

Trade and Green Economy

1. Introduction

The potential trade risks of a transition to a green economy — protectionism, conditionality, subsidies — are issues of long standing and not unique to the green economy. The urgency of the global challenges which a green economy transformation is intended to address, and the scale of the actions being taken by many countries to build green economies, does however bring renewed focus to these risks.

At the same time, the new greening of markets associated with a green economy may provide opportunities for many developing countries to find global markets for goods and services with low environmental impacts. This will, however, test the supply capacities of developing countries as reflected, for example, in domestic trade infrastructure.

The green economy offers an opportunity to improve both global trade governance and the domestic trade environment to ensure that trade contributes positively to a green economy in the context of sustainable development and poverty eradication.

2. Policy options for green transformation and trade implications

As a growing number of countries adopt strategies and policies to promote a transition to a green economy, this will have implications for trade flows and trading opportunities. The following external and internal measures and pressures, not necessarily mutually exclusive, may serve as driving forces to a transition to a green economy via international trade.

1) Local regulations and rules. For example, some U.S. states have imposed recycling requirements on newsprint, which is likely to have significant implications for the forest industries of its trading partners.

2) Environmentally-driven consumer pressure from major customers: For instance, the Chief Executive Officer of one of Canada's most competitive paper companies remarked that the pressures from his European customers have become so severe that he is now running his mills to European, rather than Canadian, standards.

3) National legislation and plans: For example, many Chinese business leaders expect to face much stronger environmental regulations and an environmental tax over the next five years under China's 12th five-year plan. Many are building major changes into their long term trade and investment planning to accommodate the need for sustainable development.

4) Unilateral policy measures: Many countries seem committed to the use of trade measures to persuade other countries to change their domestic environmental practices, despite the fact that many measures may be contrary to GATT-WTO rules (see Table 1 and discussion).

5) International environmental, climate change agreements/conventions: The outcome of negotiations on climate change will have an influence on trade, e.g., by affecting the consumption of various natural resources which are traded and shifting demand for various low-carbon technologies (see Table 1).

Some countries have expressed concerns that a green economy transition could cause their export industries to experience declining demand or competitiveness.¹ These concerns can be real and need to be addressed through proactive policies at both national and international level.²

Competitiveness and environmental standards are often considered enemies. There is evidence, however, that trade policy and environmental policy can act as complements in the development of conditions within which firms can innovate and become more internationally competitive.³ Germany and Japan have amongst the toughest environmental regimes in the world, yet both are among the most able to compete internationally. Their strategies are clear: innovate now and capture markets in the future. It should be stressed, however, that technological capacity is key to such success.

Table 1 shows three broad categories of policy measures: regulatory measures, fiscal measures and trade capacity development measures which may affect trade. The 'traffic lights' in the right-hand column provide simple signals by assessing GATT-WTO rules and disciplines. Green light illustrates that policy measures are generally free from trade concerns. Yellow light requires moving slowly with caution and underlines the need to revisit the rules to seek further clarity. Red light means "stop" or "no-go-zone" under current WTO rules. The following subsections discuss each of these green transformation measures, their trade-related concerns and proposed responses.

¹ See Cosbey's (2010) analysis on trade and competitiveness impact.

² See the subject of Rio 2012 Issues Brief #4 on New Growth Strategies in a Green Economy.

³ For example, Japan refused to shelter its industry from the oil shocks of the 1970s. Indeed, it increased the domestic pressure by adding taxes to the price increases. This contributed to Japanese industry's inventing the energy efficient technology of the 1980s.

2.1 Environmental regulations, standards, labelling and certification

Concern: There is a large body of environmentally-related rules and regulations.⁴ The regulations, standards and labelling may represent significant obstacles to market entry.

Suggestion: One type of standard with potential to promote a green economy dictates the energy efficiency of a product in use. But different countries all have different standards, meaning higher costs for exporters and less dissemination. An international harmonization of standards and labelling would be a solid step towards lowering entry barriers, but there is no obvious forum for such harmonization (Cosbey, 2010).

