

# PepsiCo Carbon Footprinting



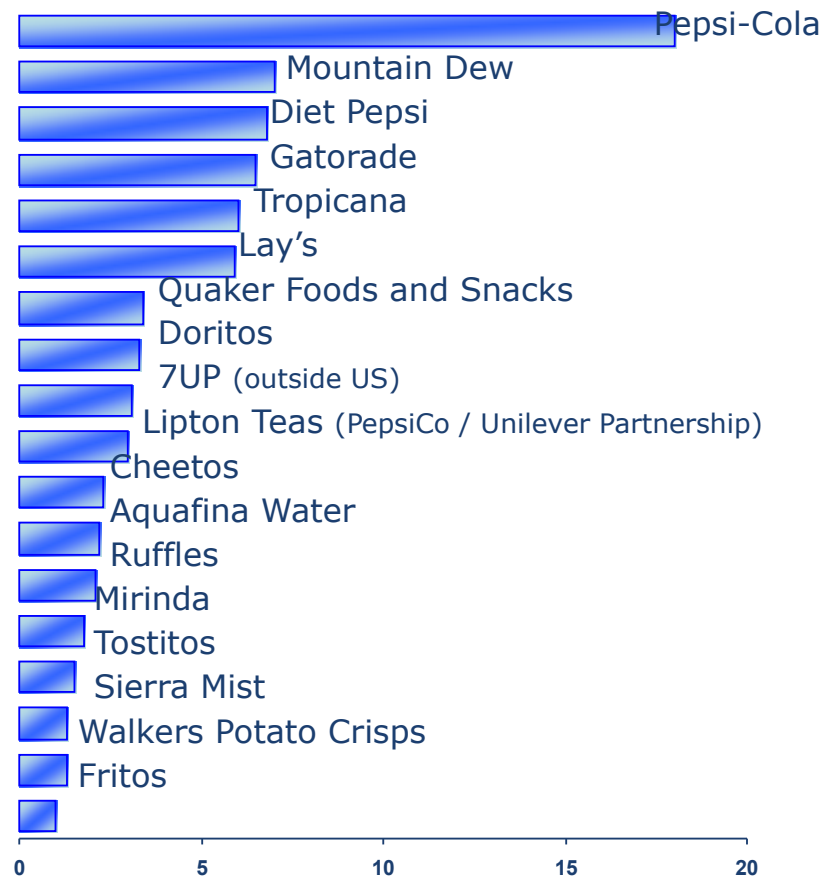


What comes to mind  
when thinking about  
PepsiCo?

# PepsiCo has 18 global mega brands reflecting the Diversity of Products and Markets in which we Operate



Estimated Worldwide Retail Sales \$ in B



# PepsiCo's Performance With Purpose Drives our Sustainability Initiatives

## Human



umers with a range of fun and healthy products, and the healthful choice an easier choice.

