

June 2011 – USF Water Meeting
Joe Rozza, P.E., BCEE
Global Water Resource Sustainability Manager
The Coca-Cola Company
jrozza@na.ko.com 404 676 4764

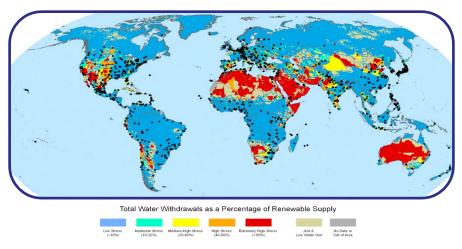
# The Coca-Cola Company by The Numbers





# Water is Biggest Part of Our Supply Chain and it is Under Growing Stress

- Physical availability surface or groundwater – and the sustainability of those sources
- Infrastructure existence, pressure, service area, metering
- Pricing too cheap or too expensive
- Droughts
- Competing use and increased demand from more people and increased GDP
- Climate change
- Regulatory limits
- Social acceptance



**Water Risks in Manufacturing Locations** 



Water Risks in Agricultural Supply Chain

# **Geospatial Analytics for Decision Support**

**Plant Locations** 

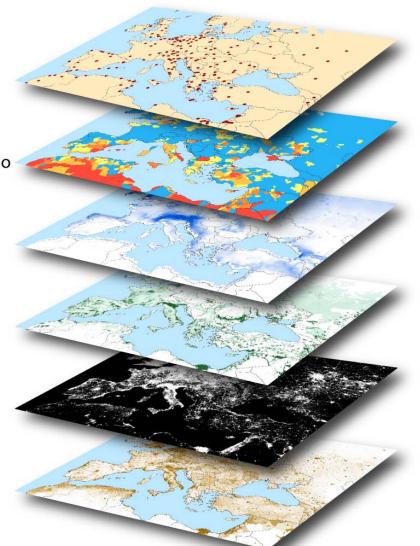
Water Withdrawal Ratio

Runoff

Irrigation

**Night Lights** 

**Population** 

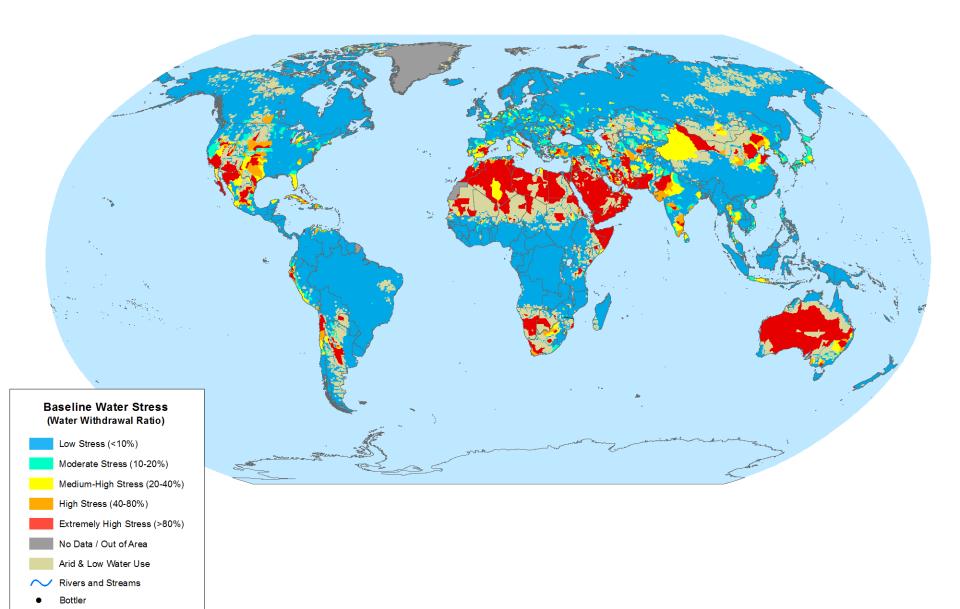


Socio-Economic Water Stress

Socio-Economic Drought

Long-Term Water Stress

# **Socio-Economic Water Stress:** Today and 2020 Conditions



## Scope of Risk Assessment: Environmental, Operational, Social, Political, Economic

#### Water Resources Sustainability

- Surface/Groundwater Stress
- Watershed Quality
- Social Impacts
- Effective Resource Mgt