2.2 Unilateral border carbon adjustments (BCAs), air and sea transport levies

Concern: The risks associated with environmentally-related border tax policies are that they may be disguised protection of domestic firms. Countries could face significant difficulties in establishing that the proposed border measure would be compatible with WTO rules. In particular, border tax adjustments or international transportation levies have the potential to impact negatively trade and the conditions of competition for developing country exporters, or to penalize them unfairly.

Suggestion: The solution may be regime design, ideally based on internationally agreed principles (Cosbey, 2010).⁵ Nevertheless, the issue of BCAs will likely remain on the table in the negotiations on climate change, in the trade negotiations of the Doha Development Agenda and in the multilateral trading system in the near term. Some have suggested that a firm Multilateral Environmental Agreement (with explicit reference to trade measures) can form the basis for origin-based charges on traded goods.⁶ This requires strong carbon monitoring, reporting and verification (MRV). In the absence of a global agreement, MRV may be developed on a bilateral or regional basis.

2.3 Subsidies and domestic support mechanisms

Concern: Recently, there have been a number of trade disputes related to 'green subsidies' and domestic support for green sectors. For example, the US government has petitioned in late 2010 to take China to WTO dispute settlement for its support to clean energy sectors. One question is whether environmental threats like climate change might provide a strong enough base to re-examine the WTO rules on domestic support to ensure that renewable energy can be promoted effectively.

Suggestion: In discussing specific subsidy-related rules of relevance to climate change, some have suggested the careful revival of an expired clause in the WTO subsidies agreement specifying that certain environmental subsidies were "non-actionable" (meaning that they are permitted) as a way of encouraging support for clean technologies (ICTSD, 2008). In this regard, developing countries have proposed that the environmental subsidies they provide shall be considered "non-actionable" under WTO rules.

2.4 Technology transfer and intellectual property rights

Concern: Intellectual property rights (IPRs) have long been a tool to promote innovation and the dissemination of new ideas and inventions.⁷ The crucial issue is how they help or hinder developing countries' gaining access to technologies and enhancing indigenous technological capacity for their development (Cosbey, 2011).

Suggestion: A global green economy package could promote the faster development of green technologies through collaborative arrangements that enshrine the sharing of technologies and the utilization of financing mechanisms like the green climate fund to acquire and place in the public domain IPRs for key climate-related technologies. These types of initiatives would be a solid step toward a green economy (ICTSD, 2008).

2.5 Liberalization of environmental goods and services

Concern: Liberalizing trade in environmental goods and services (EGS) has been on the agenda of the WTO Doha Round since the beginning. Yet, very little has been achieved. Two particular areas of controversy involve "dual use" technologies that may be used to reduce emissions as well as meet other consumer needs, and agriculture products.

Suggestion: Any liberalization package will need to be complemented by a set of financial and technical assistance measures. The impact of trade liberalization for climate change mitigation efforts will only be as effective as the broader enabling framework within which it is put into play (ICTSD, 2008). Developing countries need to have the prospect of developing capacities to compete domestically and internationally in the EGS industry.

⁴ For details of a sectoral analysis, see Cosbey, 2010.

⁵ For example, one of the key negotiation issues on taxing international transportation is how to build on special and differential treatment principle so that small and vulnerable economies, such as small island states dependent on tourism trade, are protected.

⁶ See Sussex Energy Group Policy Briefing, No. 8, May 2010.

⁷ Odagiri, H. et al eds. (2010), *Intellectual Property Rights, Development, and Catch Up: An International Comparative Study*, Oxford University Press.

Table 1. Examples of green transformation measures and related trade implications

