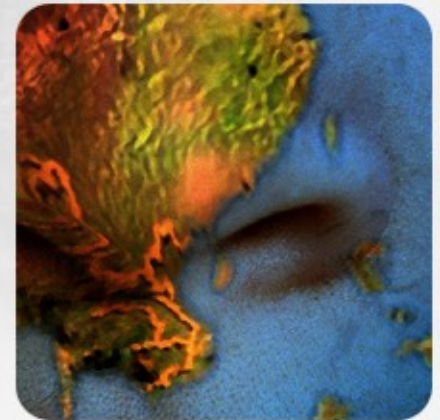
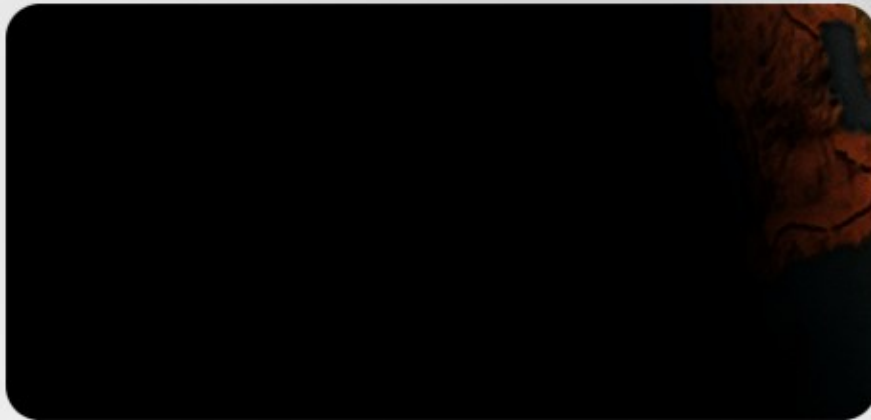


# Industry's Role in Our Water Future



Water: Quality, Quantity, and the Need  
for Innovative Technologies

*Government-University-Industry Research Roundtable (GUIRR)*

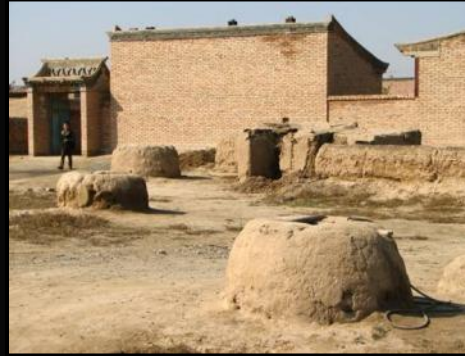
*30 June 2010*

Dan Bena  
Sustainable Development  
PepsiCo, Inc.  
[dan.bena@pepsico.com](mailto:dan.bena@pepsico.com)



First, industry must recognize the  
magnitude of the global challenges....