#### Supply Reliability

- •Legal Access to Water
- Policy/Politics
- Infrastructure
- Natural Disasters

#### Wastewater Compliance

- Local/Legal Standards
- Operations
- •Reuse

### Supply Economics

- Water Supply Costs
- Water Treatment Costs
- Policy

#### Water Efficiency

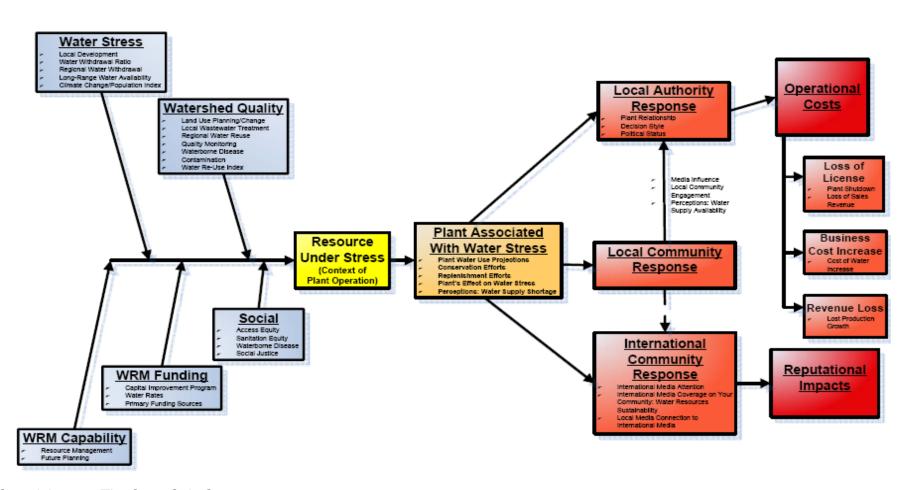
- Plant Water Efficiency
- Product/Package Mix Change
- Policy
- Technology Changes

#### Local Social

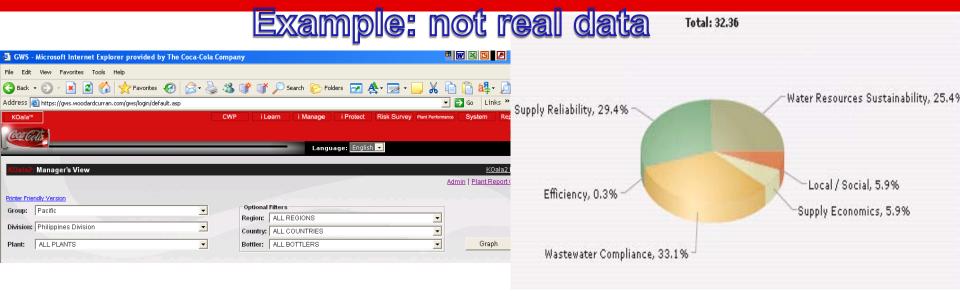
- Community
- Local Government
- Media
- NGO/Activists
- Business Community
- National Governance