## Environment



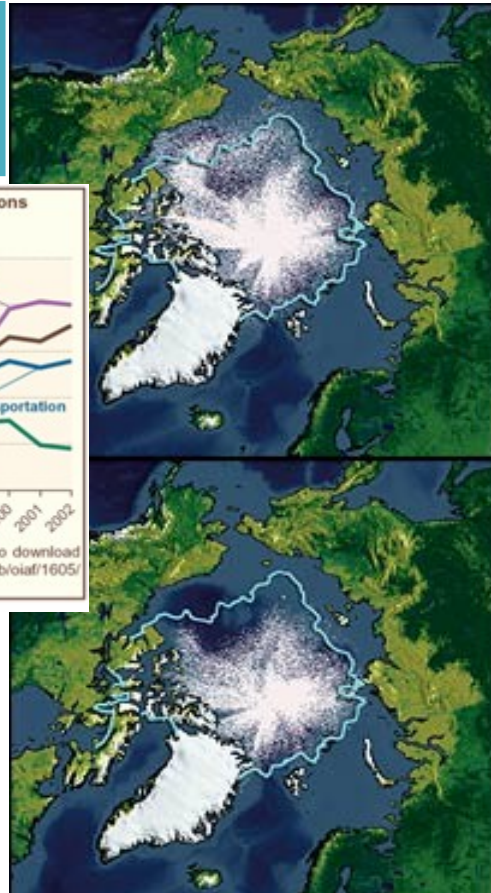
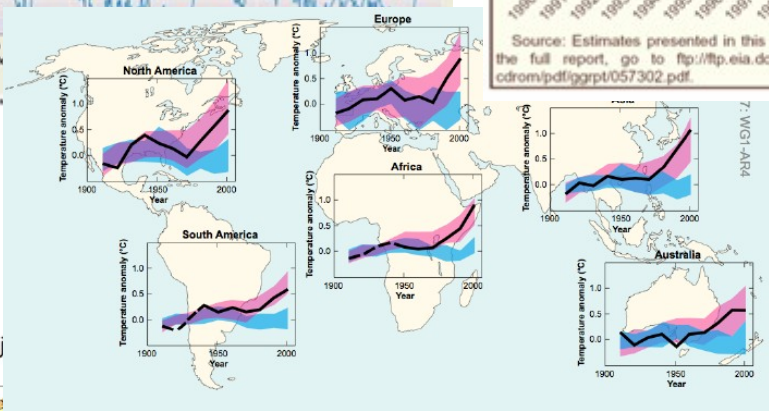
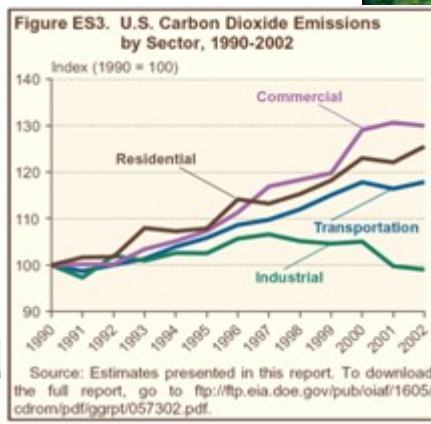
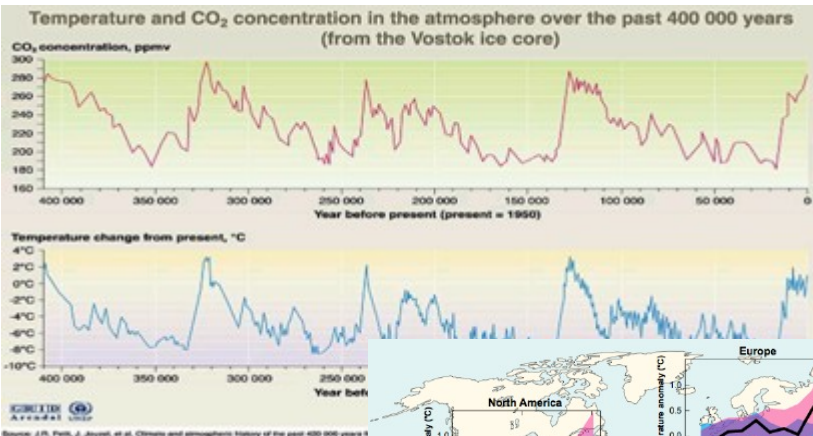
through focused initiatives and

## Talent

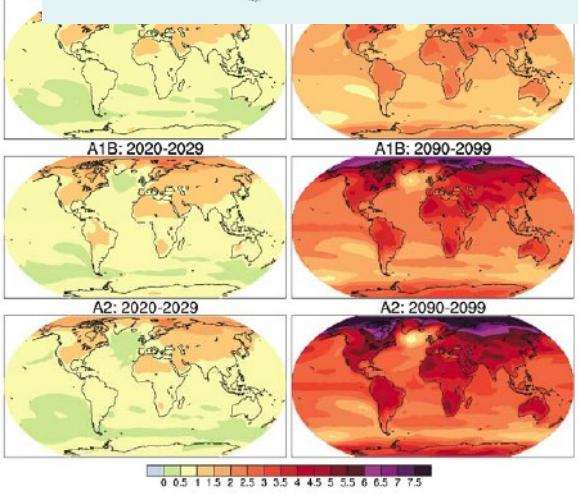
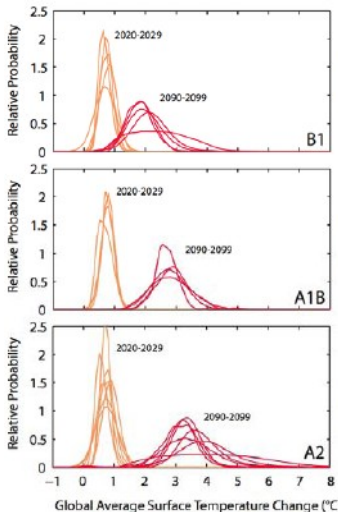


ees, and making PepsiCo the most and water, energy and packaging bounds to establish personal and

