

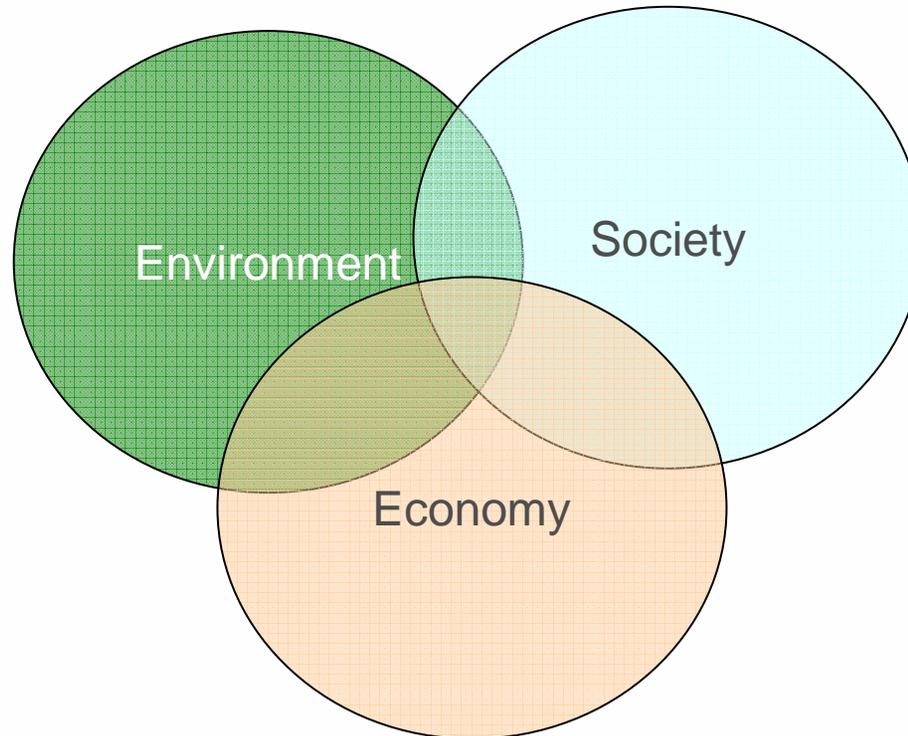
# PepsiCo's Holistic Approach to Water Stewardship



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Director, Global Policy & Government Affairs  
PepsiCo

# The context: the “Triple Bottom Line”

PepsiCo Will Do Better by Being Better



A company has to marry its business performance with its social, ethical and moral principles.



**The  
fundamental  
issues...**



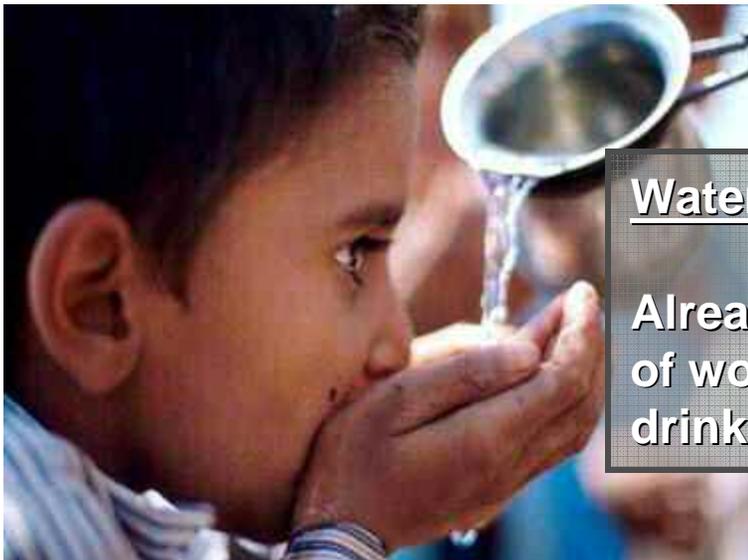


## Climate Change

Dramatic increase in severity of floods that adversely impact poor coastal communities

