

# Global supply chains and product carbon footprinting

Dr Graham Sinden  
Senior Strategy Manager

ECR Austria Information Circle  
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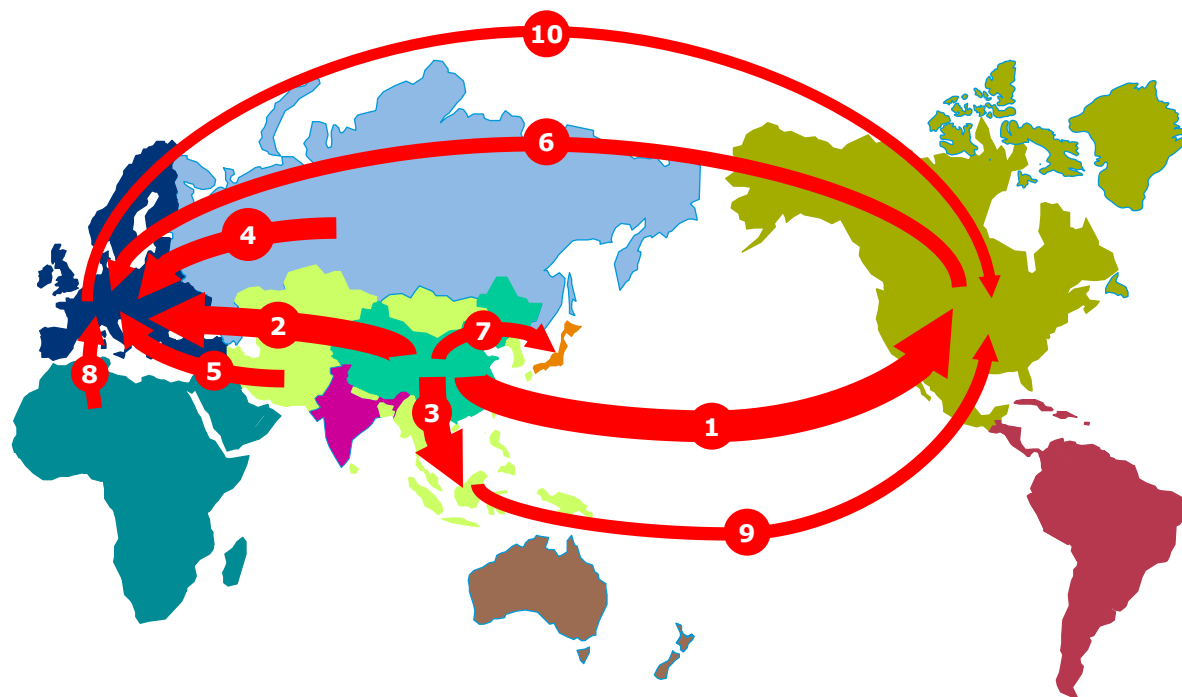
# Agenda



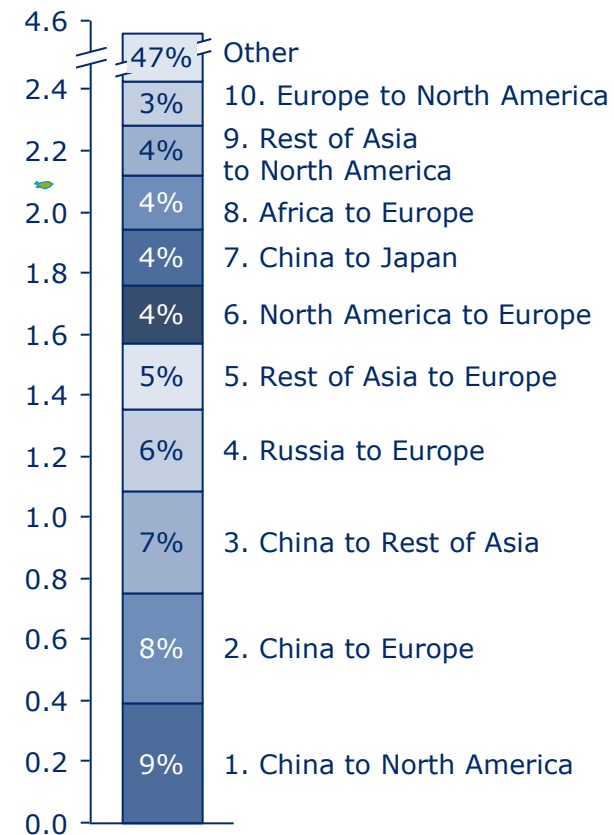
- Setting the scene – international carbon flows
- International product carbon footprinting
- The benefits of standardisation
- Commercial application of carbon footprinting

# Top 10 regional flows of CO<sub>2</sub> embedded in goods and commodities

**2004 Data**



Total Flows (GtCO<sub>2</sub>)