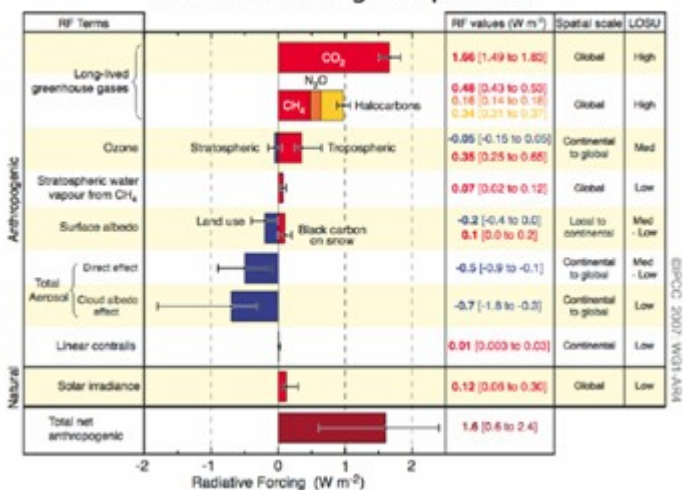
# Why Carbon? The Evidence is Clear and Immediate.



AOGCM Proj

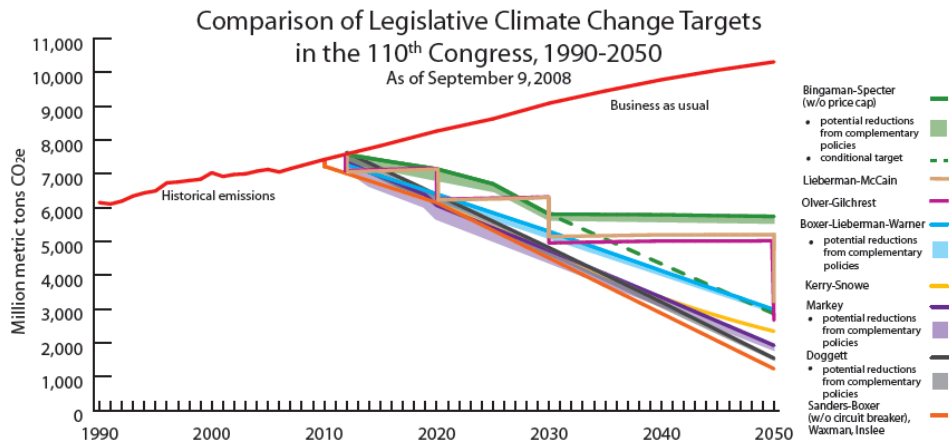


## Radiative Forcing Components



IPCC-EDM - 2002 - 2003