TOO LITTLE



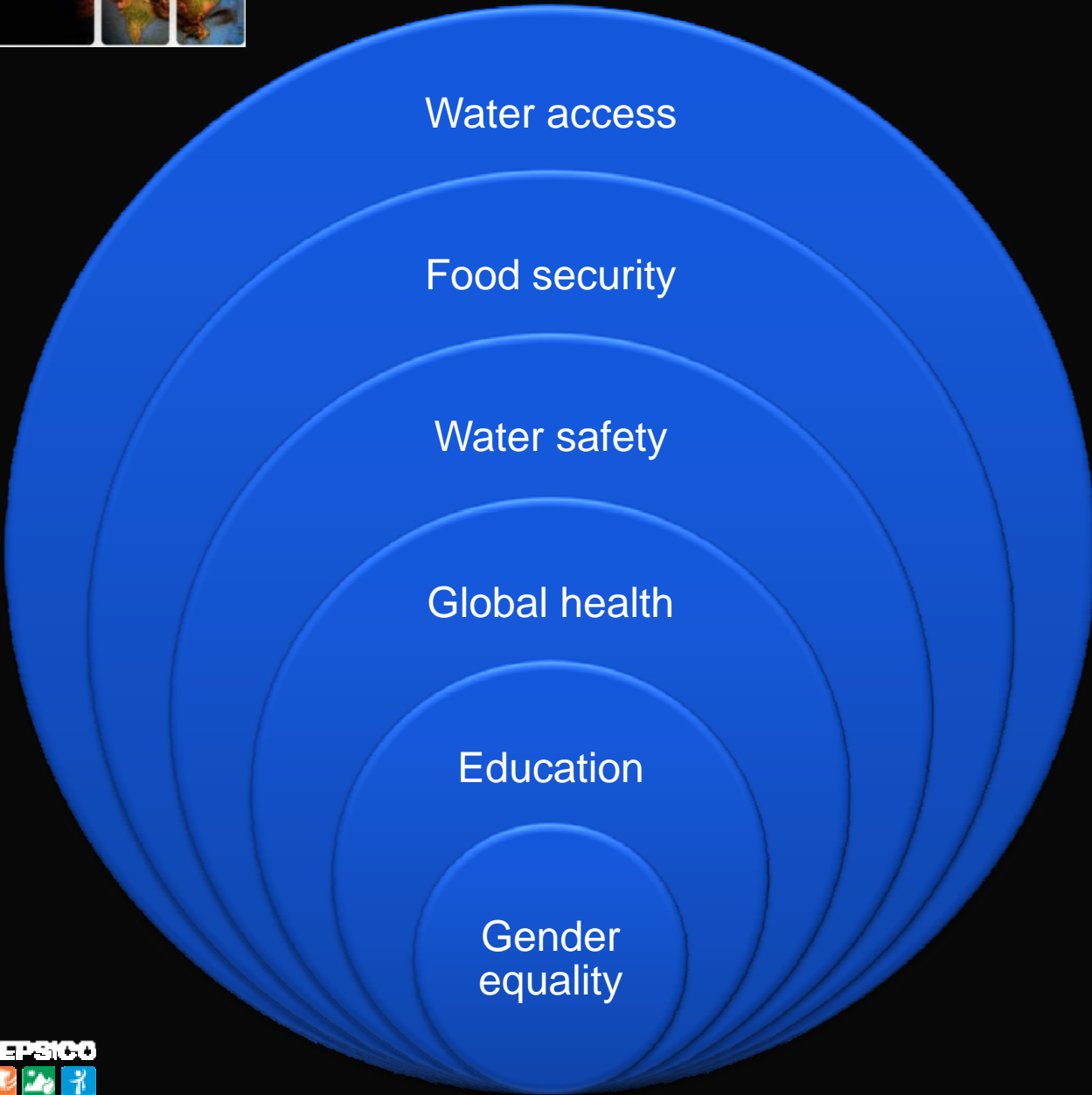
TOO MUCH



TOO DIRTY



Then, understand the unique and inter-connected role that water plays....



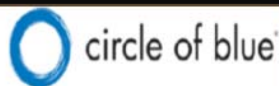
THRIVING  
COMMUNITIES

Then, “tune in” to the expectations of a diverse collection of stakeholders....



Across multiple countries, people's concern for the water crisis has outpaced concern for climate; they also see a clear role for companies to play in resolution.