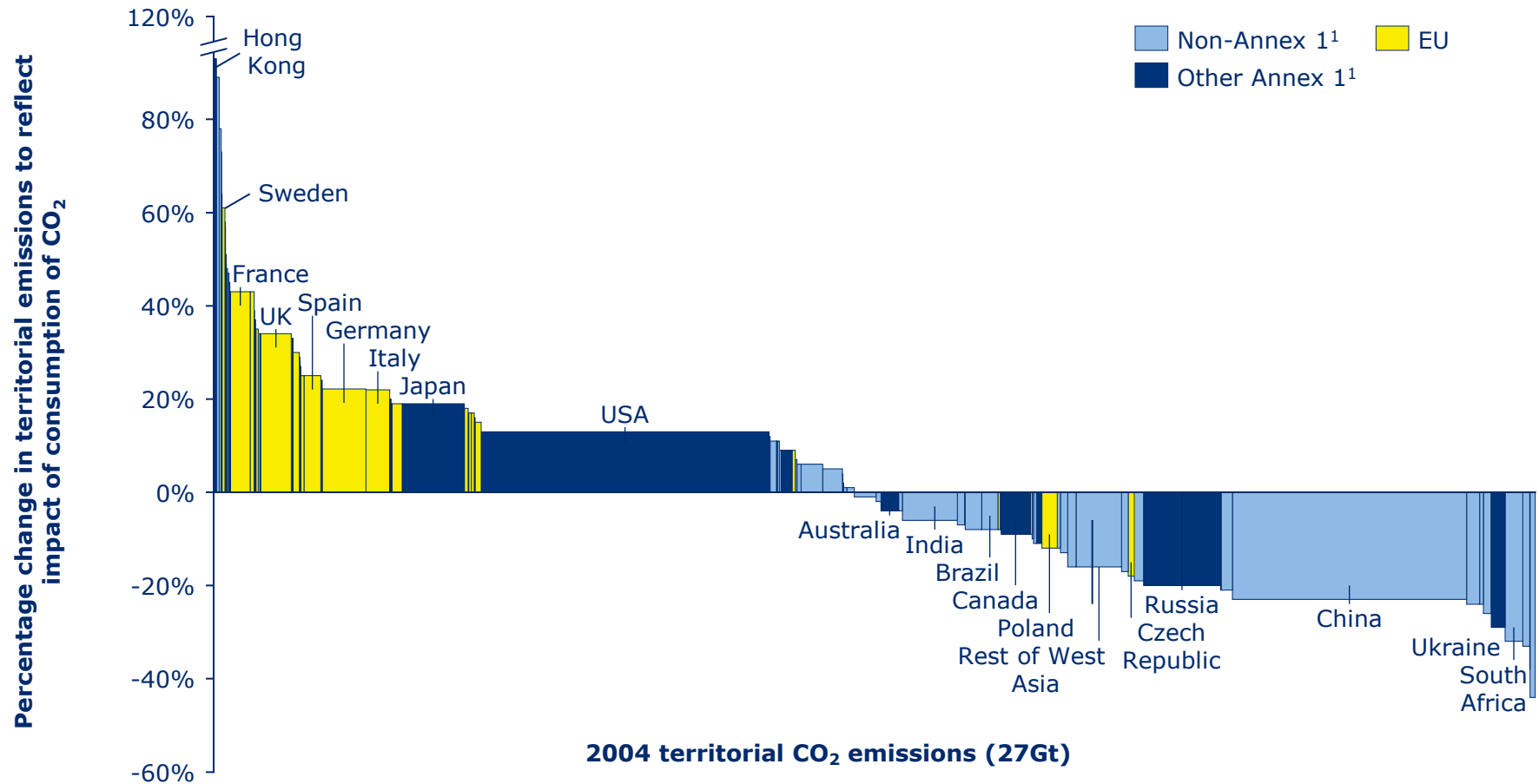
Note: Rest of Asia excludes China, Japan and India

Data includes flow of Scope 1-3 (direct, indirect and upstream) emissions arising in region of export that are embodied in trade flows to the region of import

Source: Carbon Trust Analysis; CICERO / SEI / CMU GTAP7 EEBT Model

# A consumption perspective alters the distribution of emissions between countries

2004 Data



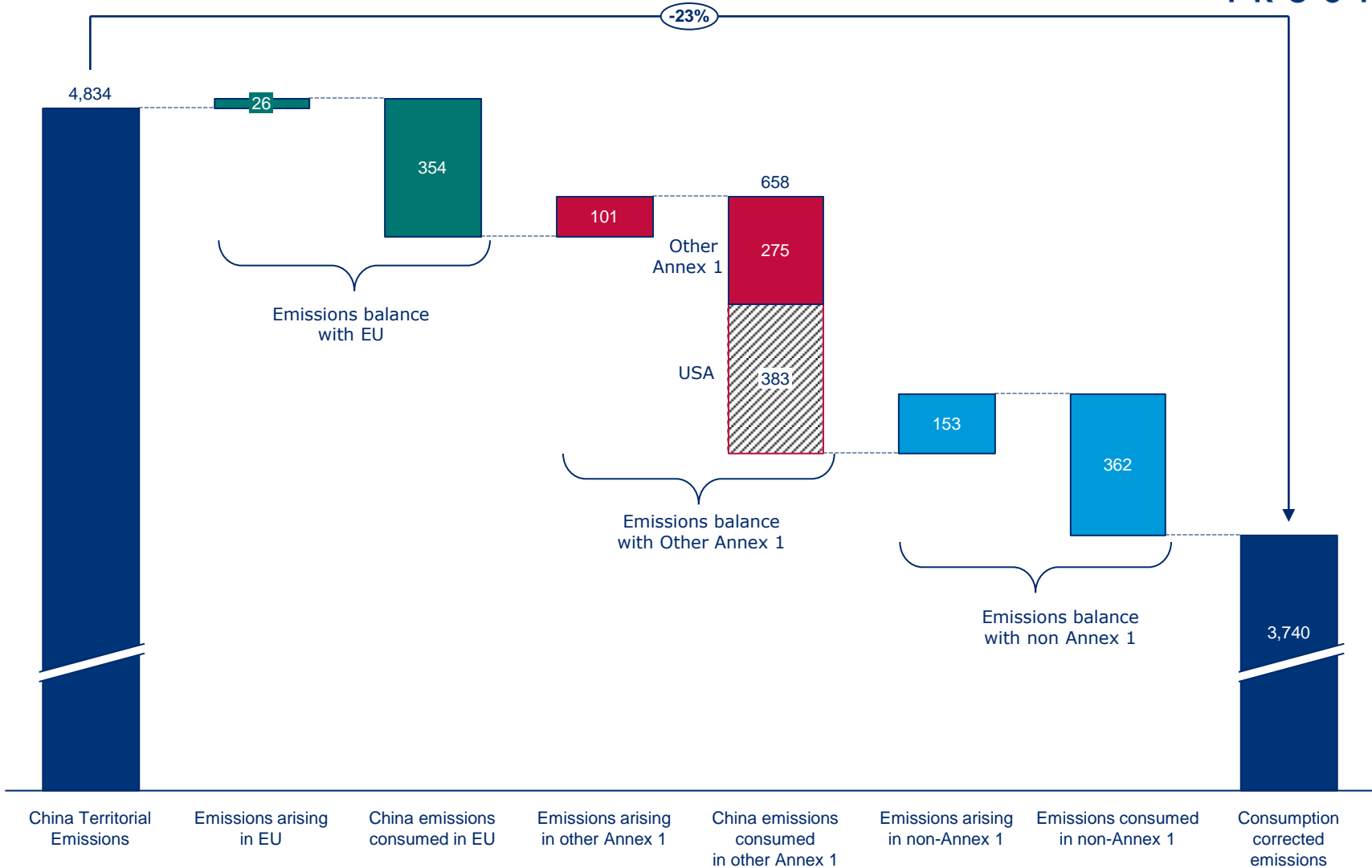
1. Annex 1 to UNFCCC

Note 1: Includes CO<sub>2</sub> emissions from production, process, transport and household sources only (27Gt in 2004); excludes non-CO<sub>2</sub> emissions, and emissions due to land-use-change