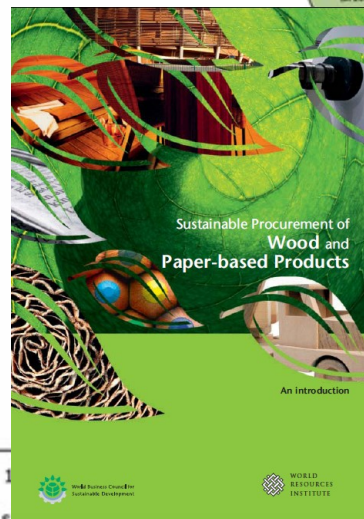
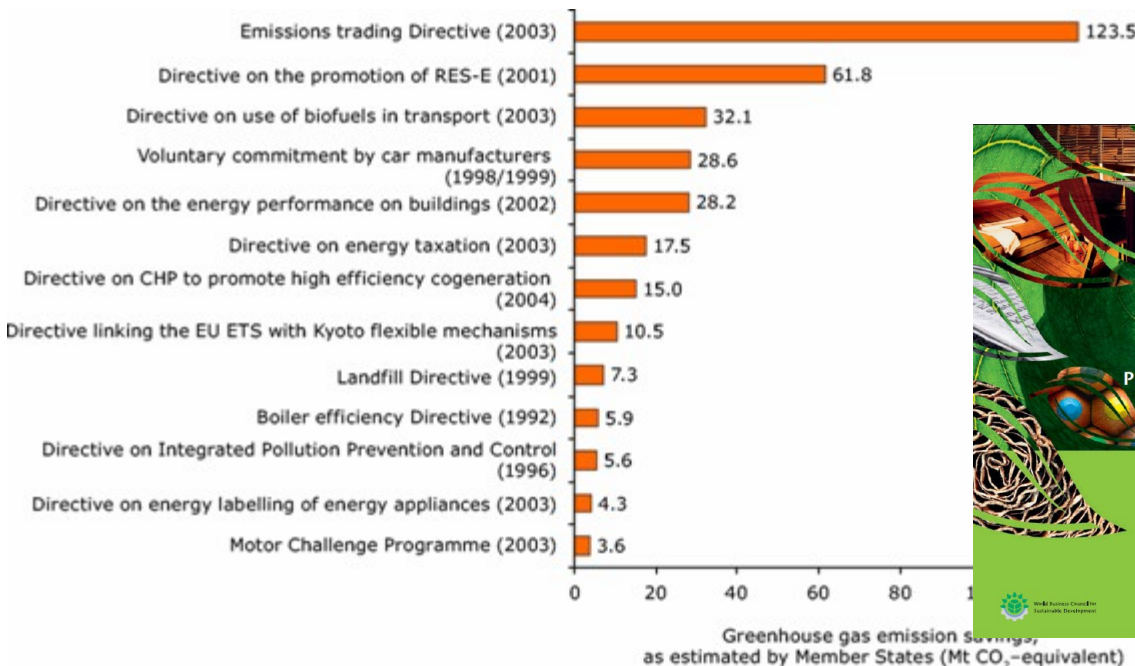
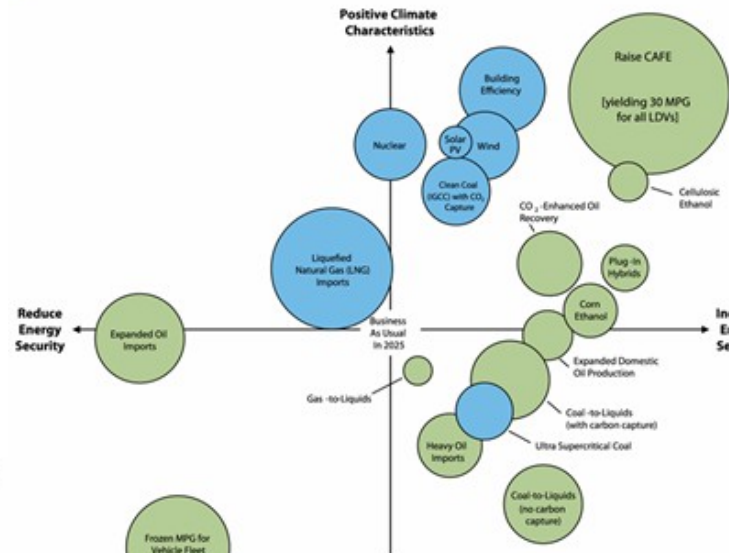
# Regulators and NGO's have been Responding