## Unrelenting Hunger

Drought exacerbates the chronic hunger facing more than 1 billion worldwide



## Water Scarcity

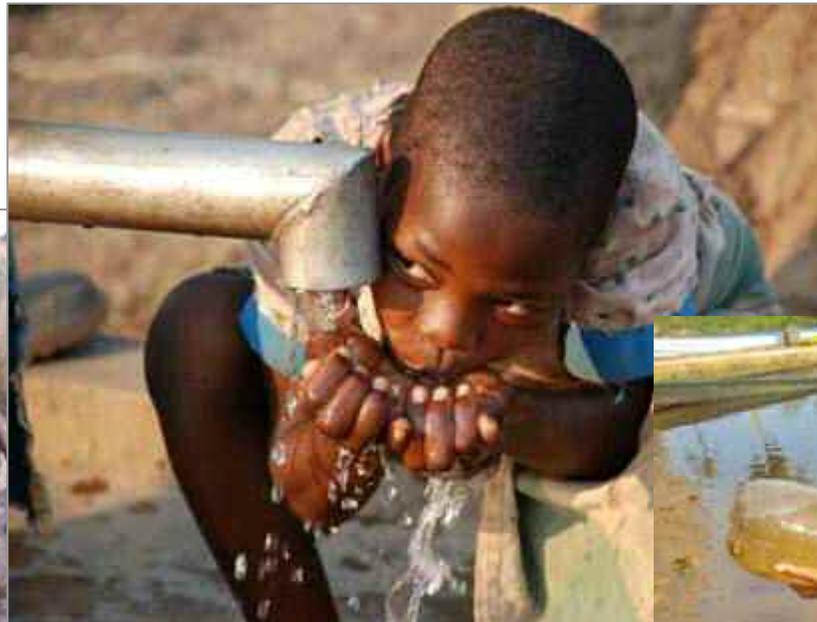
Already 1.2 billion people – 20% of world's population – lack clean drinking water



# Every 15 seconds a child dies of water-related illness

Protecting water sources reduces the opportunities for malaria mosquitoes to breed.

<http://www.who.int/mediacentre/factsheets/fs094/en/>



## 2.6 B people lack access to sanitation

- Access to piped water by household connections
  - Latin America and the Caribbean: 66%
  - Asia: 49%
  - Africa: 24%
- Access to sanitation linked to a sewage system
  - Latin America and the Caribbean: 66%
  - Asia: 18%
  - Africa: 13%



## Abject poverty only exacerbates the crises

- 600 million children live in households earning less than \$1 a day
- More than half of them girls



# The cost of inaction is enormous



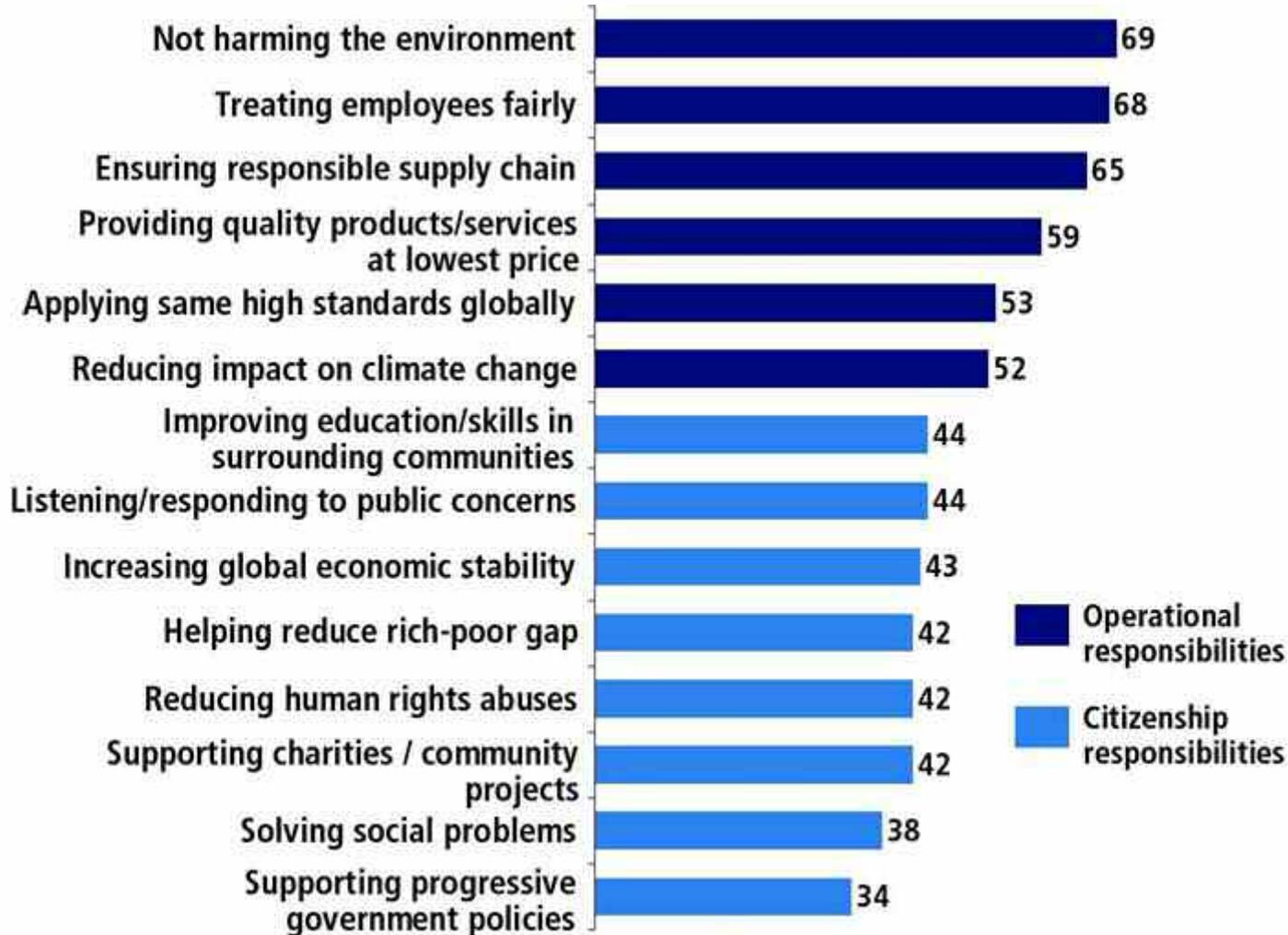
But perhaps all is not so grim...