## Concern for Concern for Water Issues



"Very Concerned," by Country, 2009

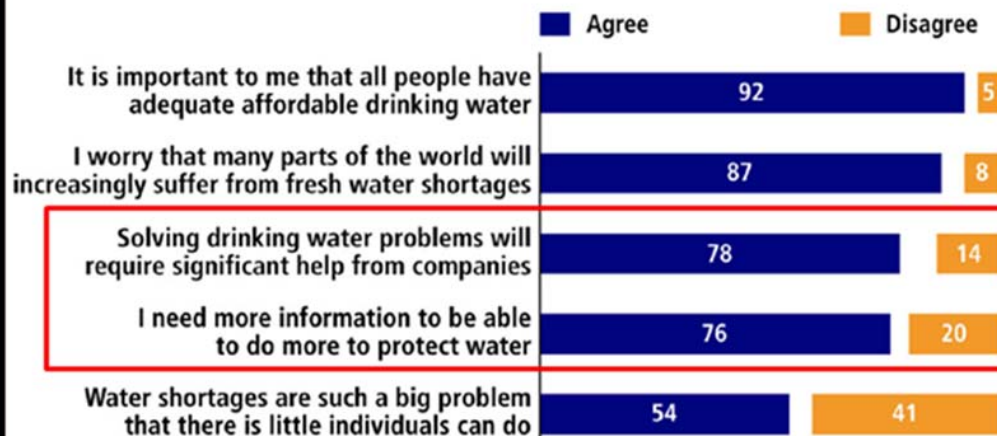


CoB09\_1\_sbs

## Attitudes toward Water Issues



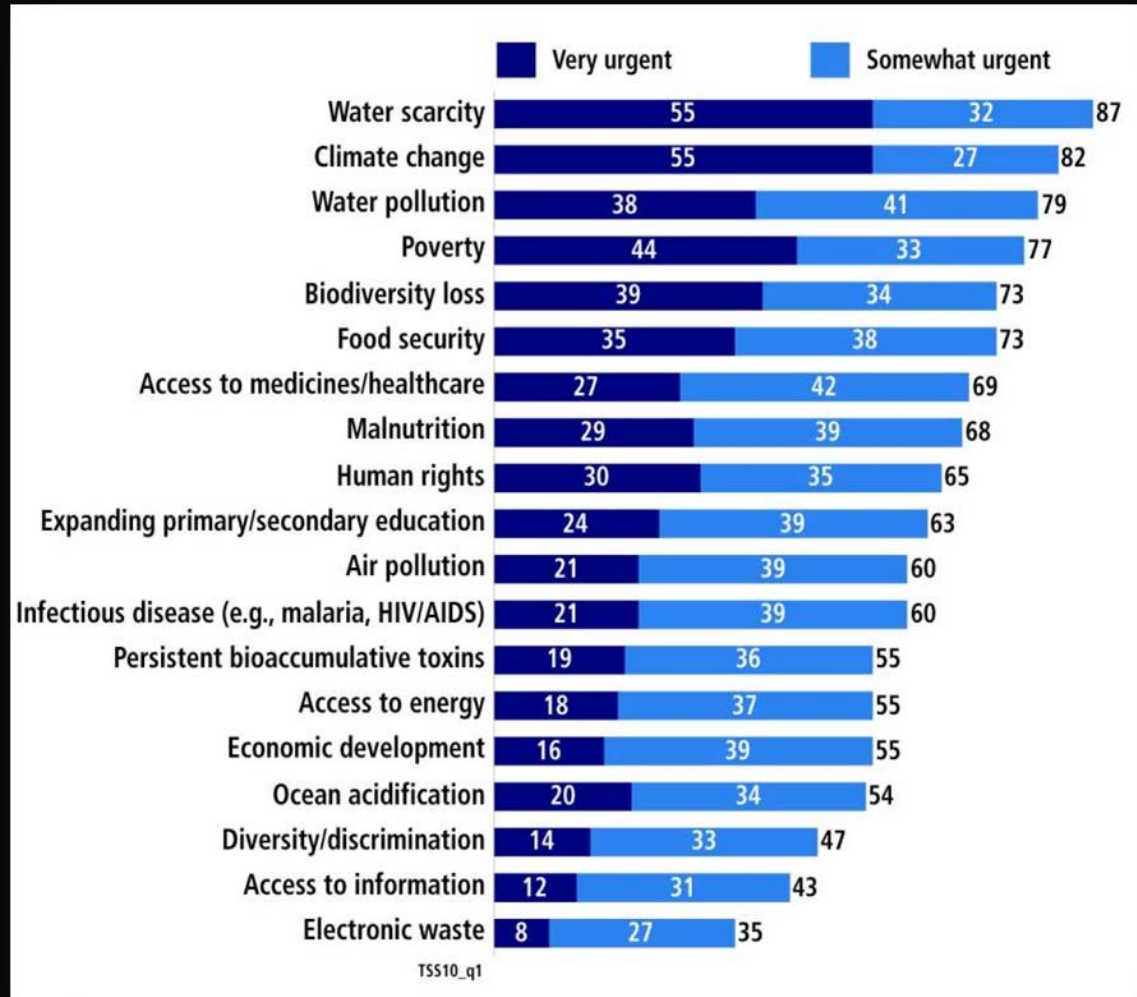
Average of 7 Countries, 2009



CoB09\_3

# Sustainability experts across 80 countries also agree that water scarcity and climate change top the list of urgent challenges

- There is a strong sense of urgency to address numerous and diverse sustainable development challenges
- The most urgent issues are highly inter-connected, which implies the need to take a systems approach to addressing sustainability, rather than developing narrow solutions for specific issues
- Across nearly all industries, water and energy-related issues are cited as the most important for business to address





# Expectations for rigor and transparency are increasing dramatically

## CARBON DISCLOSURE PROJECT

Home What We Do Programs How To Disclose Results

overview cdp reporter services

### Investor CDP

- Largest collaboration of investors in the world
- Generating essential climate change information to help drive capital flows to a low-carbon economy

We request climate change data on behalf of 534 institutional investors to be used by financial decision makers in their investment, lending and insurance analysis.

Find out more

### CDP Water Disclosure

- 300 of the world's largest companies in water-intensive sectors
- Data will help drive investment towards sustainable water use

### CDP Public Procurement

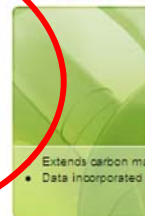


- Central and local government
- Purchasing power of public sector on climate change

CDP Public Procurement is a national and local government impact of climate change

Find out more

### CDP Supply Chain



- Extends carbon footprint
- Data incorporated



## 2.8 WATER RELATED RISKS

### SAM Rationale

Availability of water and its qualitative properties are fundamental to all industries. Water is used in vast amounts for cooling processes in power production. For mining companies and beverage industry it is indispensable. Water competes with water consumption for agriculture and municipal use. Water is a scarce resource, implicating financial consequences for high consumption. Water scarcity will aggravate in future due to global population increase and effects of climate change. Water-related risk criteria identifies companies with high exposure, water-related risk criteria evaluates their capabilities in water management and evaluates their performance in water management.