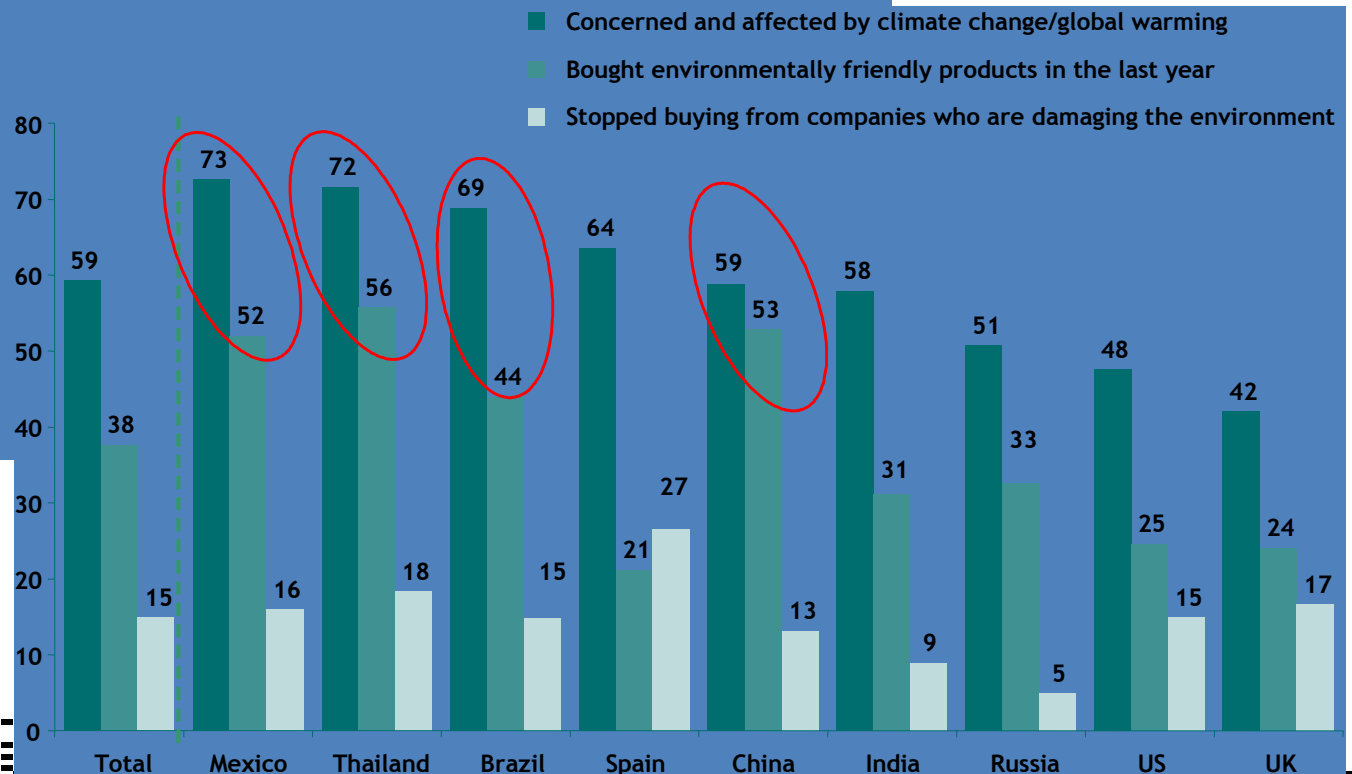
WORLD RESOURCES INSTITUTE

For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>. WRI does not endorse any of these bills. This analysis is intended to fairly and accurately compare explicit carbon caps in Congressional climate proposals and uses underlying data that may differ from other analyses. Price caps, circuit breakers and other cost-containment mechanisms contained in some bills may allow emissions to deviate from the pathways depicted in this analysis.

● Power Sector (this size corresponds to 20 billion kWh)  
● Transport Sector (this size corresponds to 100 thousand barrels of oil per day)



# Consumers are Holding Businesses Responsible for their Impact

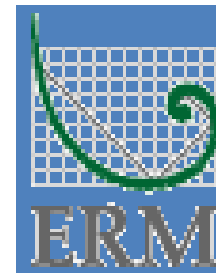


**What Should We do  
About It?**



# Measurement & Communication are the First Steps to Building Credibility in Carbon Reduction

- Calculate Carbon Footprint using Recognized External Protocols
  - WRI or PAS 2050
  - Validate via Partners and Verification Companies
- Participate in External Reporting Mechanisms
  - Primarily at the Enterprise Level
  - Carbon Disclosure Project
  - California Climate Registry
  - DJSI
  - GRI
- Develop and Deploy a GHG Reduction Strategy
  - Enterprise Level
  - Product Level



# To Fully understand the PepsiCo Impact, we must Quantify the Life Cycle Impacts from our Products



- From Seed to Pantry and on to Disposal
- All Input Streams no matter how tangential
- Very Complex Process



# We have Co-Developed a Refined LCA Process with Columbia University to Shorten the LCA Process and Reduce Complexity

1. Develop a Comprehensive Bill of Materials
2. Develop a Process Map
3. Collect Emissions Data
4. Gap Analysis (Screening Map)
5. Gap Filling
6. Calibrate and Communicate



# PepsiCo is the first Company in North America to Certify a Product Level Carbon Footprint

- CO<sub>2</sub>e per 64 Ounce Gable Top Container
  - 1700 Grams
- Calculated in Partnership with Columbia Earth Institute and the Carbon Trust
- Follows Carbon Trust Certification Label on packs of Walker's Crisps in the UK

The New York Times

Business

How Green Is My Orange?



Chip Litherland for The New York Times

Above, oranges are processed at a Tropicana plant in Bradenton, Fla. [More Photos](#) >

By ANDREW MARTIN  
Published: January 21, 2009

E-MAIL

Green Inc.

