief No. 4 (forthcoming, December 2009).

***Climate Change and China's Agricultural Sector: An Overview of Impacts, Adaptation and Mitigation***, by Jinxia Wang and Jikun Huang, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Issue Brief No. 5 (forthcoming, December 2009).

***International Climate Change Negotiations and Agriculture***, ICTSD-IPC Platform on Agriculture, Climate Change, and Trade, Policy Focus No. 1, May 2009.

This paper has been written with the purpose of providing an overview of the existing international climate change agreements, and the international negotiations underway. In addition, it points out the ways in which the agricultural sector is, or may be, addressed in the international climate regulatory framework.

To download these papers, please visit:  
<http://ictsd.net/climate-change/agriculture-and-biofuels/pacct/research-and-analysis/>.

## Composition of the ICTSD-IPC Platform on Climate Change, Agriculture and Trade: Promoting Policy Coherence

### A. Steering committee

**John Anthony Allan**, Kings College, UK

**Jason Clay**, Senior Vice President Market Transformation, WWF US

**Franz Fischler**, former Commissioner for Agriculture, European Union

**Adrian Macey**, Ambassador of Climate Change Negotiations, New Zealand

**Daniel Martino**, Carbosur, Coordinating Lead Author of Agriculture Chapter for IPCC AR4, Uruguay

**Raul Montemayor**, Vice-President, Federation of Free Farmers Cooperatives, the Philippines, International Federation of Agricultural Producers, IPC Member

**Michel Petit**, Professor, Institut Agronomique Méditerranéen, France, IPC Member

**Peter Smith**, Aberdeen University, UK, Coordinating Lead Author of Agriculture Chapter for IPCC AR4

**Ajay Vashee**, President, International Federation of Agricultural Producers, IPC Member

### **Expert Group**

**Christian Friis Bach**, International Director, DanChurchAid

**Bruce E. Dale**, Michigan State University, USA

**Jane Earley**, consultant, Earley and White Consulting Group LLC, USA

**Lin Erda**, Professor and Ex-Director General, Agro-Environment and Sustainable Development Institute Chinese Academy of Agricultural Sciences

**Marcos Jank**, President, UNICA, Brazil

**Willem-Jan Laan**, Director, Global External Affairs, Unilever, IPC Member

**Gerald Nelson**, Senior Research Fellow, International Food Policy Research Institute

**Ni Hongxing**, Deputy Director-General, Ministry of Agriculture, China

**Tim Searchinger**, Research Scholar, Princeton University, former co-Director of the Center for Conservation Incentives at Environmental Defense, US

**Hasit Shah**, Managing Director, Sunripe Kenya Ltd. ; Chairman, Fresh Produce Exporters Association of Kenya ; Chairman, Kenya Horticultural Council; Director, Europe-Africa-Caribbean-Pacific Liaison Committee

**Youba Sokona**, Executive Director, the Sahel and Sahara Observatory

**Vanessa Stiffler-Claus**, Manager, Federal Affairs, John Deere

**Ancha Srinivasan**, Senior Climate Change Specialist, Asian Development Bank

## **ICTSD and IPC Team**

**Ricardo Meléndez-Ortiz**, Chief Executive, ICTSD

**Christophe Bellmann**, Programmes Director, ICTSD

**Marie Chamay Peyramayou**, Manager, Global Platform, ICTSD

**Charlotte Hebebrand**, President/CEO, IPC

## **B. Biofuels, Trade And Sustainable Development**

To produce, trade, or use agricultural products as fuel is a policy riddle that has spawned heated debate and multiple—and sometimes conflicting—action. Today, many see fuel derivatives from agricultural produce and forests as a new frontier in energy supply. Over the past few years, OECD countries and most major demanders of energy for transport or otherwise have adopted policies and measures that have spurred enormous demand and stimulated investment in production and growth. Evidence shows that these policies have rapidly expanded trade flows and production at home and abroad; in particular measures introducing mandates of agrofuel use in the mix of liquid fuel for transportation or the energy grid. Given the ensuing scale, sustainability challenges are many, multifaceted, and urgent.