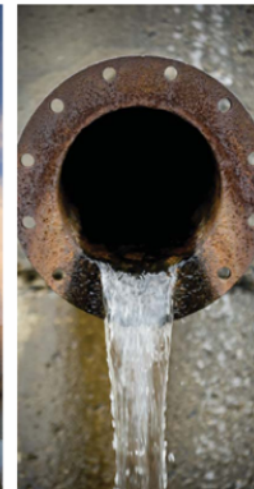
### 2.8.1 Exposure by Water Stressed Areas

When considering physical water scarcity issues at a local level, please indicate what percentage of your company's production plants / sites are located in water-stressed area and what percentage of gross profits these contribute to in the last fiscal year. If you use different definition of "water stress", please specify the alternative definition below. Please also indicate whether the water stress analysis for current operations include social sensitivity analysis. NB: This question will not be assessed in isolation, but in combination with other questions in Water-related Risks.

	in water-stressed areas ( $<1700 \text{ m}^3/\text{p}^{\circ}\text{annum}$ )
% of production plants in last FY:	
% of gross profits in last FY:	
Alternative definition:	

## MURKY WATERS? Corporate Reporting on Water Risk

A Benchmarking Study of 100 Companies



February 2010  
A Ceres Report



Authored by  
Brooke Barton, Ceres

With scoring and analysis by  
Shirley Morgan-Knott,  
UBS Investment Research

With data support by  
Bloomberg, LP

Then, wrap this all together into a cohesive water strategy....

# Water stewardship is part of our broader commitment to the planet and its people— *The Promise of PepsiCo*

## ENVIRONMENTAL SUSTAINABILITY

### To the planet we all share...

It's a promise to be a good citizen of the world, protecting the Earth's natural resources through innovation and more efficient use of land, energy, water and packaging in our operations.\*

#### OUR GOALS AND COMMITMENTS

##### WATER:

Respect the human right to water through world-class efficiency in our operations, preserving water resources and enabling access to safe water.

- Improve our water use efficiency by 20 percent per unit of production by 2015.
- Strive for positive water balance in our operations in water-distressed areas.
- Provide access to safe water to three million people in developing countries by the end of 2015.

##### LAND AND PACKAGING:

Rethink the way we grow, source, create, package and deliver our products to minimize our impact on land.

- Continue to lead the industry by incorporating at least 10 percent recycled polyethylene terephthalate (rPET) in our primary soft drink containers in the U.S., and broadly expand the use of rPET across key international markets.
- Create partnerships that promote the increase of U.S. beverage container recycling rates to 50 percent by 2018.
- Reduce packaging weight by 350 million pounds—avoiding the creation of one billion pounds of landfill waste by 2012.
- Work to eliminate all solid waste to landfills from our production facilities.

##### CLIMATE CHANGE:

Reduce the carbon footprint of our operations.

- Improve our electricity use efficiency by 20 percent per unit of production by 2015.
- Reduce our fuel use intensity by 25 percent per unit of production by 2015.
- Commit to a goal of reducing greenhouse gas (GHG) intensity for U.S. operations by 25 percent through our partnership with the U.S. Environmental Protection Agency Climate Leaders program.
- Commit to an absolute reduction in GHG emissions across global operations.

##### COMMUNITY:

Respect and responsibly use natural resources in our businesses and in the local communities we serve.

- Apply proven sustainable agricultural practices on our farmed land.
- Provide funding, technical support and training to local farmers.
- Promote environmental education and best practices among our associates and business partners.
- Integrate our policies and actions on human health, agriculture and the environment to make sure that they support each other.

\* For more information on our goals and commitments, including a metrics baseline and timeline, and risks, please visit [www.pepsico.com](http://www.pepsico.com).

Respect the human right to water through world-class efficiency in our operations, preserving water resources and enabling access to safe water.