Collaborative opportunities for business continue to arise



# Consumers across the world are helping direct businesses toward opportunities; protecting the environment is important to them...

Companies "Held Completely Responsible for," Average of 25 Countries



csr07\_11a-n\_total



# Businesses must realize the multiplier effect of expanding their influence across their supply chain

WE HAVE  
DEVELOPED A  
MODEL FRAMEWORK  
WITH WHICH TO  
LEVERAGE  
COLLABORATION,  
EXPAND OUR  
INFLUENCE, AND  
PARTNER WITH KEY  
STAKEHOLDERS





## Our water stewardship approach has evolved to include myriad interdependent elements

- Water as a basic human right
- Conserving water within our operations
  - quantity and quality; intake and discharge
- Reducing water use in agriculture
  - where the largest impact can be seen
- Partnering for change
  - through policy advocacy, engagement, and communication





## PepsiCo became one of the first companies of our size to publicly recognize water as a basic human right

- **Safety**: We will ensure that our operations preserve the quality of the water resources in the communities in which we do business;
- **Sufficiency**: Our operating objective is to ensure that our use of water will not diminish the availability of community water resources to the individuals or the communities in the areas in which we operate;
- **Acceptability**: We will involve communities in our plans to develop water resources, and will assure transparency of any risks or challenges to the local governments and community members in an on-going manner;
- **Physical Accessibility**: We will assure that our operations will not adversely impact physical accessibility of community members to community water resources and will address community concerns in a cooperative manner;
- **Affordability**: We will appropriately advocate to applicable government bodies that safe water supplies should be available in a fair and equitable manner to members of the community. Such water should be safe and of consistent and adequate supply and affordable within local practices.

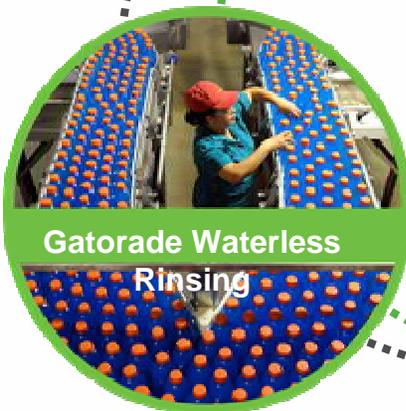




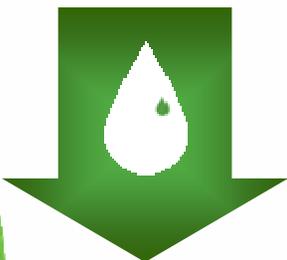
# Water conservation was the earliest stop along our stewardship journey, and our efforts are being recognized



Recovery captures 85%+ of the water from the PC fryer



Gatorade Waterless Bottle Rinsing to achieve 20% reduction in water consumption



## Reducing Our Water Usage

Installed Reverse Osmosis Water Recovery Systems to save more than 280 million gallons annually