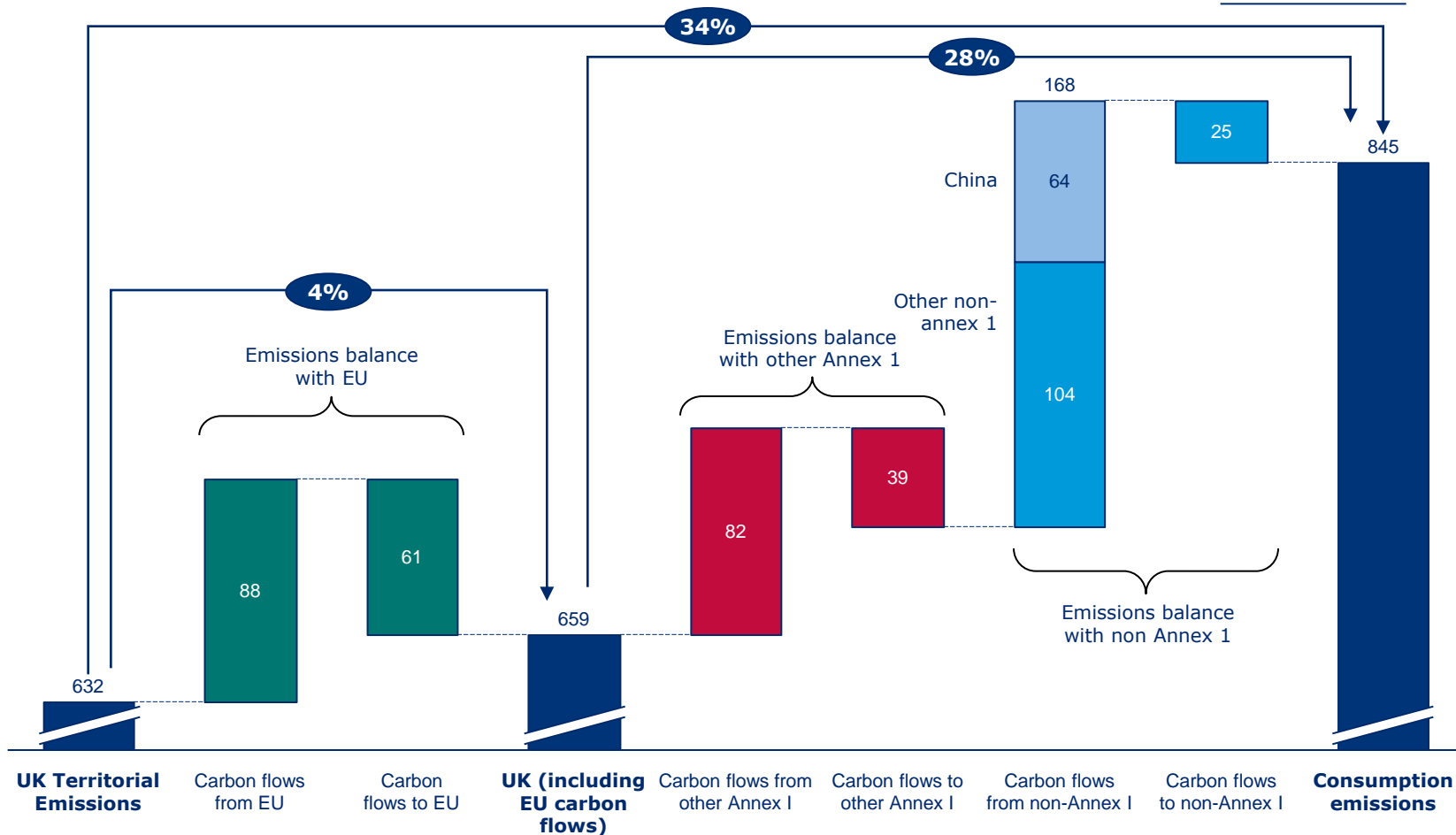
Note 2: Based on an MRIO (multi region input/output) model allocating emissions to regions of consumption

Source: Carbon Trust Analysis; CICERO / SEI / CMU GTAP7 MRIO Model (2004)