Energy, the Environment and the Bottom Line

January 22, 2009, 10:45 AM

Do Consumers Care About Carbon Footprints?  
By ANDREW MARTIN



# LCA results across all of our products show where reduction opportunities are concentrated

## Mostly Upstream



## Mostly Downstream



# How do we lighten our Footprint?



# Beginning in our own House: Greening Our Company Controlled Operations

## Building In House Conservation Capability



## Bio Boilers



**25% of Energy in India is Renewable**

## Plants with Solar Panels



**Turkey and California**

## Daylighting Warehouses



**15 Facilities to Date**

## Distribution Centers with Solar Power



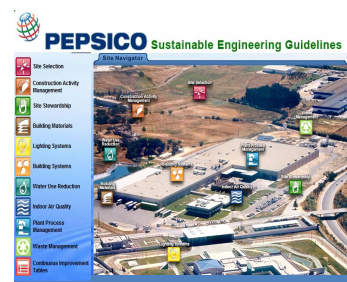
**Solar Tubes PV Energy**

## Waste Heat for Water Warming



**Recapturing >12MM BTUs and 2,000 gallons / hr.**

## "Green Design" for Buildings



**Sustainable Engineering Guidelines**  
**LEED Certification**

## On-Site Power Co-Generation



**2x Thermal Efficiency**

## Methane Gas from Landfills And Waste Water



**Turning waste into energy**

# Participating in Sector Specific initiatives such as BIER ensures alignment with methodologies and results

## What is BIER?

A partnership of leading global beverage companies working together to advance the standing of the beverage industry in the realm of environmental stewardship.






# The BIER Mission ensures that Sector LCA's follow a common method and Data Management Structure

**PRODUCT APPROACH  
PAS 2050**

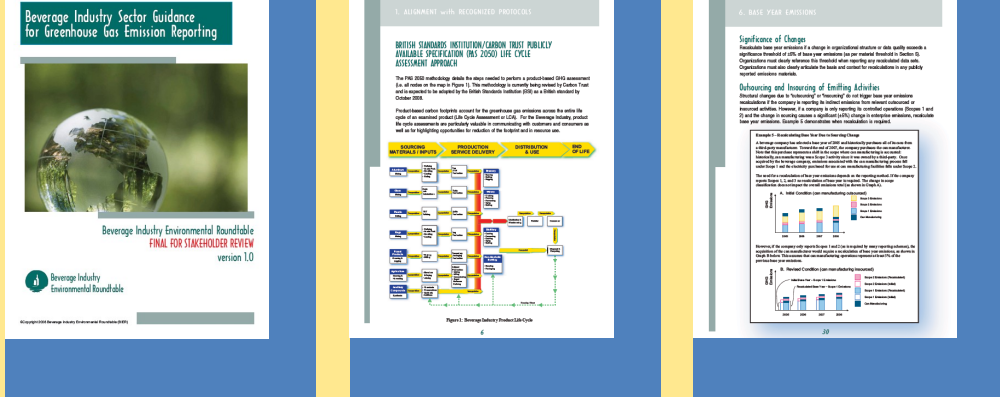



**ENTERPRISE APPROACH  
GREENHOUSE GAS  
PROTOCOL**




## BIER APPROACH Beverage Industry Sector Guidance for GHG Emissions Reporting

- Aligns industry for emissions reporting
- Defines common supply chain boundary
- Describes calculation methodology



The image shows three pages from the 'Beverage Industry Sector Guidance for Greenhouse Gas Emission Reporting' document. The first page is the cover, featuring a globe and the title 'Beverage Industry Environmental Roundtable FINAL FOR STAKEHOLDER REVIEW version 1.0'. The second page, titled '1. ALIGNMENT WITH RESOURCES PROCESS', contains text about the 'BRITISH STANDARDS INSTITUTION/CARBON TRUST PUBLICLY AVAILABLE SPECIFICATION (PAS 2050) LIFE CYCLE ASSESSMENT APPROACH' and a flowchart showing the supply chain from 'Raw Materials' through 'Production' to 'Distribution & Sale' and finally 'End Use'. The third page, titled '4. BASE-YEAR EMISSIONS', discusses the 'Significance of Change' and 'Enhancing and Incentivizing of Emission Advisories', including a bar chart comparing emissions across different categories.