Net gains and losses from use of biomass as energy are hard to estimate, particularly in a long-term assessment. Odds for a future of improved energy efficiency; lower carbon emissions; reasonable and sustainable use of lands for the production of food, fibre, forests, or fuel; and larger developmental and social gains may be enhanced or dampened by the policies that are made now; especially those with long-term targets as well as changes in regulatory frameworks and international rules that limit and lock-in our possibilities.

In this context, ICTSD has over the past two years engaged in policy dialogue, research, analysis, and problem-solving activities that contribute to societies' pressing need to come to grips with the reality of energy crops.

## **Research and Analysis**

***Biofuels Subsidies and the Law of the World Trade Organization***, by Toni Harmer, ICTSD Programme on Agricultural Trade and Sustainable Development, Issue Paper No. 20, June 2009.

This paper reviews biofuel measures that are commonly used in major producing countries against the WTO subsidies disciplines. There is little evidence that domestic policymakers have taken into account these disciplines when crafting the biofuel measures. This paper identifies a number of issues for policymakers to consider.



***Biofuels Certification and the Law of the World Trade Organization***, by Marsha A. Echols, ICTSD Programme on Agricultural Trade and Sustainable Development, Issue Paper No. 19, June 2009.

This paper reviews biofuels certification through the WTO lens. More specifically, it assess under what circumstances a biofuels-certification programme might be WTO-compatible.

***US Trade Policies on Biofuels and Sustainable Development***, by Jane Earley, ICTSD Programme on Agricultural Trade and Sustainable Development, Issue Paper No. 18, June 2009.

This paper reviews US biofuels related trade-measures, or trade related biofuels measures. The WTO-compatibility of these measures and their effects on the environment and sustainable development are analyzed, and based on this, policy recommendations are formulated for the United States.

***EU Support for Biofuels and Bioenergy, Environmental Sustainability Criteria, and Trade Policy***, by Alan Swinbank, ICTSD Programme on Agricultural Trade and Sustainable Development, Issue Paper No. 17, June 2009.

This paper describes EU biofuels policies, sets them in the context of the EU's overall policy framework on renewable- and bio-energy, and discussed their interface with the WTO legal system.

***Biofuels Production, Trade and Sustainable Development***, by ICTSD, ICTSD Programme on Agricultural Trade and Sustainable Development, Policy Discussion Paper, December 2008.

This paper discusses the complicated linkages between biofuels production, trade and sustainable development. Although the potential for trade in biofuels could be enormous, so are the risks and challenges. This makes research into the area of biofuels production and its links to trade and sustainable development very important.

***Sustainable Bioenergy Development in UEMOA Member Countries***, by ICTSD in partnership with the UN Foundation and the Energy and Security Group, October 2008.

This paper assesses constraints, identifies trade-offs, and outlines key policy issues for promoting sustainable production and use of bioenergy in the eight member countries of West African Economic and Monetary Union (UEMOA). It also provides appropriate data to guide governments and international organizations as they consider smallholder production schemes to broaden the use of bioenergy as part of a comprehensive agriculture sector strategy, while reducing poverty and arresting environmental degradation.

To download these papers, see: <http://ictsd.net/climate-change/agriculture-and-biofuels/>.

## V. DEFINING POLICY TOOLS AND MECHANISMS TO MAKE ADAPTATION POSSIBLE

Least-developed countries (LDCs), small and vulnerable economies (SVEs), and small island developing states (SIDS) are highly vulnerable to the physical impact of climate change, including droughts, floods, and hurricanes. These countries' high levels of poverty and dependence on limited exports and sectors, as well as weak supply-side capacity, underline such vulnerability. Moreover, key economic sectors such as agriculture, fisheries, and tourism are among the most susceptible to the impact of climate change.

Adapting to climate change requires building economic resilience by enhancing supply-side capacities and promoting economic diversification to reduce the negative and augment the positive impact of climate change and achieve sustainable development. Indeed, enabling supply-side policies that facilitate the diversification of production and exports, technological upgrading, and the value added are instrumental to foster economic resilience in these countries. Trade policy can also play an important role in constructing and strengthening the supply-side and adaptive capacity of LDCs, SVEs, and SIDS.