# Exports drive significantly lower consumption emissions in China



# UK consumption drives imports of CO<sub>2</sub>, mostly from developing nations



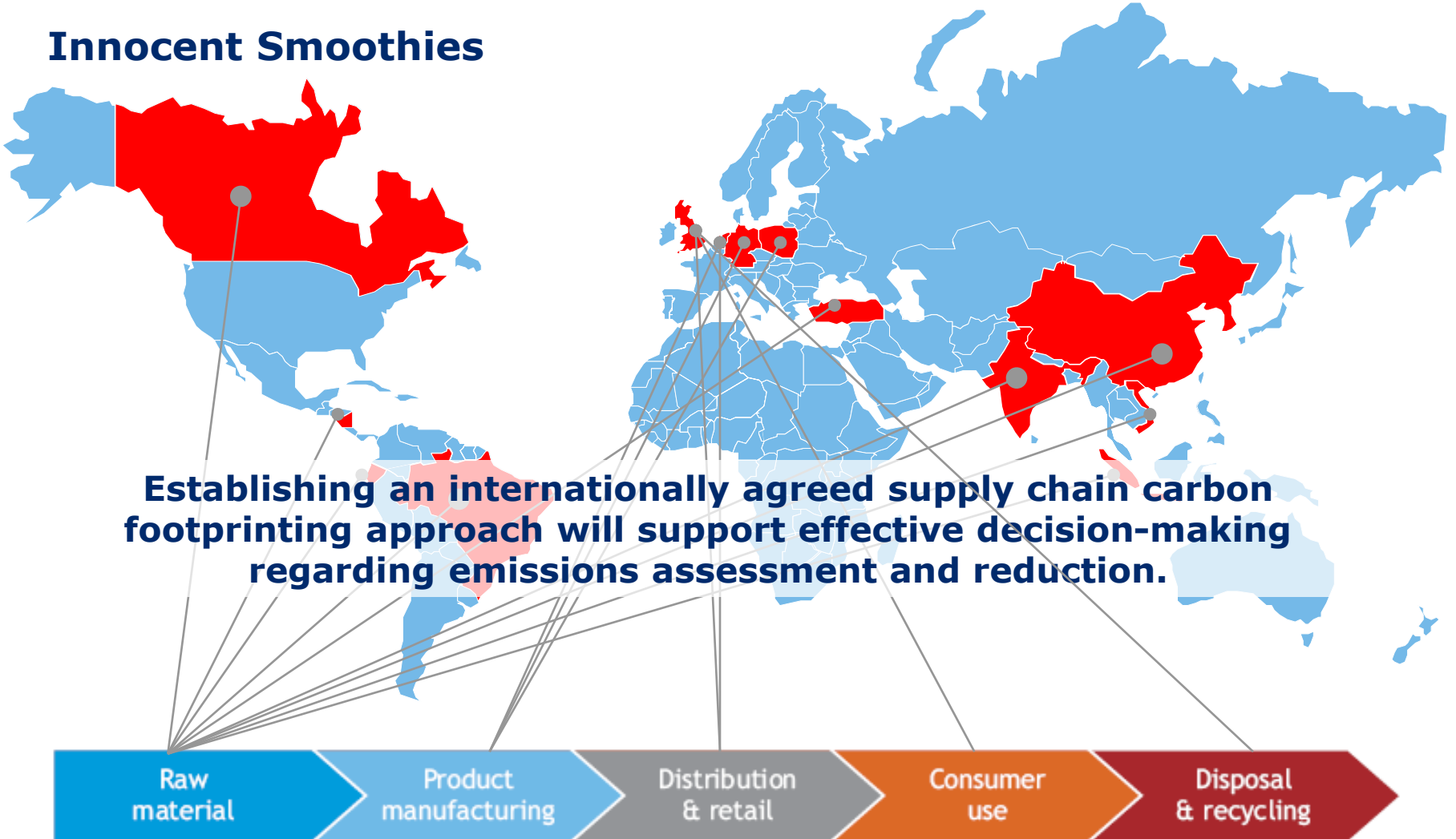
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# Emissions assessment and supply chain carbon footprinting (II)

## Innocent Smoothies



# Emissions assessment and supply chain carbon footprinting (I)



- Emissions have the same impact on the atmosphere, irrespective of country of origin
  - However, a production view of GHG emissions can be very deceptive for both net producer, and net consumer, countries
  
- Supply chain carbon footprinting addresses this issue
  - Whole of life cycle assessment
  - All emissions, irrespective of
    - Country of origin
    - Country of use
    - Country of end-of-life
  
- Supply chains are complex, and the products arising from them are often the result of inputs from many countries.
  - Supply chain carbon assessment takes a *consumption* view of emissions, including emissions from the whole life cycle.

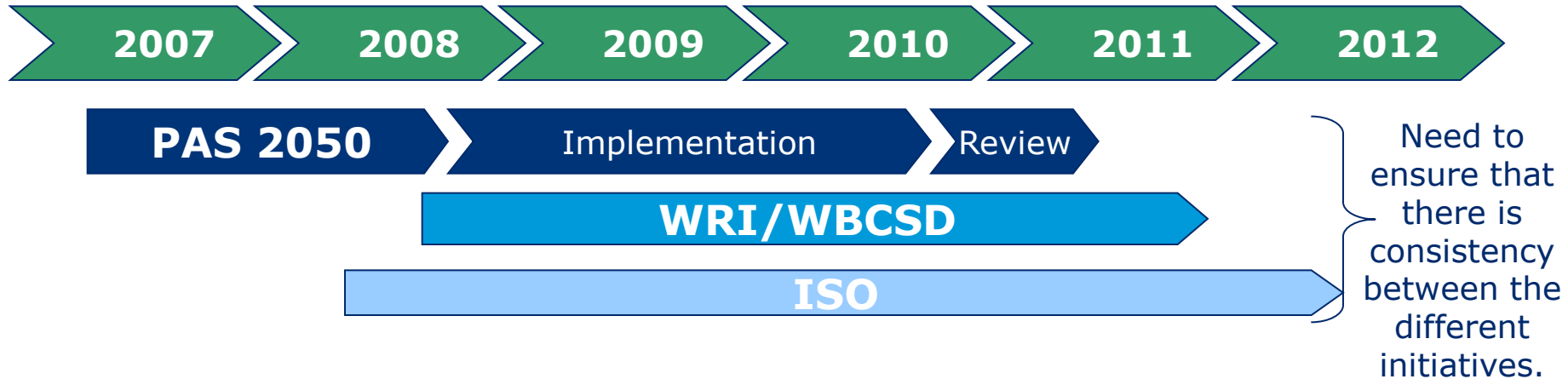
# International standard development – Status (II)



	PAS 2050	WRI/WBCSD	ISO
Status	Published Oct 2008 <i>Under review</i>	Commenced September 2008	Commenced November 2008
Scope	Product carbon footprinting standard that provides detailed requirements for the assessment of GHG emissions from products	Two components: 1. Publication on GHG assessment for products 2. Further Scope 3 guidance for the GHG protocol	Two-part standard for product carbon footprinting 1. Assessment 2. Communication
Additional material	<ul style="list-style-type: none"> <li>• Guide to PAS 2050</li> <li>• Case studies</li> <li>• Code of Good Practice</li> </ul>	Collaboration with CT to develop sector guidance	No

- There are a range of other schemes being pursued, however:
- They are typically restricted by geography or sector
  - They are not widely recognised
  - They do not have independent accreditation

# Standards development: Timetable



- Differing time scales create the opportunity to ensure comparability
  - Carbon Trust engaged with international standard-setters
  - Carbon Trust supported the development of Scope 3 from the World Resources Institute and World Business Council for Sustainable Development's (WRI/WBCSD)
- ISO process has the opportunity to incorporate the experience of both the PAS 2050 and WRI/WBCSD development processes, and the experience of companies implementing PAS 2050 in practice, in its drafting of a new standard.