# PepsiCo is engaged in the CDP Supply Chain Initiative to Understand Supplier Carbon Reduction Capability

- Participation is Up Dramatically
  - 90% in 2009 vs 57% in 2008
  - Majority of Respondents have calculated Scope 1 and 2 emissions
- Risk Assessments agree with our own
  - Cap and Trade
  - Extreme Weather Events
  - Consumer Preference Shifts
- Life Cycle Assessments are Underway
  - Orbis Example: Re-Usable Plastic Shells and One Way Corrugated Packaging

**CARBON DISCLOSURE PROJECT**

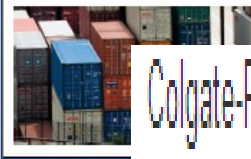
**PepsiCo, Inc.**  
Carbon Disclosure Project Corporate Supply Chain Program 2008

This summary provides an overview of the responses to the CDP supplier questionnaire conducted in 2008. PepsiCo nominated a selection of suppliers to receive a questionnaire on climate change looking at issues related to carbon risks and opportunities, emissions reporting, reductions targets and plans, governance, supplier engagement and product lifecycle. This concise summary attempts to convey the messages that are most material to your business and enhance your understanding of the most significant climate change risks and opportunities in your supply chain. The scope of this summary is limited to analysis of the questionnaire responses. The data has not been verified and no other information requested from

**Key facts**  
Responses: 42 from 73 (57%)  
Number of respondents disclosing:  
• Scope 1 emissions: 28 (67%)  
• Scope 2 emissions: 24 (57%)  
• Scope 3 emissions: 11 (25%)

Global 500 Non-carbon-intensive

Sector	Company	CDLI score	Scope 1*	Scope 2*	Scope 3**	Intensity***
Financial Services	Barclays	98	31	457	78	11
	Merrill Lynch & Co.	98	12	365	98	6
	Munich Re	98	7	138	42	2
	National Australia Bank	98	19	218	14	12
	Australia and New Zealand Banking Group	97	14	198	18	20
	Citigroup	97	45	1366	79666	17
	Lloyds TSB	97	30	101	30	6
	Royal Bank of Canada	97	11	32	44	2
	Wells Fargo & Company	97	42	539	95	15
	HBOS	95	41	35	31	2
	Westpac Banking	95	7	109	-	5
	Royal Bank of Scotland Group	94	92	395	89	8
	Standard Chartered	94	11	209	58	20



Colgate-Palmolive	90	244	431	23
Diageo	90	604	133	1505
<b>PepsiCo</b>	<b>90</b>	<b>2332</b>	<b>1471</b>	<b>-</b>

Diageo	90	604	133	1505	38
PepsiCo	90	2332	1471	-	96
Technology, Media & Telecoms	98	32	232	85	20
Other	95	55	470	206	15

# Supply Chain Engagement and Participation in Sector Initiatives lead to a more rapid Greening of the Supply Chain

## Light-Weighting and Finish



Weight reduction for 500ML bottles

Several million pounds reduction in PET

## Source Reduction



5 million+ trees saved per year

Significant corrugate reduction in primary and secondary packaging

## Design for Recycle



10% Recycled PET & 40-50% Recycled Aluminum

Eliminating dyes and finishes that contaminate recycling stream

## Compostable Packaging



Plastic & Film from Renewable Sources

Feasibility testing on packaging across PepsiCo

## PVC Elimination



Eliminating PVC from tamper bands

Quaker Standard Oatmeal has eliminated the PVC band on the 18oz. tube and replaced it with biodegradable material,

## Energy Reduction



Significant energy reduction in equipment

47% energy reduction coolers and 55% in vending

# In Summary

- Carbon footprinting is key to understanding your complete impact
- Partnering with Academic, NGO and key stakeholder groups informs your LCA process and provides credibility
- Participating in Sector Specific Industry Groups and Initiatives are key to ensuring credibility and best practice sharing
- Supply Chain engagement must be multi-faceted and provide for differing levels of engagement

# Responsible Environmental Management is at the Foundation of “Performance with Purpose”

PepsiCo’s responsibility is to continually improve all aspects of the world in which we operate – environment, social, economic – creating a better tomorrow than today.



“Performance with Purpose is at the foundation of every aspect of our business. Indeed, financial achievement can and must go hand-in-hand with sustainability. We integrate a commitment to human, environmental and talent sustainability into all of our operations. Doing so creates a blueprint for PepsiCo to develop, manufacture and sell our products in a sustainable way, gives us a competitive advantage in markets all over the world, which in turn drives long-term growth.”