Nearly 1.5 billion gallons saved in 2007!  
Since 1999, 4,500 Olympic-sized swimming pools

**EPA** United States Environmental Protection Agency

LEARN THE ISSUES SCIENCE & TECHNOLOGY LAWS & REGULATIONS NEWSROOM ABOUT EPA

News Releases issued by the Office of Water

**EPA Awarded \$100 Million Project to Promote Energy Efficient Water Efficiency**

News Release 12/10/2008

Contact Information: Brenda Lewis, (202) 894-4300/7073 | brenda.lewis@epa.gov

(Washington, D.C., Dec. 10, 2008) Water efficiency is critical to the growing U.S. economy and quality of life. Water Efficiency Leaders (WELs) are being recognized for their contributions in reducing, reusing and recycling water, increasing innovation and water saved.

"Water is America's golden thread and the key to our economic, environmental and social future. EPA is proud to announce that water efficiency leaders are being recognized for their contributions in reducing, reusing and recycling water, increasing innovation and water saved."

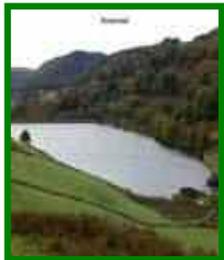
The leaders are made up of utilities, individuals, organizations and governmental agencies.

The award winners are:

**PepsiCo received the EPA WEL Award in 2008**



# First Technology - Membrane Bio-Reactor



ZeeWeed® MBR/Nanofiltration Pilot Study  
Frito-Lay Kirkwood NY 2006



Wastewater  
Feed



Activated  
Sludge



ZeeWeed®  
MBR  
Permeate



NF  
Concentrate



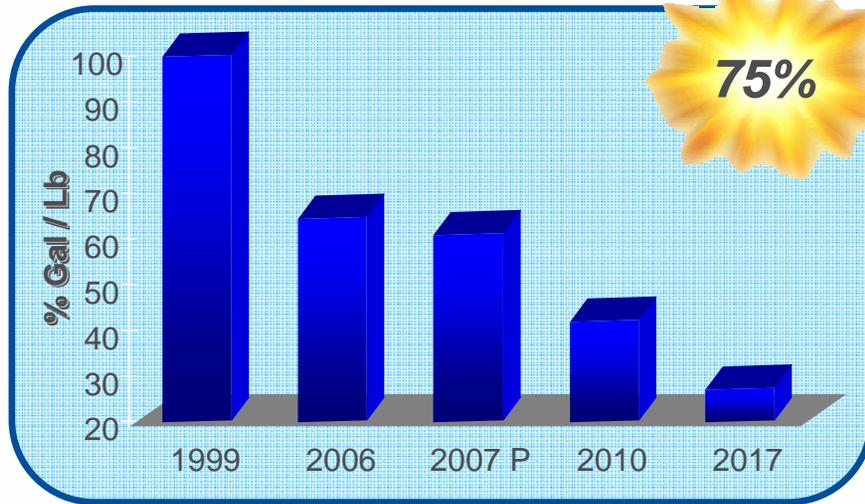
NF  
Permeate

**Kirkwood  
 Plant MBR  
 Pilot Test  
 Demonstrated  
 Feasibility of  
 75-95% Water  
 Recycle**



# Future Goals: Next 10 Years Will Deliver Even More in Water and Energy Savings

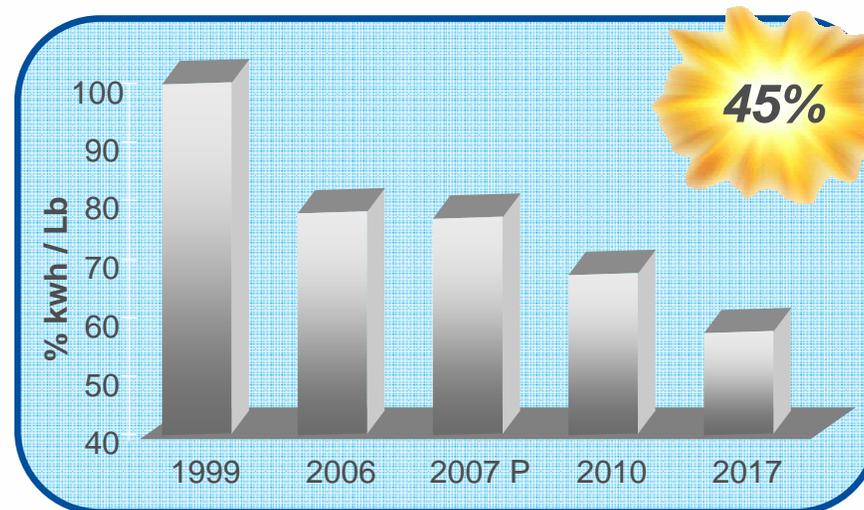
## Water



## Fuel



## Electric



# But the water use within our operations pales in comparison to water use in agriculture

## Water use

- 70% of global water consumption is agro
- 85+% in developing economies

## Water footprinting

- Represents a significant opportunity
- Links environment to agro, food security, and global health
- PepsiCo has become a sponsoring member of the Water Footprint Network to help influence the global agenda