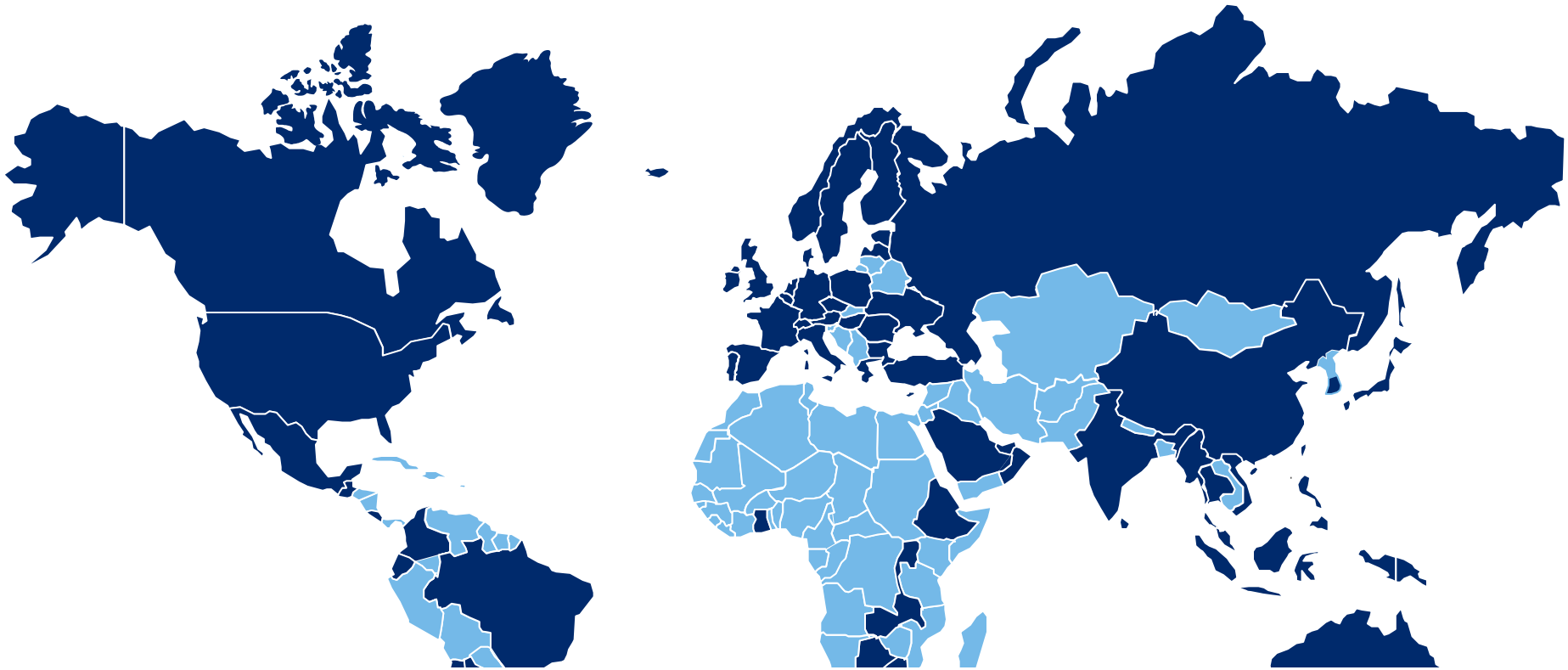
# PAS 2050



## ***Specification for the assessment of the life cycle greenhouse gas emissions of goods and services***

- Published in October 2008, PAS 2050 provides an agreed method of assessing product GHG emissions
  - Fifteen month process: included Steering Group, expert workgroups & consultation
  - Builds on existing LCA standards, together with IPCC, etc.
  - Has been downloaded in over 100 countries, over 25,000 times
  
- In 2009/10, the Carbon Trust sponsored the UK Accreditation Service to develop an accreditation programme accreditation for PAS 2050
  - Five certification bodies accredited to verify PAS 2050 results
  - Only carbon footprinting method in the world to offer independent 3<sup>rd</sup> party certification
  
- PAS 2050 is currently being reviewed; new version expected in 2011
  - Feedback to-date suggests that the review will refine rather than re-write PAS 2050
  - Carbon Trust participating in the Steering Group
  - Harmonisation between WRI, ISO & PAS initiatives is being pursued

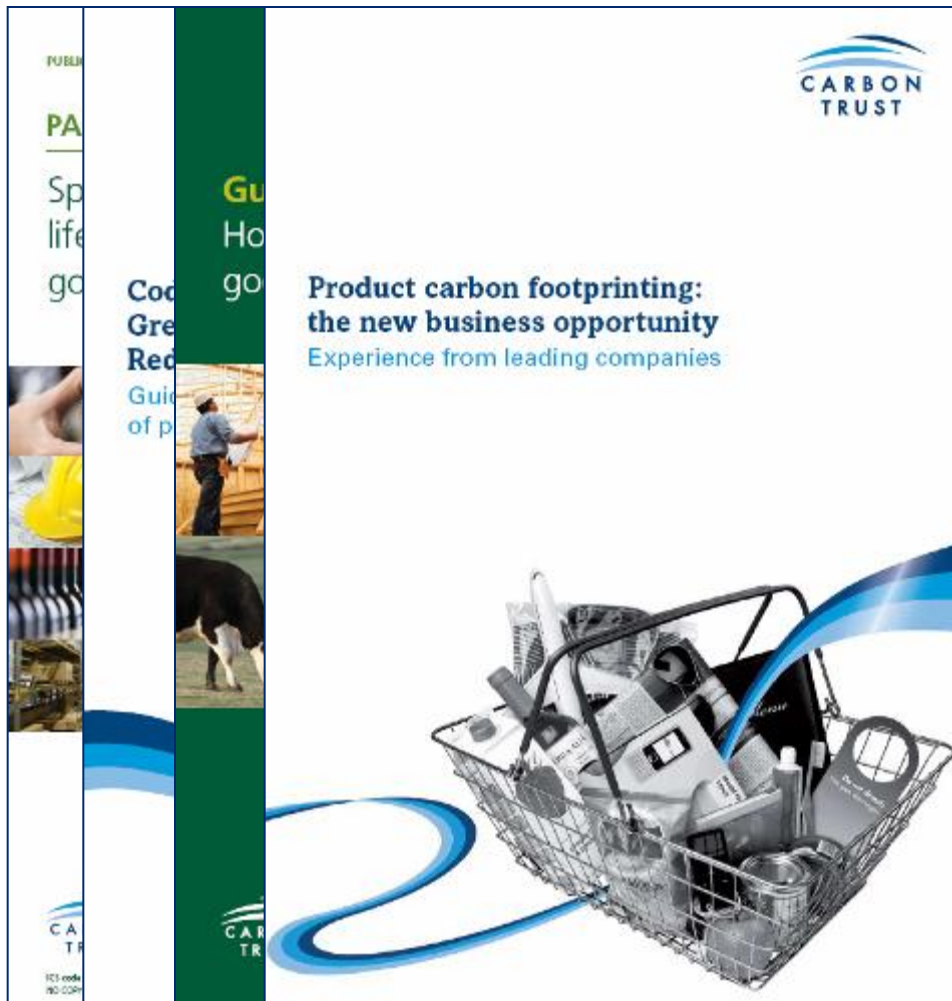
# Overall international exposure (consultation, download and supply chain)