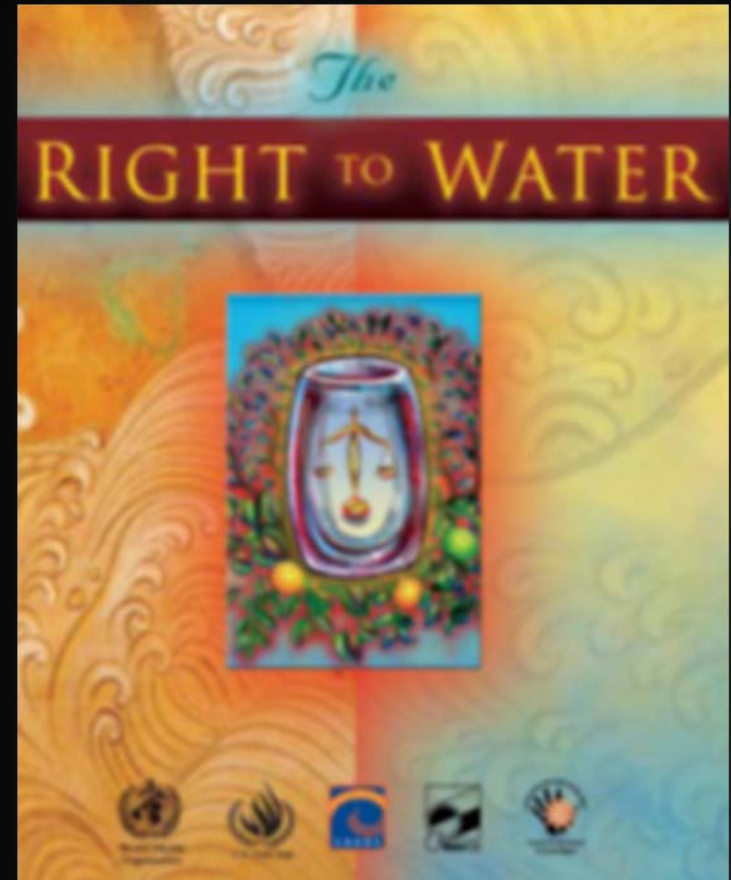
- Improve our water use efficiency by 20 percent per unit of production by 2015.
- Strive for positive water balance in our operations in water-distressed areas.
- Provide access to safe water to three million people in developing countries by the end of 2015.

This promise is “operationalized” through a focus on four areas:

1. Water as a basic human right
2. Conserving water within our operations (quantity and quality)
3. Reducing water use in agriculture