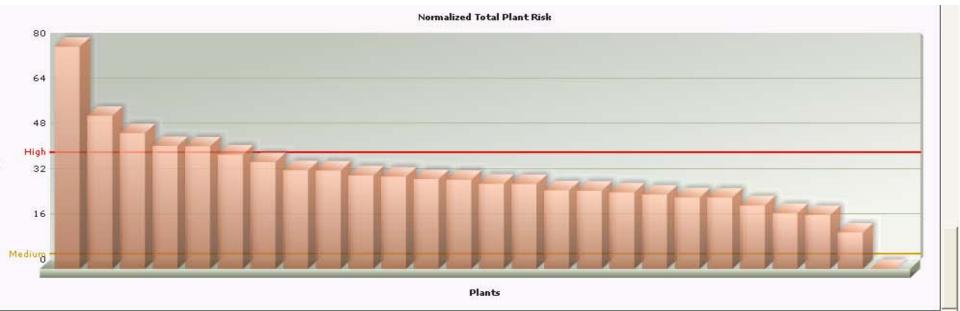
## Risk Assessment Structure is Critical

## Water Resources Sustainability Event Tree



# **Risk Based Strategy Implementation**





## **Critical Success Factors for Risk Mitigation**

## Communications, Engagement & Alignment

- Risk Assessment Participation: 840 Plants All BUs, All T2T Bottlers
- Briefed CEO and BOD (PPCR Council)
- Reports to all Group/BU Presidents, CEOs of Top Franchise Bottlers
- Validation, Alignment & Planning Meetings with Key Directors and Managers (300+ Individuals)

#### **Execution**

- Current Operations:
  - Source Water Vulnerability Assessments
  - Provide Decision Support for Locally Relevant Priorities
  - Source Water Protection Plans
  - Plant, BU, Bottler, Cross Functional Execution
- Infrastructure Planning: SC Rationalization / Greenfields
- Connect to Annual Business Planning

Governance & Capability Development

- Revised Corporate Standard
- Updated Governance Model
- Tools, Guidance, Training
- Support Procuring Professional Services
- Global Tracking System



## Global Leader in Sustainable Water Use



























# **Performance Targets**

Our water conservation goal is to return to communities and nature an amount of water equivalent to what we use in all of our beverages and their production.

## **REDUCE**

TCCC aims to be the most efficient user among peer companies. As part of our WWF partnership, we set a goal to improve water efficiency 20% by 2012 (2004 baseline).

# **RECYCLE**

TCCC will align our entire global system with stringent wastewater treatment standards which require returning all water that is used in our manufacturing processes to the environment at a level that supports aquatic life by the end of 2010.

# **REPLENISH**

On a global basis we will expand support of healthy watersheds and sustainable community water programs to balance the water used in our finished beverages.

# Replenish: Communities and Watersheds

reduce

recycle

replenish

- "Replenish" is the manifestation of our community and watershed partnership work, with the aim to offset the water we use in finished products
- Locally relevant projects that support communities and nature, from source water protection implementation to rainwater harvesting projects