**PAS 2050 received input and experience from over 40 countries, across six continents, during its development.**

**PAS 2050 has been downloaded over 25,000 times in over 100 countries.  
(Direct downloads only; does not include informal distribution)**

# Standards and supporting information



- PAS 2050: Product carbon footprint measurement standard
- Carbon Trust Code of Good Practice for Product GHG Emission and Reduction Claims: Guidance for communicating carbon footprint results, and for setting and assessing GHG reductions over time
- PAS Guide: Implementation of PAS 2050, written for non-experts
- Business Opportunity: including six case studies (incl. potatoes, orange juice, crisps, smoothies, cotton clothing).

# Accreditation and assurance under PAS 2050



- PAS 2050 allows three types of assurance
  - Self certification, other party certification, and independent third party certification
    - Until now, only self certification and other party certification have been available
  
- The UK Accreditation Service (UKAS) has developed an accreditation processes for PAS 2050
  - Programme development was supported by the Carbon Trust
  - Four companies (certification bodies) have completed the UKAS programme
    - Carbon Trust Footprinting Certification Company Limited (CTFCC),
    - Complete Integrated Certification Services Ltd
    - Lloyds Register Quality Assurance Limited
    - SGS United Kingdom Limited
  
- Companies that pass the accreditation process are certified to offer verification services for PAS 2050 (& Code of Good Practice)
  - This allows for independent third party assurance of PAS 2050 results

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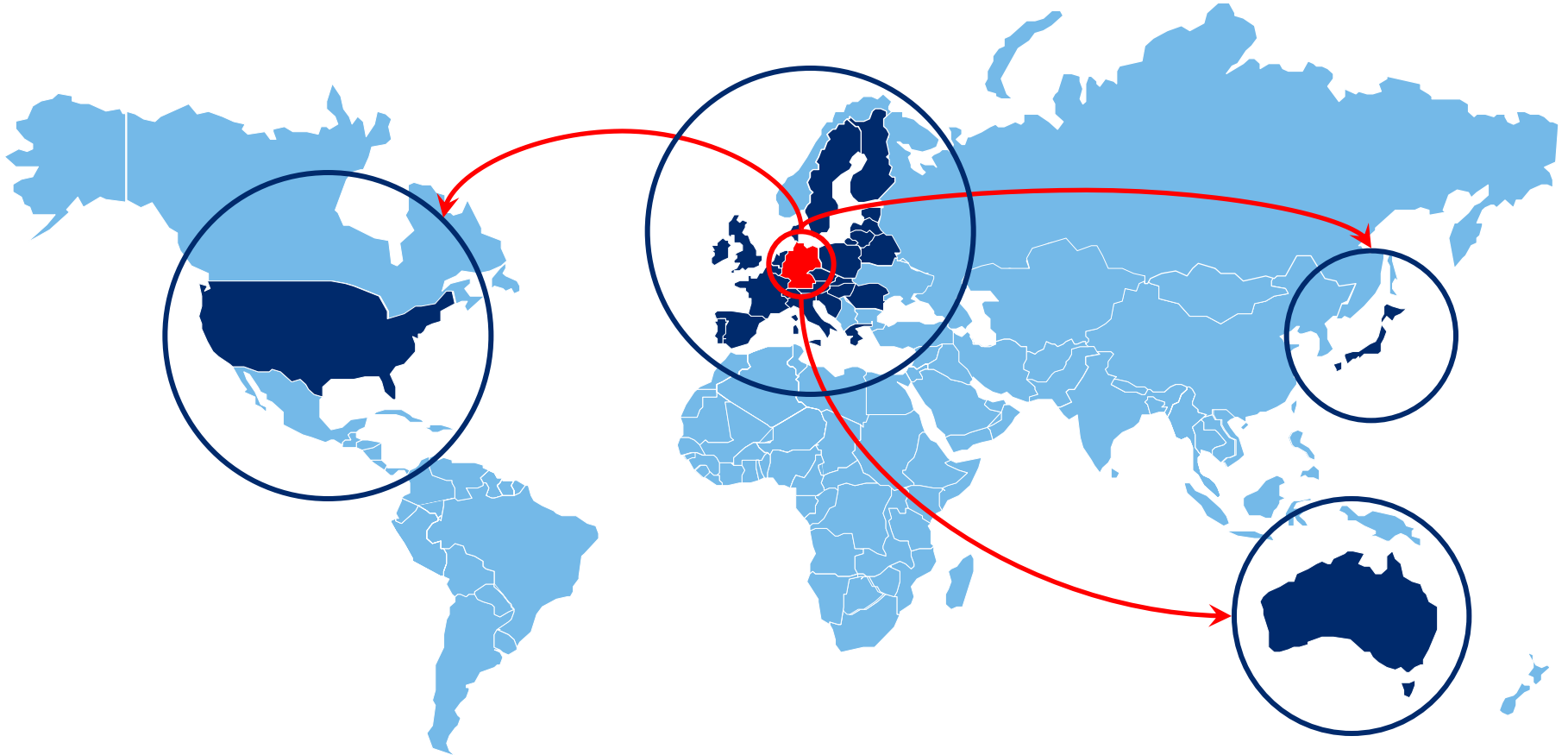
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# The benefits of standardisation