Green transformation measures	Assessing GATT-WTO compatibility
Examples of regulatory measures	WTO-rule compatibility and conditions
<p><i>Energy efficiency standards</i></p> <p>1) These have been introduced in most OECD countries, but also in certain developing countries.</p> <p>2) In 2006, 57 countries with 80 percent of the world's population had energy efficiency standards and labeling programs in place.</p>	 <p>Yellow light: WTO's Technical Barriers to Trade agreement prohibits standards that create unnecessary obstacles to trade, and favors international standards over national ones.</p>
<p><i>Environmental labeling schemes</i></p> <p>For example, carbon labeling schemes describe the carbon dioxide emissions created as a by-product of manufacturing, transporting, and disposing of a consumer product.</p>	 <p>Yellow light: It is unclear whether labeling can be based on process and production methods (PPMs) that do not affect the end characteristics of final products. The WTO-US Shrimp-Turtle case seems to give a green light, subject to conditions for acceptability.⁸</p>
<p><i>Regulations, standards and targets for renewable energy</i></p> <p>1) China: 15 percent from renewables by 2020; 2) EU: 20 percent of energy from renewables by 2020; 3) US: 35 billion gallons of alternative fuels in 2017.</p>	 <p>Green light: National targets for renewables <i>per se</i> do not generally raise trade concerns so far. However, government measures to achieve the targets may raise trade concerns.</p>
Examples of fiscal measures	WTO-rule compatibility and conditions
<p><i>Domestic carbon and energy taxation</i></p> <p>1) Energy taxes on consumption; 2) Embedded carbon taxes proposed in some countries but actually implemented in few.</p>	 <p>Green light: Domestic carbon and energy taxes do not raise trade concerns as long as national treatment and non-discrimination principles apply.</p>
<p><i>Carbon/energy tax on imports or exports</i></p> <p>Border tax adjustment on imports/exports proposed in some countries but not yet implemented in any.</p>	 <p>Yellow light: 1) Under GATT rules border tax adjustments are possible for taxes levied directly on products. 2) It is unclear whether adjustment can be made for taxes on unincorporated input (such as energy) during the production of goods.</p>
<p><i>Subsidies and domestic support mechanisms part I</i></p> <p>Subsidies to biofuels are common in many developed and developing countries.</p>	 <p>Red light: The SCM (subsidies and countervailing measures) agreement of WTO does not allow enterprise- and sector-specific subsidies, if they cause adverse effects for foreign producers. The Agreement prohibits two types of subsidies: those contingent on exports and those contingent on the use of domestic over imported goods.⁹</p>
<p><i>Subsidies and domestic support mechanisms part II</i></p> <p>Subsidies to renewable energy</p>	
<p><i>Sustainable government procurement</i></p> <p>Green procurement policies in several countries</p>	 <p>Green light: Environmental factors can be taken into account in government procurement decisions under the WTO Agreement on government procurement (GPA)</p>
Examples of capacity development measures	WTO-rule compatibility and conditions
<p><i>Trade facilitation, promotion, and financing, as well as Aid-for-Trade for green sectors¹⁰</i></p> <p>See Section 3.</p>	 <p>Green light: Trade facilitation and trade finance do not generally raise trade concerns so far.</p>

Note: The current institutional home for global trade rules and disciplines is WTO. However, the current WTO rules seem to be not clear on the principles for the design and implementation of trade-related instruments for a green economy, as there is no multilateral consensus on best practices yet. The aim of developing this table is to serve as a reference for policy deliberation on trade rules and green economy.

Source: adapted from ICTSD, *Climate Change and Trade on the Road to Copenhagen*, 2008, <http://ictsd.org/i/publications/12524/>.

⁸ For details of the conditions and analysis, see Cosbey (2010) and Cosbey (2011).

⁹ For a possible extensions of the scope of energy subsidies to include exemptions from user fees or general taxes and environmental externalities, see <http://www.climatepolicyinitiative.org/>.

¹⁰ For illustrative green sectors, see Table 2.

2.6 Sustainable public procurement

Concern: Not counting compensation to public employees, public procurement is estimated to represent 6-10 percent of GDP. With sustainable public procurement, governments can select and purchase products and services that minimize adverse environmental and social impacts. This can in turn create critical mass for market development. Sustainable government procurement is sometimes accompanied by a requirement for domestic content or sourcing.

Suggestion: Domestic content requirements would probably breach the non-discrimination provisions of the WTO Agreement on Government Procurement (GPA) (Cosbey, 2010). However,

most developing countries are not parties to the GPA and would as result be immune from direct challenge under international law for utilizing social and/or environmental criteria (Kjöllerström, 2008, Sustainable Development Innovation Briefs, DESA).