Total amount of water used in Manufacturing

Treated wastewater

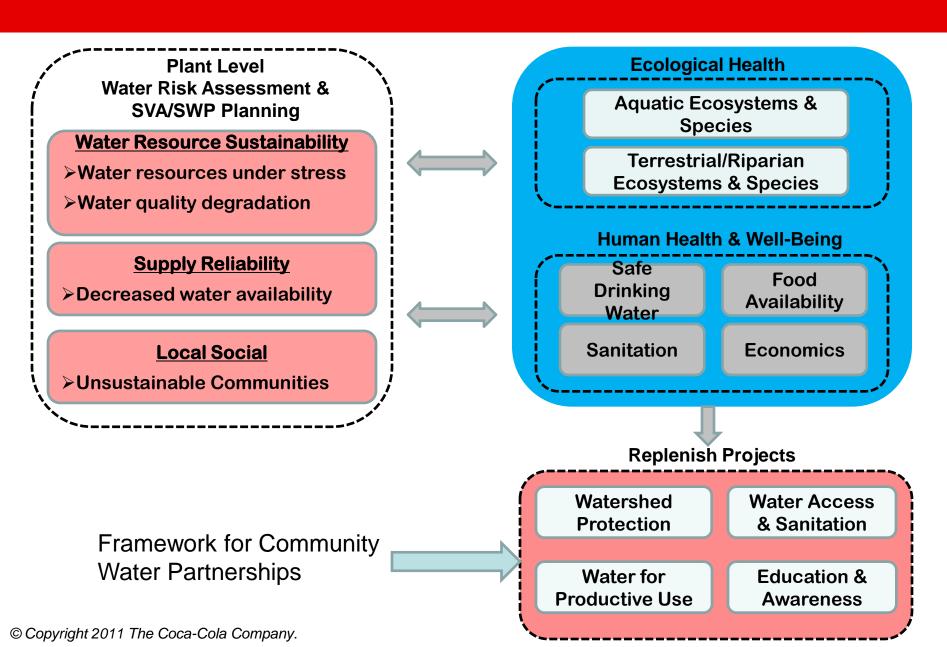
Product Volume and amount to replenish





We are engaged in 320 community water projects in 89 countries to protect and preserve water resources and help enable greater access to water and sanitation. Our partners include USAID, UNHABITAT, CARE, UNDP, TNC, WWF, local governments and implementing NGOs.

## Plant Level Water Sustainability and Replenish Program



## **Watershed Protection and Restoration**

#### **Activities:**

- Agricultural improvements (better management practices)
- Land cover improvements (reforestation, land conservation)
- Surface and groundwater quantity management (dam reoperation, floodplain reconnection, rainwater harvesting, aquifer recharge)
- Water conservation and leak repair
- Wastewater treatment

## Replenish Benefits:

Water quantity and quality







# Access to Safe Drinking Water

#### **Activities:**

- Household water pumps
- New water source (boreholes)
- Rainwater harvesting
- Community water treatment systems
- Distribution network improvements

## Replenish Benefits:

 Metered or calculated based on number of beneficiaries and WHO minimum daily requirements







# **Mexico Reforestation Program**

**Activity:** Reforestation in priority ecosystems across Mexico

Outcome: 25,000 hectares replanted by 2012 Benefits:

- Reduced runoff water quantity:
   9.4 billion liters/yr (total)
- Reduced sediment runoff:
   770,472 metric tons/yr (total)
- Carbon sequestration
- Habitat restoration & improved biodiversity
- Economic & community growth

#### Costs:

• \$6 million from Coca-Cola (33% of total)



# Valuing Water: Payment for Environmental Services

- Activity: Conservation of tropical forest through payment for maintenance of environmental services
- Outcome: Deforestation will be prevented on 12.5 million hectares

#### Benefits:

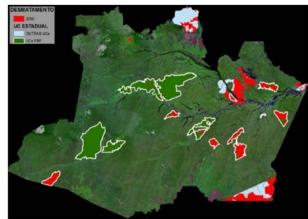
- Reduced runoff water quantity:
   120.6 billion liters/yr (total for 2010)
- Reduced sediment runoff:
   104,274 metric tons/yr (total for 2010)
- Carbon sequestration
- Habitat protection & preserved biodiversity
- Preservation of quality of life for communities

#### Costs:

 \$20 million from Coca-Cola to endowment fund (33% of total endowment)

Classified - Internal use





Current and predicted extent of deforestation (red) in 14 conservation units (without the program)

## Replenish Africa Initiative (RAIN)



- Partners: USAID, other
- Priority Goal: Provide access to safe drinking water to at least 2 million people by 2015; 100 water projects
- Primary Activities:
  - Boreholes for drinking water, community latrines, hygiene promotion, rainwater harvesting, rehabilitation of water supply systems
- Investment: \$30 million over 6 years
  - Seeks to leverage funding to achieve at least 1:1 co-finance









Replenish Benefits:
Currently 1.5 billion liters/yr

# **WWF: A Transformational Partnership**



In 2007, we announced a global, multi-year partnership with WWF to combine our international strengths and resources to help conserve freshwater resources.