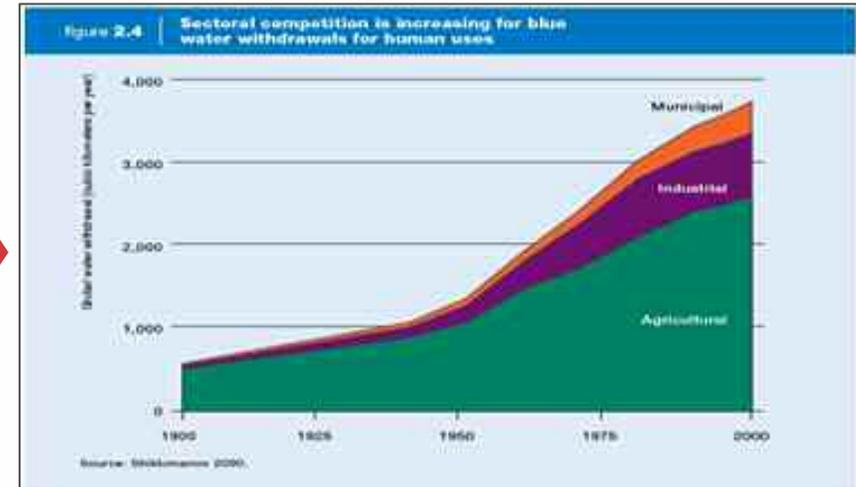
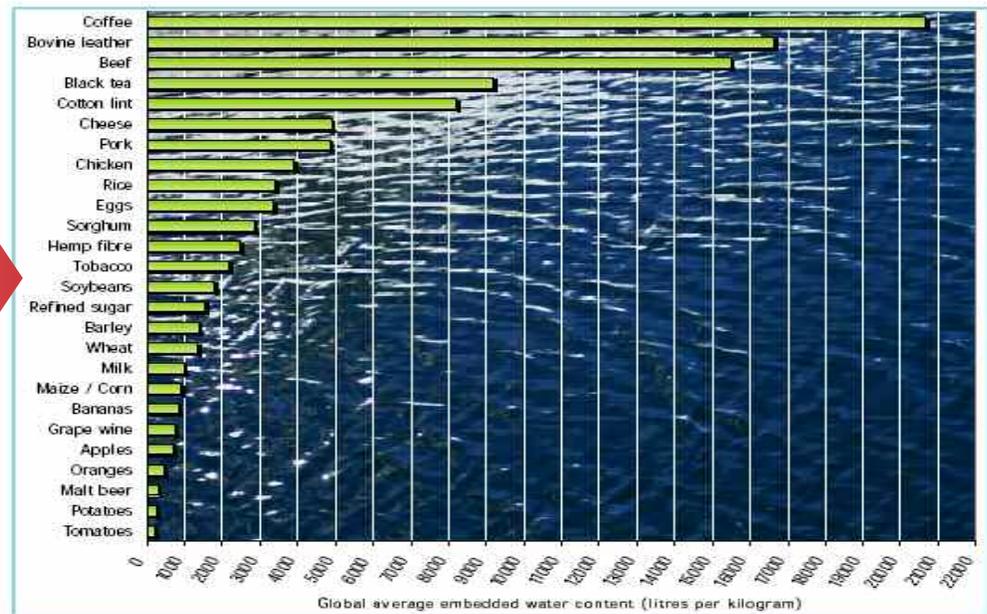


FIGURE 6. Global average embedded water content of some major agricultural products. Data from: Chapagain and Hoekstra 2004.