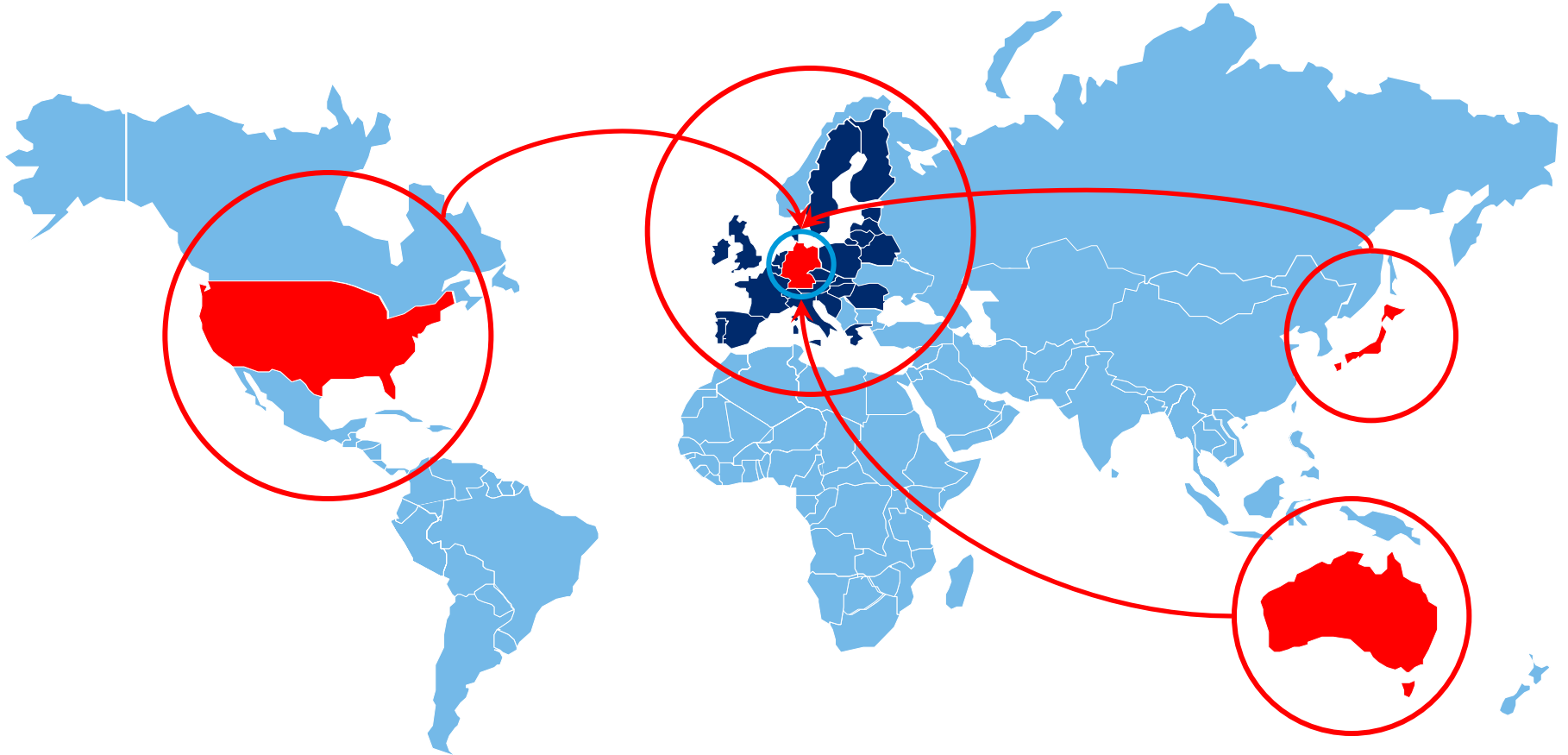
- Standardisation means common approaches to key questions in product GHG assessment. For example: which greenhouse gasses should be included?
  - This may appear trivial, but different decisions will fundamentally alter the results for similar products
  - Where results are disclosed publicly, such an approach would result in confusion
  
- Standardisation delivers benefits for organisations
  - Simplified implementation
  - Common assumptions and boundaries
  - Supports data transfer through the supply chain
  - Clearer understanding and improved comparability when publicly disclosed
  
- The beginnings of international harmonisation towards a common approach can already be seen
  - Innocent smoothies example
  - Chinese manufactured products sold in Europe
  - Multinational companies evaluating implementation
  - Other export-led countries looking for a single solution

# International Supply Chains: Imports and exports (I)



For companies that are producing goods for both domestic and international markets, a consistent method of assessment is essential for minimising cost and complexity in supply chain carbon footprint assessment.

# International Supply Chains: Imports and exports (II)



For companies that are importing goods for use in production, a consistent method of assessment is essential for minimising cost and complexity in supply chain carbon footprint assessment.

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# Footprinting and certification

- The Carbon Trust Footprinting Company is a programme operator, offering footprinting and communication (including labelling) services
  - Adopted PAS 2050 as the footprinting method to be followed
  - Footprinted over 5,000 products (annual UK sales over £3bn/year)
  - The Carbon Reduction Label can be found in over 80% of UK homes
  
- The Carbon Trust Certification Company is a UKAS accredited certification body
  - Provides independent, third party verification of PAS 2050 footprints
  - Certification used for both internal assessment, and for external communication
  - CT Certification Company competes against other accredited certifiers to provide verification of carbon footprints
  
- FootprintExpert™ is the integrated set of PAS 2050-compliant methods and models that is licensed for use by third parties carrying out product footprinting
  - Ensures consistency of results for the programme operator
  - Lowers costs by providing established tools and models

# Product carbon footprinting is being rolled out now



- Over £3 billion worth of products carry the Label
- Carbon footprints completed for over 5,000 individual products
- Over 8 Mt CO<sub>2</sub>e certified footprints
- Translated into over 6 languages

# A range of businesses have developed comparable footprints for foods



**PEPSICO**



**BRITISH SUGAR**



The **co-operative**



working with  
the Carbon Trust

**100g**  
**CO<sub>2</sub>**  
per serving

We have committed to  
reduce this carbon footprint

# Tesco

Providing consumers low carbon purchasing choices



- Operates over 923 stores and employs over 240,000 people
- **2008**: Footprinted 20 products
- **2009**: Expanded to another 100 in 2009
- **2011**: Further expansion to another 500 products
- Allowed Tesco and suppliers to identify ways to reduce their footprints
- Identified carbon cutting and money saving actions for consumers (e.g., washing clothes in cold water)

“We are delighted to be taking this major step with the Carbon Trust. We want to give our customers the power to make informed green choices for their weekly shop, and enlist their help in working towards a revolution in green consumption.”