3. Trade promotion and financing — the positive agenda

Table 2 illustrates selected green sectors that have export potentials. Trade facilitation and financing in these fast growing sectors could assist exporters in seizing new green export opportunities, from organic fruits to clean technologies.

Table 2. Selected green sectors with trade potentials

	<p>Agriculture Organic agriculture in Uganda (UNEP Green Economy: Developing countries success stories, 2010) Certified sustainable agriculture in Hawaii (Food Alliance, United States of America)</p>
	<p>Fisheries Sustainable native fish management in Peru (UNCTAD Biotrade Initiative) Sustainable tuna fishing (Marine Stewardship Council)</p>
	<p>Forests Sustainable forestry practices for pulp and paper production in Brazil (Program for the Endorsement of Forest Certification, Brazil)</p>
	<p>Tourism — trade in services Sustainable sea tourism in Honduras (Coral Reef Alliance) Conservation charging in Abrolhos Islands (Brazil, IBAMA)</p>
	<p>Energy Hydro power exports in Lao PDR^a (Ministry of Energy and Mines, Lao PDR, www.poweringprogree.org) Biofuel production in Brazil (Brazilian Ministry for Mines and Energy) China — the world's largest producer and export of solar photovoltaics (Ren21, 2010) Sahara Desert Solar Project for solar electricity export to Europe (Bloomberg, March 08, 2010)</p>
	<p>Manufacturing Lean manufacturing in Japan (Toyota Production System) Renault (France) pledge to use set percentages of recycled plastic in its cars (EU, 2010) Global low-carbon supply chains (Carbon Trust, 2006, Carbon footprints in the supply chain) Waste recycling and water treatment technologies (ICT, 2010)</p>

Source: Author.

Note: ^a In 2008 the hydropower exports amounted to about 30% of total Lao PDR's exports. Agreement for future hydropower exports are in place with Thailand, Viet Nam and Cambodia. However, with these hydropower projects, villages disappeared under the reservoir — and tens of thousands more living downstream have been affected. Not everyone considers these exports sustainable without thorough environmental assessment as well as sufficient resettlement and adaptation support.

3.1 Targeted trade facilitation — minimizing non-tariff barriers for green trade

Concern: Small producers can be disadvantaged by mandatory certification schemes. Trade facilitation and capacity building programs need to help relieve the certification burden on small-scale producers. For example, the cost of certification remains one of the most contentious issues in organic agriculture both for small scale farmers and for commercial operators.

Suggestion: One option is the creation of a government institution helping to facilitate affordable inspection and certification services. For example, the Conservation Agriculture Trust of Kenya (CATOK), a non-profit trust duly registered under the Trustship Act of Kenya, was formed to assist farmers and agricultural exporters access the services of internationally recognized organic inspectors and certification bodies (Ndugire, 2010, UNECA African Trade Policy Centre, No.80).

Moreover, the transition to a green economy will mean a large-scale transfer of technologies and acquisition of technological capabilities in developing countries. Trade facilitation can increase the transfer and diffusion of clean technologies to developing countries by enhancing transparency of trade and business regulations and the rule of law.

3.2 Trade finance — a green trade enabler

There is an opportunity to mobilize committed trade financing to strengthen a global green economy package and enhance the transition to a green economy (see Box 1). The Green Climate Fund recently agreed at Cancún could be a source of trade facilitation financing packages to assist poorer countries to finance development of new green sectors with export potential. A global program of green trade financing in developing countries may be helpful to create synergy between international and national initiatives.

3.3 Aid-for-Trade

The WTO work program on Aid-for-Trade aims to mobilize additional funding to help suppliers from developing countries build capacity to compete in international markets. Depending on country demand, it could play an important role in promoting trade in green products. The UNDP Project on “Aid-for-Trade in Central Asia: Support to Economic Development along Trade Corridors” aims to enhance private sector capacity to increase exports, with a special focus on promotion of environmentally friendly technologies and green commodity production.