4. Partnering for change (through policy advocacy, engagement, and communication)

# Respect the Human Right to Water in our communities and in our operations

- **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.



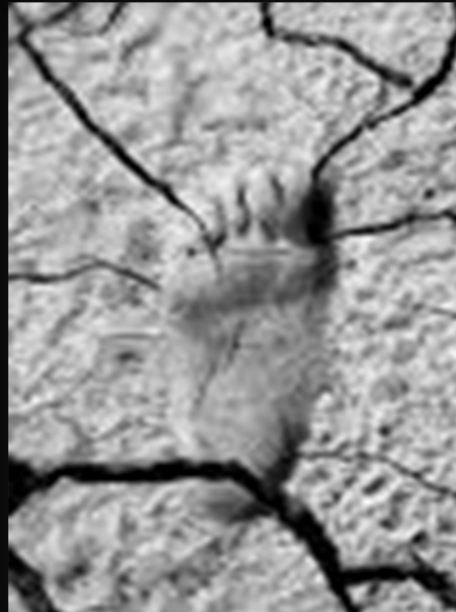
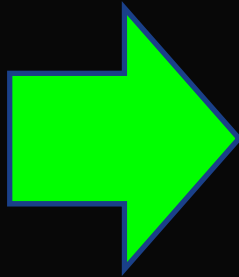
Companies must understand their  
footprint....



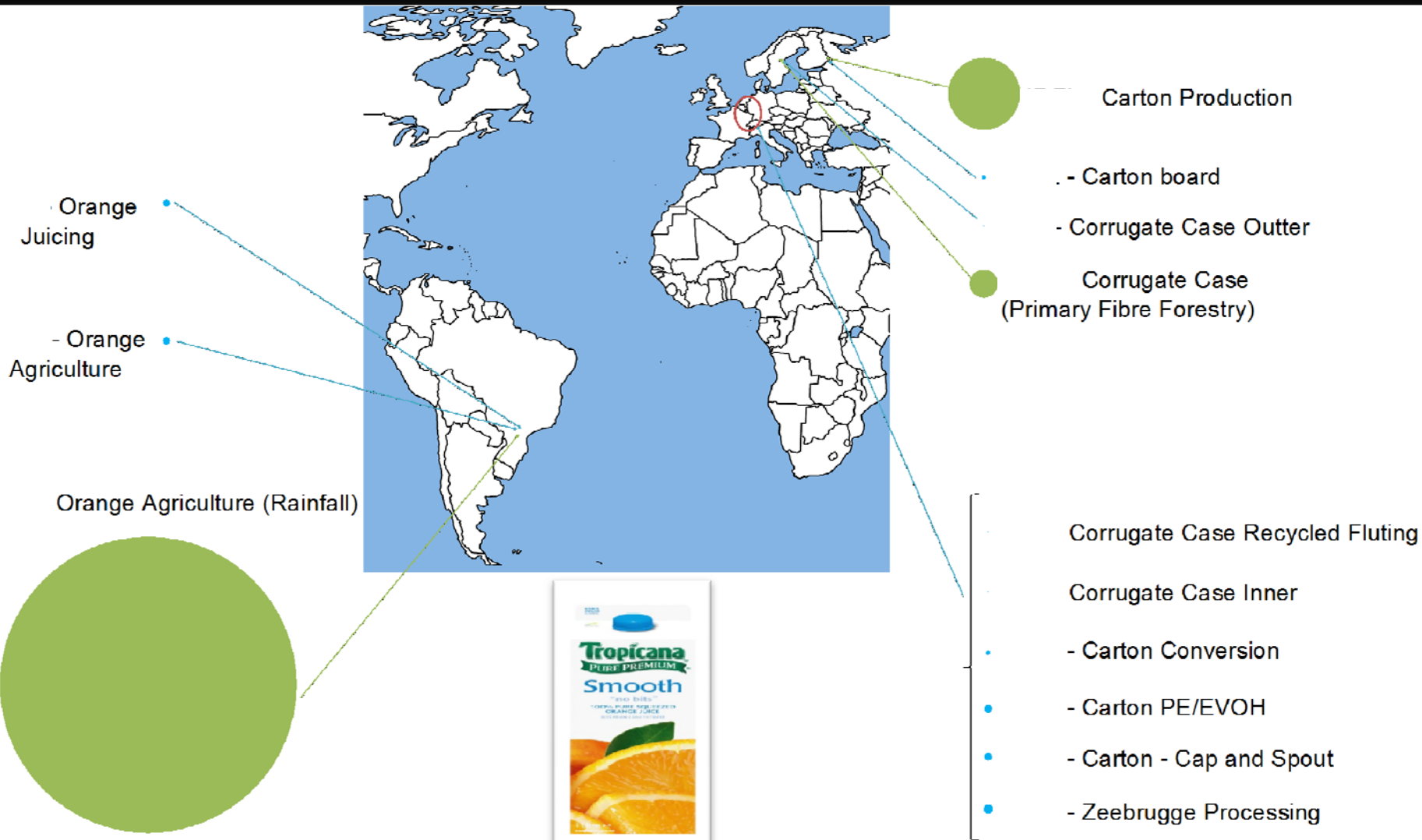
Footprint depends on shoe size and weight...  
and on *where and when* you tread.