**Sir Terry Leahy** CEO, Tesco PLC



# Case Study: New Zealand Wine Company



- Products: 750ml bottles of Mobius Sauvignon Blanc wine
- Outcome: Gained full understanding of carbon hotspots in wine life cycle
- Highlights: First wine in the world and the first product of any kind from New Zealand to achieve the carbon reduction label certification

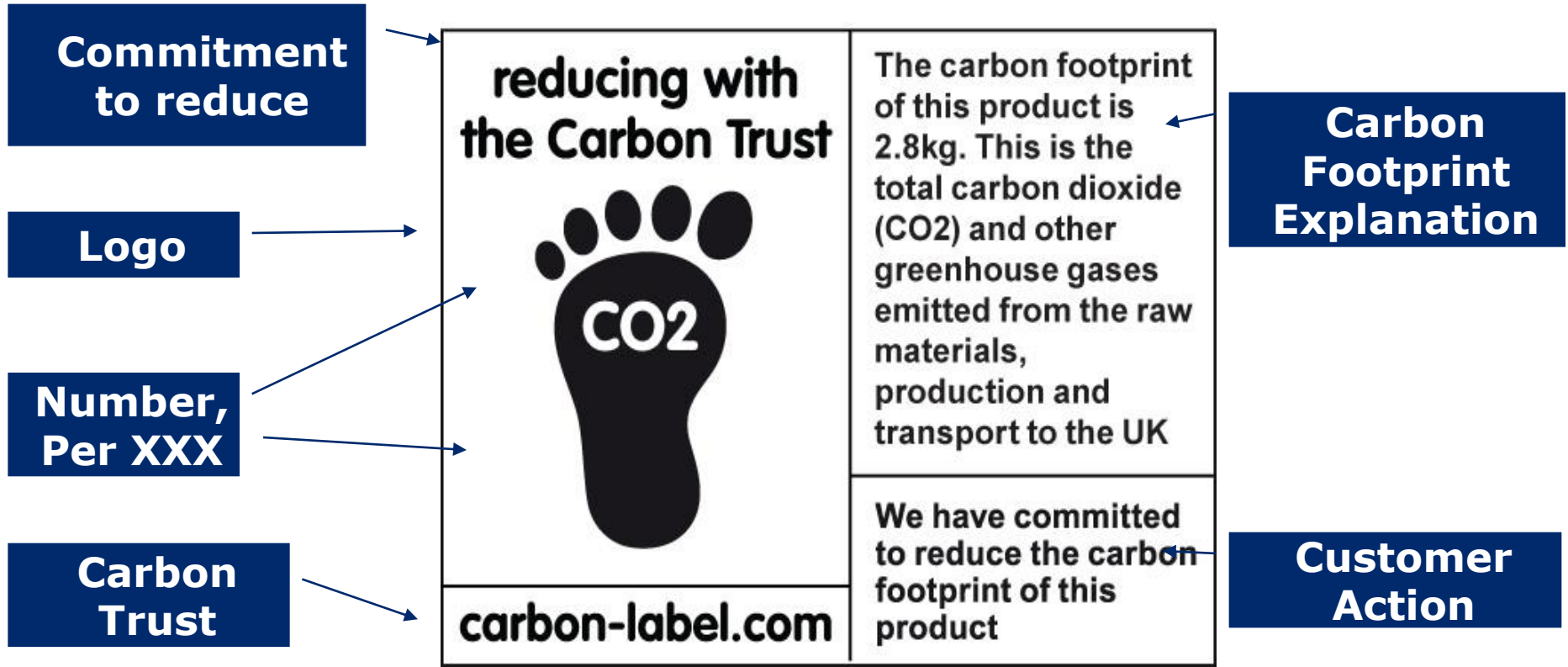


“Considering the growing demand internationally for carbon labelling, we certainly feel that this certification will be important to our export customers, along with consumers in their markets.”  
- Craig Fowles, Sustainability Manager, New Zealand Wine Company

# Carbon Reduction Label



Demonstrates the commitment of a company to reduce product footprint over 2 years



# Use of the Label

The Label must clearly refer to the specific Licensed and Certified product

## On Pack



The Label may be used on the front as well as the back of pack, or it can be used only on the back of a pack at the brand owner's discretion.

## Point-of-sale



At point-of-sale, for example in a supermarket, the Label must clearly refer to a specific product

## Online



Online, for example when labelling a Bank Account, the Label must clearly refer to the account in question rather than the bank as a whole.

## Sales literature



Within sales literature, for example a product catalogue, the Label must clearly relate to the certified product/s

## Press release



Within a press release, a company may inform its staff or customers of its carbon measurement work, and explain how the Carbon Reduction Label is read.

This list is not all-inclusive list. We welcome your ideas on other ways to communicate your product footprint to your audience.

# Summary

- It is the emissions arising from consumption, not production, that need to be addressed
  - Current international approaches may mislead, and even exacerbate, GHG emissions
  - Product carbon footprinting takes a consumption view of emissions production
  
- A consistent method for GHG assessment is required if we value
  - Minimising costs for business
  - Maximising benefit for business and consumers
  
- There is a need for harmonisation between different initiatives
  - Standards already exist, and further guidance is being developed
  - Consistent assessment methods have already been applied across countries
  - The opportunity exists to use current activities to inform future developments
  
- Current commercial activities demonstrate the applicability of product carbon footprinting
  - Over 6,000 products footprinted, across a range of sectors
  - Footprinting carried out to support consumer engagement, business-to-business communication and internal company decision-making

Further information:

Dr Graham Sinden  
Senior Strategy Manager  
graham.sinden@carbontrust.co.uk

[www.carbontrust.co.uk](http://www.carbontrust.co.uk)