ICTSD's work on trade and climate change adaptation supports resilience building and adaptation in LDCs, SVEs and SIDS. Key research, analysis, and dialogues are conducted at the sectoral level (e.g., tourism, fisheries, energy, etc.) to foster low-carbon economic restructuring, supply-side capacity, and trade competitiveness in these countries. Moreover, our work promotes the concept that innovative financing mechanisms in the trade and climate change regimes reinforce and complement each regime.



## Research and Analysis

***Climate Change and Fisheries: Policy, Trade and Sustainable Development Issues***, ICTSD Programme on Competitiveness and Sustainable Development, Information Note No. 15, October 2009.

This information note discusses the likely impacts of climate change on fisheries and the role of trade and trade policies in supporting adaptation and mitigation measures in fisheries.

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***Trade and Climate Change Adaptation: Sustainable Development Objectives for LDCs, SVEs, and SIDS***, ICTSD Programme on Competitiveness and Sustainable Development, Information Note No. 13, October 2009.

This information note identifies key trade and development areas where trade policy could facilitate climate change adaptation and the attainment of sustainable development objectives.

***Trade, Climate Change, and Competitiveness in the Tourism Sector in the Caribbean***, by Keron Niles, ICTSD Programme on Competitiveness and Sustainable Development, Issue Paper No. 9 (forthcoming, February 2010).

***Aid for Trade and Climate Change Financing Mechanisms: Best Practices and Lesson Learned***, by Dr. Vinaye Dey Ancharaz, ICTSD Programme on Competitiveness and Sustainable Development, Issue Paper No. 10 (forthcoming, December 2009).

***Economic Vulnerability and Resilience in SIDS***, by Professor Robert Read, ICTSD Programme on Competitiveness and Sustainable Development, Issue Paper No. 11 (forthcoming, February 2010).

To download these papers, go to <http://ictsd.net/climate-change/adaptation/>

## VI. ADDRESSING CARBON LEAKAGE AND COMPETITIVENESS THROUGH EQUITABLE POLICIES

In the debate on the implications of climate change policies for global competitiveness and carbon leakage, policies such as energy-efficiency requirements, cap-and-trade schemes and carbon taxes have come to the forefront.

Countries trying to mitigate climate change have raised concerns that their energy-intensive industries risk poor competition with firms in nonmitigating countries, which could result in market-share losses and consequently a relocation of emissions. Options are available to address such concerns. The free distribution of allowances to emissions-intensive sectors of production is one, adopted by the European Union and included in other existing proposals. Another alternative is internationally negotiated sectoral agreements, which is part of the current negotiations of the UNFCCC. A third option is levelling the playing field with measures at the border to equalize carbon costs. Calls for this controversial option are being considered in national legislation in the United States.

On these subjects, ICTSD's Global Platform on Climate Change, Trade and Sustainable Energy (the Global Platform) has undertaken research and analysis and has organized policy dialogues across policy communities and with the inclusion of stakeholders. The aim is to promote equitable and nondiscriminatory approaches to the potential use of trade instruments to address carbon leakage and competitiveness and to generate awareness of inherent potential welfare and sustainability costs.



## Research and Analysis

***Trade, Climate Change and Global Competitiveness: Opportunities and Challenges for Sustainable Development in China and Beyond***, ICTSD Programme on Trade and Environment, Selected Issue Briefs No. 3, March 2008.

This collection of papers brings together views and perspectives from a wide range of experts and analysts both within China and internationally to contribute to the debate on issues in the trade - climate change relationship that may impact on global competitiveness, with a particular focus on the role of China.

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***The Microcosm of Climate Change Negotiations, What Can the World Learn from the European Union?***, by Håkan Nordström, ICTSD Programme on Global Governance Architecture, Issue Paper No. 1, December 2009.

Did the European Union reach a consensus on climate change? In considering this issue, this study follows the internal EU climate change negotiations and draws lessons on leadership, burden sharing, financial support and competitiveness for the global climate change negotiations.

***Competitiveness and Climate Policies: Is There a Case for Restrictive Unilateral Trade Measures?***, by ICTSD, Information Note No.16, December 2009.

This information note looks into the political, economic and legal context of border carbon measures as a tool to deal with concerns of leakage and competitiveness and to create leverage for developing countries to take on climate change regulation.