# PepsiCo India Case Study: Paddy

- Agriculture accounts for between 70-85% of global water withdrawal, and therefore plays a critical role in tackling the worldwide water crises
- India has about 43 million hectares (108 MM acres) under traditional paddy cultivation
  - Requiring nearly 350 trillion liters of water annually (~35% of national annual water use)
  - Traditional paddy cultivation requires about 7.5 million L of water/hectare (3 MM L/acre)
- PepsiCo initiative is to work with communities and local farmers in optimizing water usage in agriculture, significantly improving “More Crop Per Drop”



# A Small Change in Agro Yields Significant Impact



- If 25% of the national paddy cultivation can be moved to direct seeding, water savings will be over 25 trillion liters
  - the total quantity consumed by Industry annually in India
- Direct savings
  - 30-40% saving on water
  - increased farm yields and income
- Pilot acreage increased five-fold from 2006 to 2007
- Farmers are keen to do more each year; hope to



Seeding Using Pepsi Seeder



40 days

Pepsi's paddy cultivation method saves water by 40%



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- **Partnering for change**
  - **through policy advocacy, engagement, and communication**





# Our Foundation water portfolio is an important element of our PepsiCo Strategy, and Safe Water Network is a core partner in the portfolio

**Public Goal: In direct support of the Millennium Development Goals, bring safe water—sustainably—to one million people in underserved populations by 2010**



Protection at the  
**Watershed Resource**

Earth Institute



**Distribution** to the people that need it

WaterPartners  
Safe Water Network



**Purification** of the water for the community  
**Sanitation & Hygiene** at discharge to prevent Recontamination

Safe Water Network





# Partnerships for Positive Impact

## safewaternetwork

Safe water initiatives for village water systems in Ghana, India, and Bangladesh as well as rainwater harvesting systems in India



Initiative led by the Earth Institute and supported by the PepsiCo Foundation to identify a series of high-impact, community-based activities and practical solutions across water, agriculture and climate. Focus is on improving water access, increasing water productivity and recommending innovative methods to deliver "more crop per drop." projects in India, Brazil, China and Africa

Partnership with the charitable organization founded by Matt Damon, involves on-the-ground clean water projects in Niger, Mali, Senegal and other countries in Africa



Provide safe drinking water and sanitation to India's communities of the greatest need through the WaterCredit Initiative, an innovative program that uses microfinance to increase access to safe water and improve sanitation for local communities





# We actively advocate water policy to help tackle the global crises at the national+ level

- Unique private-public partnership developed in recognition of emerging crisis
- Designed to assist companies in development and implementation of water sustainability policies and practices by
  - Facilitating and catalyzing partnerships
  - Leveraging synergies with existing/emerging water initiatives
- Endorsed by more than 35 CEOs
- Includes six key elements:
  - Direct Operations, Supply Chain, Collective Action, Public Policy, Community
- Declaration on U.S. Policy & the Global Challenge of Water. Advocates:
  1. Comprehensive and sustained global campaign to address the global challenge of water
  2. An integrated strategy for national action on the global water campaign
  3. Special high-level representative to lead implementation of the U.S. global water campaign
  4. A core team to help guide implementation of the water campaign, in addition to expanded capacities at the Department of State
  5. Significant increase in the amount and duration of resources committed
  6. The U.S. government should attempt to energize and catalyze international efforts
  7. The U.S. government should reinforce public/private-sector partnerships



The CEO Water Mandate





**We even partner with competitors for the laudable cause of water stewardship!**

## **BIER Mission Statement**

**The mission of the Beverage Industry Environmental Roundtable (BIER) is to bring together leading global beverage companies to define a common framework for stewardship, drive continuous improvement in industry practices and performance, and inform public policy in the areas of Water Conservation and Resource Protection, Energy Efficiency and Climate Change Mitigation**

**The pursuit of our mission will be founded upon three pillars:**

- Data Collection and Benchmarking*
- Best Practice Sharing; and*
- Internal & External Stakeholder*

- 
- World Class Water Stewardship in the Beverage Industry is based on five fundamental principles
    - Water efficiency is fundamental to operation excellence
    - Water is a limited and shared resource
    - Community involvement is essential
    - Partnerships lead to more effective water management
    - Supply chain engagement is a critical element of water stewardship

*Communication*



# Closing thoughts

Jane Nelsen, Harvard, IBLF.

Three critical things needed to progress toward the MDGs:

1. Corporations need to continue to make strategic investments not only in their charitable giving, but also in their core business, and the two should be complementary
2. If real change is to be effected, especially in the context of the MDGs, it will require "collective corporate action"--companies banding together toward a common goal.
3. "Systems Strengthening"--approaches to build local competencies.

- No single entity can “do it alone”
- Lasting solutions will require “collaborative innovation” between the private sector, governments, industry, NGOs, and individuals



**Thank you.**