Box 1. The new trend in green trade financing

Republic of Korea Export-Import (EXIM) Bank plans to develop a Green Pioneer Program that provides US\$20 billion annually until 2020 to 200 selected green enterprises in the field of renewable energy. According to the Chairperson of the Bank, the Program is developed to promote the exports of green industry as a future growth engine and applies the strategy of creating an overseas market to help companies strengthen their track records and accumulate business development experience. The Program is planned to launch by the first half of 2011.^b

The Japan Bank for International Cooperation (JBIC) has recently signed a US\$20 million untied loan agreement with the private Turkish commercial bank Denizbank to finance renewable energy trade loans. It also signed a green memorandum of understanding (MoU) with the Banco Nacional de Obras y Servicios Públicos to implement green operations in Mexico.

Eight U.S. government agencies, including Export-Import Bank of the United States and U.S. Trade and Development Agency, have launched a coordinated effort to promote renewable energy and energy efficiency exports, the Renewable Energy and Energy Efficiency Export Initiative (RE&EE).^c

ECGD, the UK’s export credit agency, is in negotiations with Indian banking institutions to establish two \$100 million credit lines, one of which will be earmarked for renewable energy projects.

Source: Trade Finance magazine (various dates).

^b See <http://www.korea.net/news.do?mode=detail&guid=51748>.

^c See http://www.export.gov/renee/eg_main_023036.asp.

4. Conclusions

Countries may take measures to make trade policy respond better to social development and sustainable development objectives, including international commitments to poverty reduction, food security, quality jobs, and environmental sustainability. These measures may actually have positive impacts on green exports but some may raise concerns from trade partners. As suggested by UNCTAD (2011), the international community must agree upon the principles for the design and implementation of trade-related instruments in relation to a green economy.

In conclusion, this brief provides guidance on issues to be addressed to reinforce trade, green economy, and sustainable development complementarities.

- 1) Identify and address trade-related obstacles to a green economy
- 2) Ensure trade rules enable the transition to a green economy, e.g. ensure trade rules provide policy space for development and for the technology diffusion and acquisition necessary for a low-carbon development trajectory
- 3) Discuss and resolve issues of regulation, standards, labelling and certification to ensure they do not constitute unjustified non-tariff barriers to trade
- 4) Discuss and resolve issues of unilateral border carbon adjustments
- 5) Discuss and resolve treatment of green energy and industry subsidies
- 6) Conclude and implement effective Doha Round agreement on environmental goods and services
- 7) Embrace green trade opportunities by pro-active trade promotion and facilitation programs
- 8) Ensure access to affordable trade finance, particularly for the poorest countries, and particularly for sectors and activities related to a green economy
- 9) Finance green technology transfer and public procurement of key patents on latest generation green technologies to put them in the public domain
- 10) Provide Aid-for-Trade on promotion of environmentally friendly technologies and green commodity production.

These issues may require the further attention of all parties and stakeholders. Many questions remain unanswered and will need to be discussed in effective multilateral forums. Further research and policy deliberation would assist in filling knowledge gaps and contribute to preparation of countries for the Rio+20 conference and, eventually, a successful transition to a green economy.

Key Reading

Cosbey, Aaron (2011) "Trade, sustainable development and a green economy: benefits, challenges and risks", Ch. 2 of *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*, Report by a Panel of Experts for the UNCSD's 2nd PrepCom Meeting, March.

Cosbey, Aaron (2010) "Are there downsides to a green economy? The trade, investment and competitiveness implications of unilateral green economy pursuit", background paper for Ad Hoc Expert Meeting on the Green Economy: Trade and Sustainable Development Implications, UNCTAD, Oct., Geneva, Switzerland.

UNCTAD (2011), *The Road to Rio+20 For a Development-led Green Economy*, United Nations publications, UNCTAD/DITC/TED/2010/8.

UNCTAD (2010) "The green economy: trade and sustainable development implications", background note for Ad Hoc Expert Meeting on the Green Economy: Trade and Sustainable Development Implications, UNCTAD, Oct., Geneva, Switzerland.

The purpose of the Rio+20 Issues Briefs is to provide a channel for policymakers and other interested stakeholders to discuss and review issues relevant to the objective and themes of the conference, including a green economy in the context of sustainable development and poverty eradication, as well as the institutional framework for sustainable development. For further information on this Brief, contact Wei Liu (liuw@un.org).