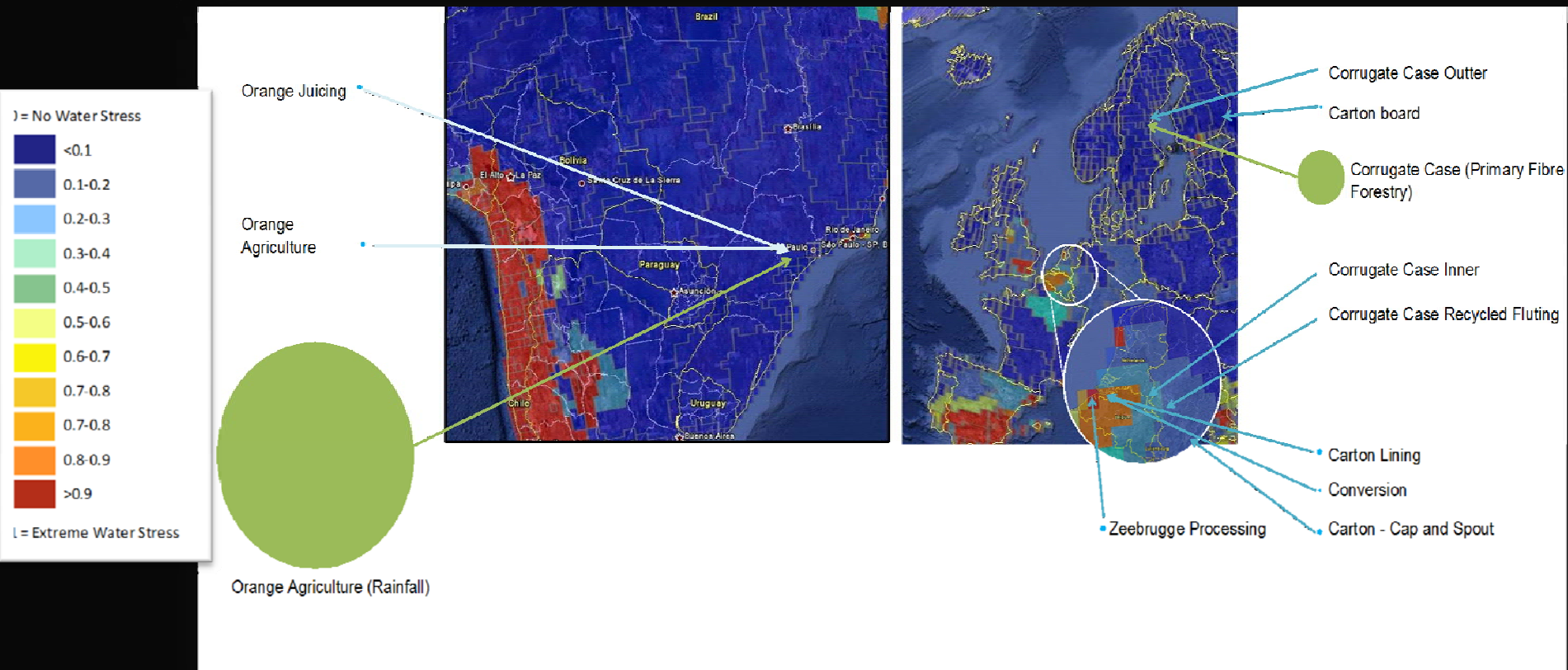
**WEIGHT**



# Components of pilot water footprint for Tropicana produced in Zeebrugge, with oranges from Brazil



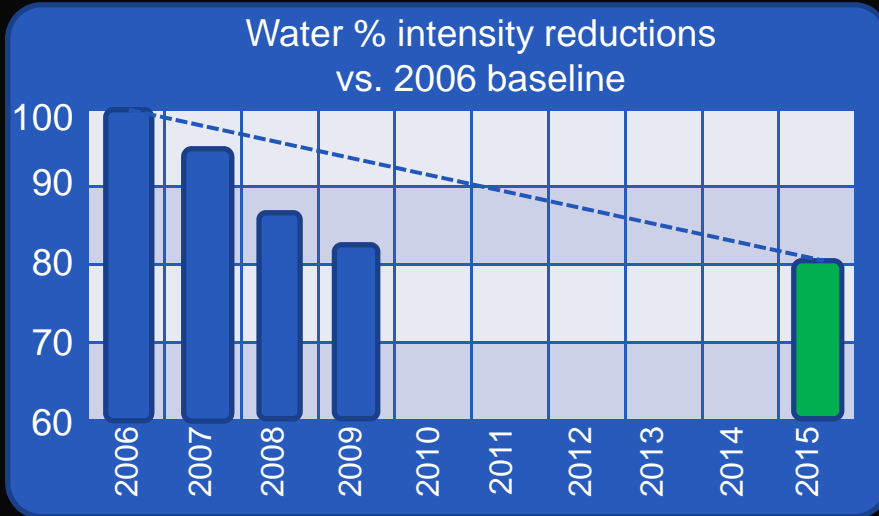
# The interpretation changes significantly when we look at impact through the lens of local scarcity



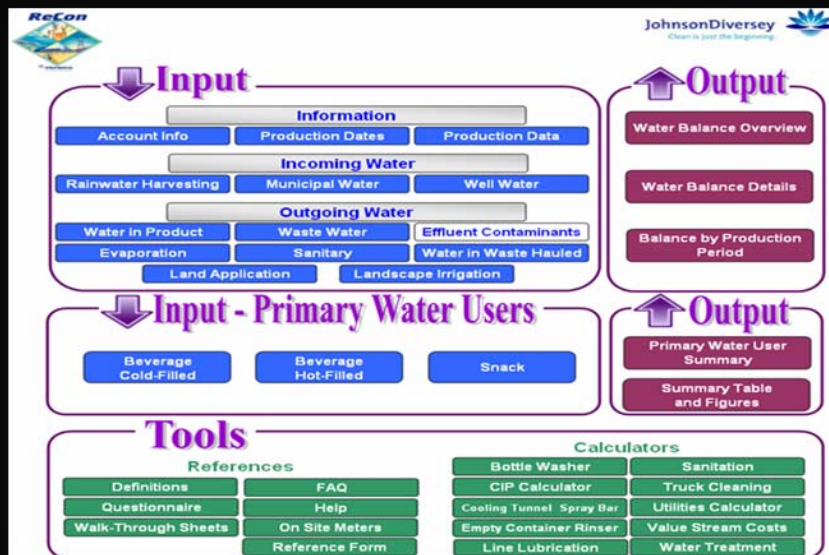
- Context is EVERYTHING!
- Greatest *impact or risk* is not necessarily equal to greatest *use*
- A water footprint only provides *direction*; a *single, aggregated number is of limited value*

Once the components of water footprint are understood, companies must take steps to manage them....

We are well on our way to exceed our public commitment to improve our water use efficiency by 20% by 2015



- Using the Water ReCon Tool to measure all water streams in our plants and assign a value to those streams
  - Identifies reuse priorities within the plant
- Educating our associates to look for the basics
  - Dripping hoses
  - Squeegee vs. pressure hoses
- Investing in technologies to conserve water
  - Low water corn cook
  - Reverse osmosis reclaim
  - Membrane bioreactor (MBR)





# Casa Grande “Near Net Zero” plant is a showcase of PepsiCo’s commitment to innovation and forward thinking



Using MBR technology will allow the plant to reduce water usage by 75-90%

# Our business in India has also been expanding a novel approach to paddy cultivation, using direct seeding of rice (DSR)