Improve water efficiency in Coca-Cola's manufacturing operations





Decrease the company's carbon dioxide emissions and energy use





Support more efficient water use in TCCC's agricultural supply chain, beginning with sugar





Measurably conserve seven of the world's most important freshwater river basins





Inspire a
global
movement to
conserve the
world's
freshwater
resources

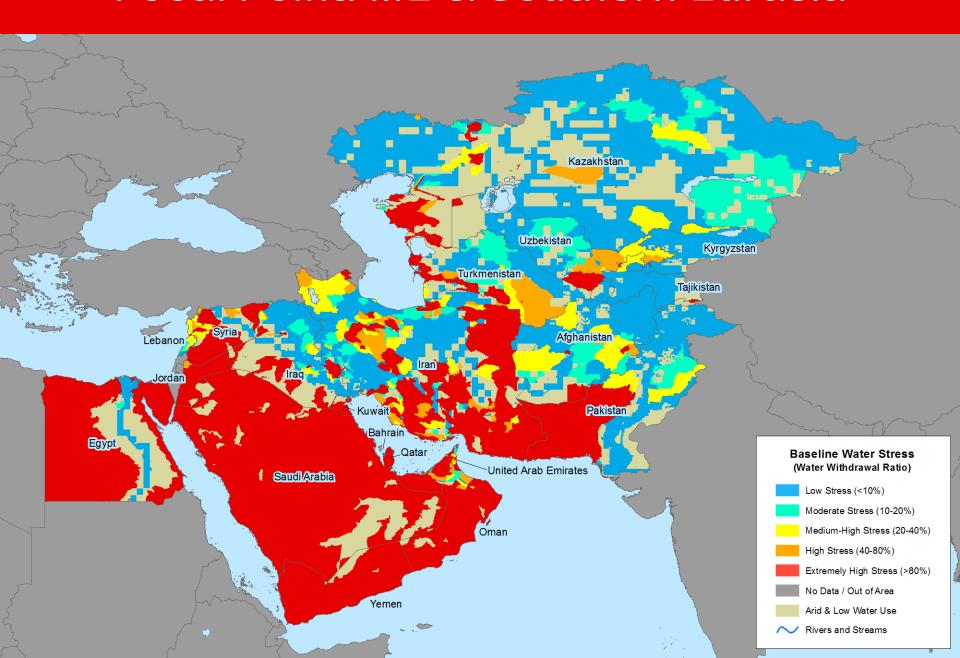


# **Building Organizational Capability**



- Repository of information to assist in water management and data collection techniques
- Guidance and templates

# Focal Point: ME & Southern Eurasia



# Water For...Strategy (Notional)



Supporting the Services Water Provides in Human Security and Prosperity

# **Key Elements of the Strategy**







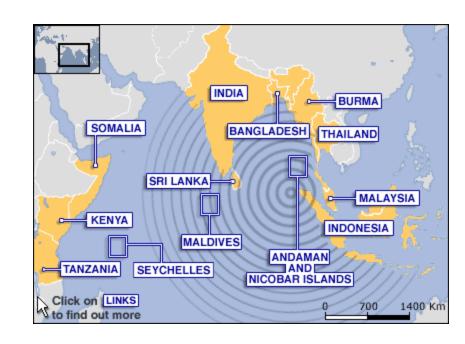




# Reducing the Impact from Natural Disasters

## **Assets and Capabilities**

- Alternate Potable Water Source
- Rigorous Water Treatment Technologies
- Logistics
- Independent from Muni
   Infrastructure (many cases)
- Local Presence
- Understand Hydration
   Key Learnings
- Planning For Truly Worst Case
- Taking Early Action in Situations
   Dominated by Uncertainty
- Pre-arranged Partnerships with Tactical Planning



### Recommendations

- Integrated global-to-local response policy and planning requirements
- Integrate plans with local governments/authorities
- Global partnerships (RCRC)

