



Counting Carbon in the Market Place - Emerging Product Carbon Footprint Standards and their Possible Trade Impacts

Bolwig, Simon

Publication date:
2010

[Link back to DTU Orbit](#)

Citation (APA):

Bolwig, S. (Author). (2010). Counting Carbon in the Market Place - Emerging Product Carbon Footprint Standards and their Possible Trade Impacts. Sound/Visual production (digital)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Counting Carbon in the Market Place – Emerging Product Carbon Footprint Standards and their Possible Trade Impacts

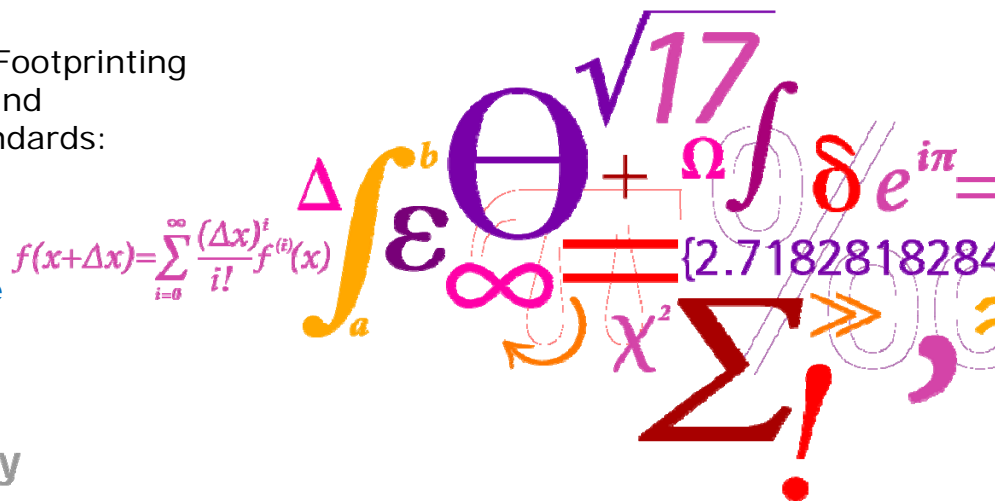
*Simon Bolwig, DTU Climate Centre at Risø,
Technical University of Denmark. sibo@risoe.dtu.dk*

Global Economy Seminar “Carbon Footprints, Trade and Development”, Danish Institute for International Studies, Copenhagen, 11 August 2010

Bolwig, S. and P. Gibbon. 2010. “Product Carbon Footprinting Schemes and Standards”, in P. Gibbon, S. Ponte and E. Lazaro (Eds.), *Global Agro-food Trade and Standards: Challenges for Africa*. Palgrave Macmillan.

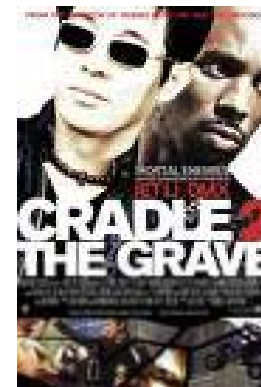
Sponsor: OECD Trade and Agriculture

Risø DTU
National Laboratory for Sustainable Energy




Overview

1. What is product carbon footprinting (PCF) and what can it do?
2. Public and international PCF standards initiatives
3. Private PCF certification schemes: results from a global survey
4. Possible implications for trade and developing country exports



1. What is a product carbon footprint?

- Information about the total amount of GHGs emitted during the life cycle of a good or service
- Grams CO₂-eq. per unit of product
- “Consumption” approach to climate change mitigation (vs. regulation at source)

<p>working with the Carbon Trust</p>	<p>The carbon footprint of this product is 850g per wash and we have committed to reduce this</p>
	<p>By comparison the carbon footprint of non-biological washing liquid is 600g per wash</p>
<p>CO₂ per wash</p>	<p>Help to reduce this footprint. Washing at 30°C rather than 40°C saves 160g CO₂ per wash</p>

Life cycle analysis

- Method for calculating the sum of GHG emissions from activities along the entire life cycle of a product
- From “Cradle-to-grave” or “Farm-to-fork”