- Agriculture uses over 85% of water in India (FAO)
- Water table is receding in 80% of Punjab
- India grows about 130 million tons of rice over about 108 million acres
- DSR conserves ~30% water (0.9 million liters of water / acre) over puddling
  - If 25% of the Indian rice cultivation can be shifted to direct seeding, water saving will be equal to the total water consumed by Indian Industry
- 75% reduction in methanogenic greenhouse gas emissions
- In 2009, PepsiCo applied direct seeding to over 6500 acres across five states
  - Over 5 Billion liters conserved

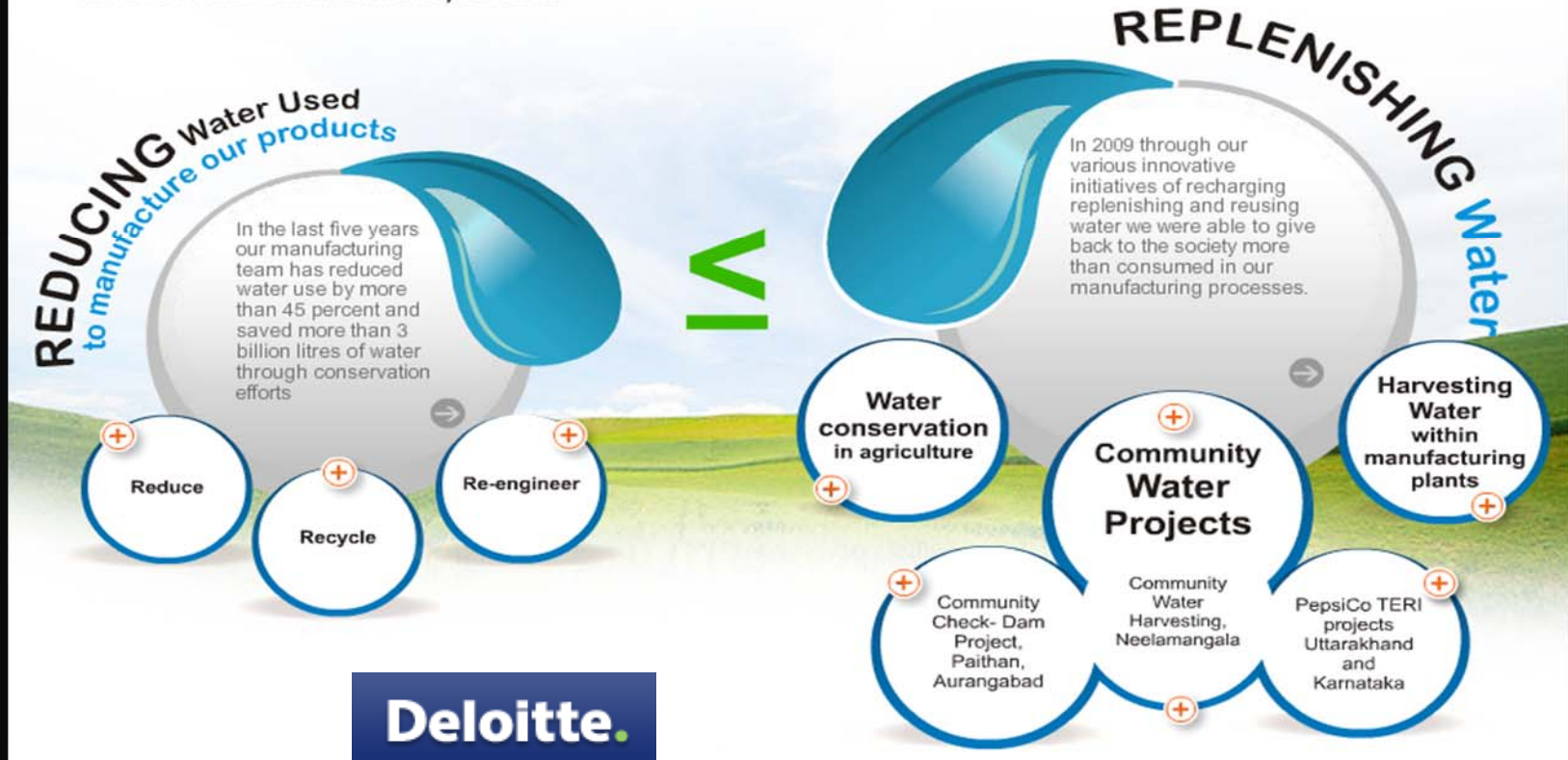


# Our India business reached a milestone in 2009: *Positive Water Balance*

## Positive Water Balance

In 2009, through our various innovative initiatives of recharging, replenishing and reusing water we were able to give back to the society more than consumed in our manufacturing processes.

Which means PepsiCo achieved Positive Water Balance in the year 2009



**“Business cannot succeed in a  
society that fails.”**

--Bjorn Stigson, President  
WBCSD

# A critical contributor to our commitment to respect water as a human right is our Foundation portfolio of partners





# The Faces of Future Success