***Climate Change Mitigation Policies in Select OECD Countries: Trade and Development Implications for Developing Countries***, by Diarmuid Torney and Mustapha Kamal Gueye, ICTSD Programme on Competitiveness and Sustainable Development, Issue Paper No. 8, October 2009.

This paper explores a few of the climate mitigation policies and measures enacted, or being considered in OECD countries, and discusses their potential implications for trade and development in developing countries.

To download these papers, see: <http://ictsd.net/climate-change/leakage-competitiveness/>.



## VII. DEALING WITH DE-CARBONIZATION OF TRANSPORTATION AND BUNKER FUELS

At the UNFCCC, discussions about regulation of emissions from the international transport sector—air and marine—could have crucial implications for developing countries in terms of trade and development prospects. Defining regulatory approaches that effectively control emissions from international transportation without undermining the export potential of developing countries requires careful thinking and active participation by countries in the negotiations on climate change.

To promote open dialogue about regulation of emissions from the international transport sector, carbon accounting and labelling initiatives, and their impact on global trade and climate change—and particularly on the implications for developing countries—ICTSD's Global Platform on Climate Change, Trade, and Sustainable Energy (the Global Platform) has planned a series of studies and stakeholder meetings.

This dialogue process will engage the OECD countries on developing-country concerns with regard to potential trade and development effects of regulating bunker fuels and emissions from air and marine transport (e.g., by the International Civil Aviation Organisation and the International Maritime Organisation) and in complying with carbon-related standards and labels. Dialogue on this subject will be organised at the UNFCCC meetings and during the meetings of the UN Commission on Sustainable Development.

This work seeks to single out two sets of issues of critical importance to developing countries: adaptation in their trade-exposed sectors (agriculture and tourism) and the key question of technology transfer, innovation, Aid for Trade, and the UNFCCC agenda on financing. It responds in a tailored manner to the issues of small and large developing countries to foster constructive engagement in climate change negotiations.

In sum, the Global Platform enhances understanding of trade and development concerns in the review of regulation of greenhouse gas emissions in the international transport sector.

### FORTHCOMING RESEARCH AND ANALYSIS

Regulating Carbon in Air and Maritime Transportation: Assessing Implications for Imports and Exports in Developing Countries.

Carbon Regulation, Climate Change Adaptation and Competitiveness in Tourism in LDCs, SVEs and SIDS.

Supporting Compliance with Climate-related Regulations and Standards: What Role for Aid for Trade and the UNFCCC Agenda and Financing?

## VIII. GLOBAL PLATFORM TEAM

The ICTSD Global Platform on Climate Change, Trade and Sustainable Energy's team includes:

**Ricardo Meléndez-Ortiz**, Director, Global Platform on Climate Change, Trade and Sustainable Energy; Chief Executive, ICTSD

**Marie Chamay Peyramayou**, Manager, Global Platform on Climate Change, Trade and Sustainable Energy

**Ana Maria Kleymeyer**, Senior Advisor on Climate Change Negotiations

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**Joachim Monkelbaan**, Programme Officer, Global Platform on Climate Change, Trade and Sustainable Energy

**Ingrid Jegou**, Research Fellow, Global Platform on Climate Change, Trade and Sustainable Energy

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**Christophe Bellmann**, Programmes Director, ICTSD

**Ahmed Abdel Latif**, Programme Manager, Intellectual Property, Innovation and Technology

**Johannes Bernabe**, Senior Associate

**Gloria Carrión**, Development Programme Officer

**Moustapha Kamal Gueye**, Senior Associate

**Pedro Roffe**, Senior Fellow

**Malena Sell**, Senior Programme Officer, Environment & Agriculture

**Mahesh Sugathan**, Programme Coordinator, Economics and Trade Policy Analysis



## ABOUT ICTSD

Founded in 1996, the International Centre for Trade and Sustainable Development (ICTSD) is an independent non-profit and non-governmental organization based in Geneva. By empowering stakeholders in trade policy through information, networking, dialogue, well-targeted research and capacity building, the Centre aims to influence the international trade system such that it advances the goal of sustainable development.

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