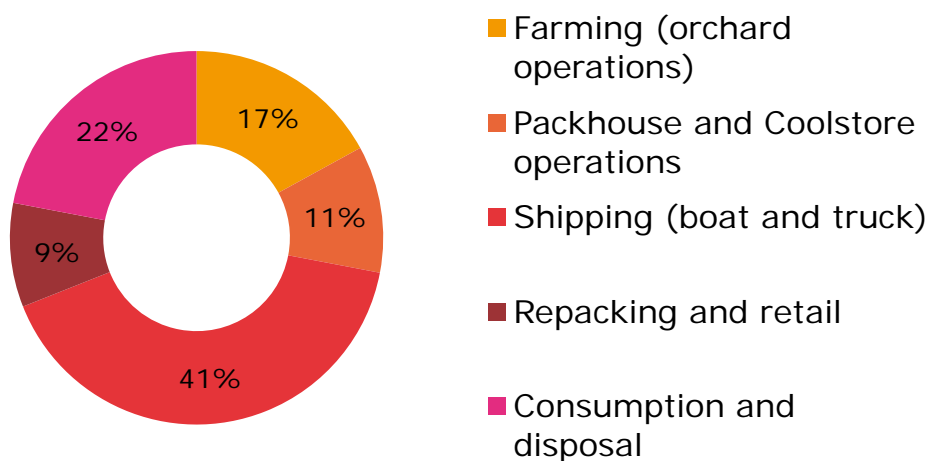


Source: www.zespri.com

- Requires provision of information from many actors along the value chain (> < corporate GHG reporting)

The carbon footprint of a New Zealand kiwi fruit eaten by a geographer in Maryland

Share of total GHG emissions

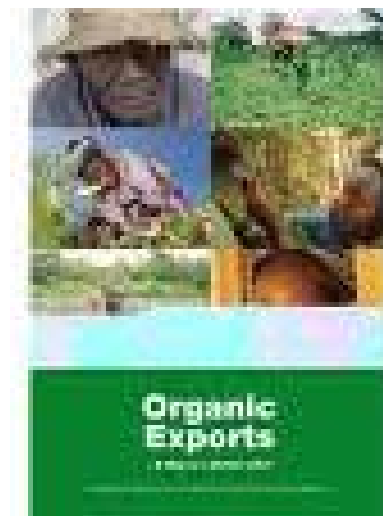


Data source: www.zespri.com

Total footprint: 1.74 kg CO₂ Eq. per 1 kg of fruit

Some research questions

1. What is the function of PCF?
2. Is PCF demanded by consumers, clients and investors?
3. What standards and certification schemes are being developed, and by whom?
4. What are the features of these standards and schemes?
5. Do these features disadvantage certain producers or countries – small, distant, developing?
6. Do they create barriers to trade?



What can PCF be used for?

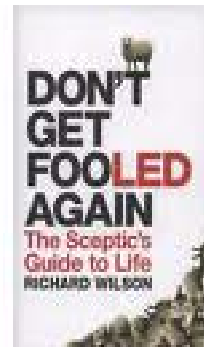
- **Help prioritise GHG reduction efforts along the entire supply chain**
 - Zespri Kiwifruit focuses reduction efforts at the orchard, packhouse, coolstore and transport stages
- **Compare the footprint of “similar” products delivered by different supply chains**
 - Broccoli imported to Sweden from Ecuador has a similar PCF to those imported from Spain
- **Compare the footprint of “similar” products with different attributes**
 - The footprint of a 330 ml can of Coke is half the size of 330 ml delivered in a glass bottle

(Cont'd)

- **Designate products as “carbon neutral” through off-setting**
 - The “CarboNZero” and “Stop Climate Change” schemes
- **Basis for demonstrating corporate commitment to climate change**
 - To consumers, clients, investors and lawmakers
 - Display of information on packaging, websites, CSR reports

Will product carbon information influence consumer behaviour?

- 72% of EU consumers support mandatory carbon labelling
- Eco labelling is important for 47% of EU consumers
- 48% of EU consumers mistrust producers' environmental claims
- Environment ranks 3rd after quality and price in purchasing decisions



What sells a beer in Japan?



CO2 Labels Proposed for Beer Cans by '09



Will product carbon information influence client and investor behaviour?

- Climate-change criteria do not appear important for corporate buyers
- They do not appear important for company valuations or for investment portfolio managers
- *But perceptions in business communities are changing fast*



2. Public PCF standards initiatives

- PAS 2050 – BSI and Carbon Trust (Oct. 2008)
- ISO 14067(2011)
- WRI-WBCSD Product Life Cycle Accounting and Reporting Standard (2011)
- Japan Carbon Footprint System (April 2009)
- Mandatory carbon labelling in France (?)
- EC initiative to integrate PCF in existing environmental labelling instruments (2009–11)
 - *"EC is considering the preparation of a robust, reliable and EU harmonised PCF methodology"*



3. Private PCF standards and schemes

- Private organisations calculating and certifying PCF information
- Operated by consultants, NGOs, retailers and branded manufacturers
- First schemes emerged in 2007
- 17-20 schemes worldwide
- > 3000 footprinted products
 - Carbon Label Company (UK): 2800 products
 - L.Eclerc (France): 800 product categories
 - Wide product range, mainly food/drinks



Certification criteria

- Comply with rules for calculating the PCF
- **Comply with communication rules**
- Commitment to GHG emission reduction
- **Carbon neutrality through offsetting emissions**
- Comply with other environmental criteria (e.g. recycling)



Value



Claim



Value and sliding scale

Methodology

- **Publication of PCF methods and assessments**
 - Most schemes rely on published methodologies
 - 3 schemes use the PAS 2050, adding own criteria
 - Few publish individual product assessments
- **Scope of product GHG assessments**
 - All schemes claim to include all major GHGs
 - Most involve “full” life cycle analysis – but precise boundary unclear
- **Use of different methodologies, combined with poor documentation of methodology and individual assessments**
 - No basis for comparison of PCFs across products and schemes



Conformity assessment (verification)

- **Most operators certify products to their own standard**
 - Disincentive to tightening the standard
 - Standards compliance difficult and costly for producers
- **Consumer scepticism is not taken seriously**
 - Self-verification by scheme user (4)
 - Same organisation calculates *and* verifies the PCF (3)
 - Independent, 3rd party verification (7)
 - Verification rules and procedures often not transparent



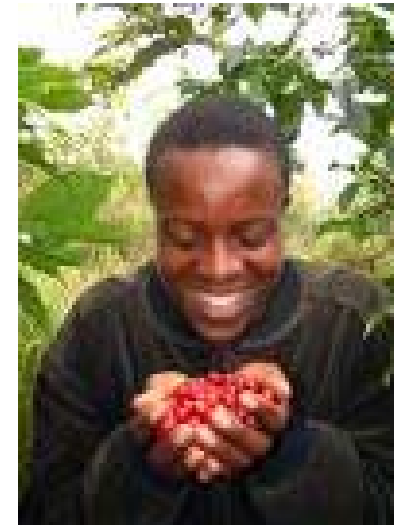
4. Possible implications for trade and DCs

- Lack of **international standard** could favour producers in countries with public standards (UK, NZ, France?) or with non-proprietary private standards (Germany, Switzerland, UK, US)
- No bias against producers in **distant countries**, but “distance travelled by product” sometimes highlighted as an additional feature
- High initial **costs and technical requirements** of PCF could disadvantage small producers and producers in developing countries (scale economies important)



(Cont'd)

- Emissions from the production of capital goods are sometimes excluded from the LCAs, imparting a bias against **labour-intensive production systems** typical of many sectors in developing countries (esp. agriculture)
- Unavailability of **LCA databases and expertise** in developing countries makes PCF relatively costly and time consuming



5. Concluding observations

- **Consumers want more information on the climate impact of their daily purchases**
 - But will they understand, trust and act on this information?
- **More private schemes and labelled products, but still small scale**
 - Key issues: transparency, verification, data, comparability, costs
- **Increased engagement by governments and int. organisations**
 - Key issue is standard implementation – accessible, harmonised and comprehensive LCA databases, costs (especially for SMEs)
- **The Future of PCF?**
 - Steady but slow progress until LCA databases are further developed, costs go down and international standards are published and accepted

"We've been moving back to 'buy local,'" said Mrs. Edwards, outlining a trade policy that "acknowledges the carbon footprint" of transporting fruit...

"I live in North Carolina. I'll probably never eat a tangerine again."

I hope they make chemotherapy drugs in North Carolina.



©Mike Lester/Rome News Tribune
www.CalyLeCartoon.com