

# Global **Sustainability** Summit

UNCOVER THE POSSIBILITIES



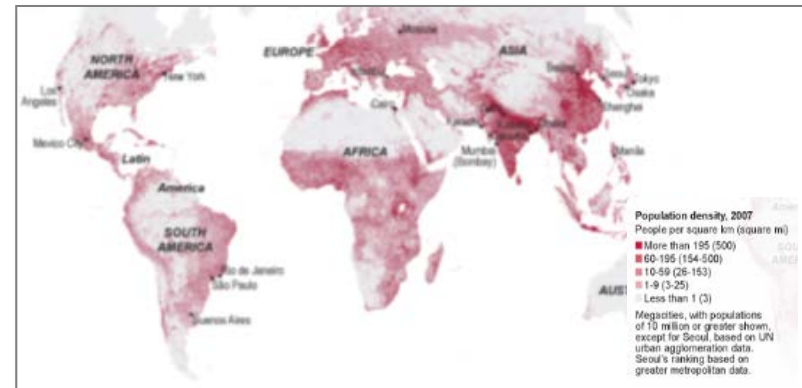
Data Visualization and  
Communications to Address  
Water, Energy and Food Risk

## Increasing demand for finite resources

### Major Drivers

- Population - to nearly 9 billion people by 2050
- Economic growth
- Rise of the middle class and dietary changes
- Urbanization

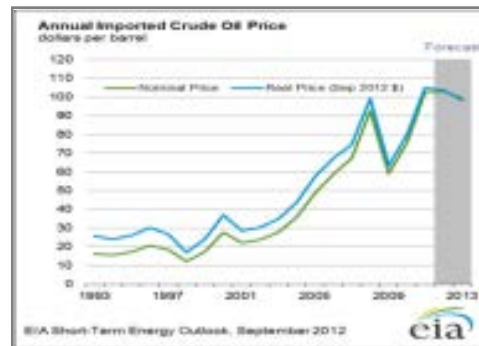
### Population Density



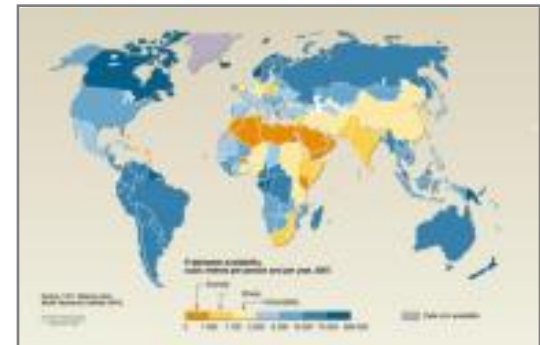
### Resource Depletion



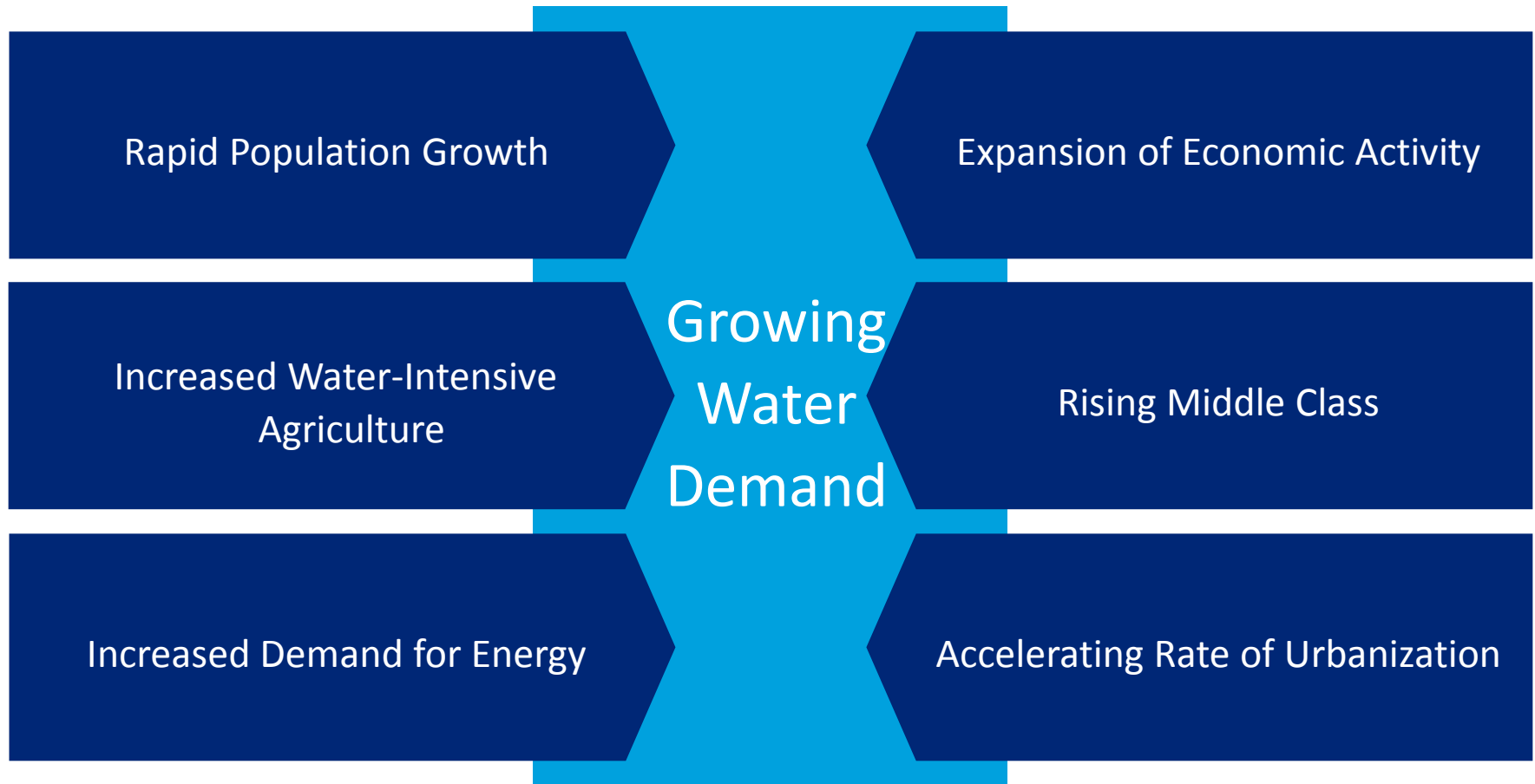
### Demand for Energy



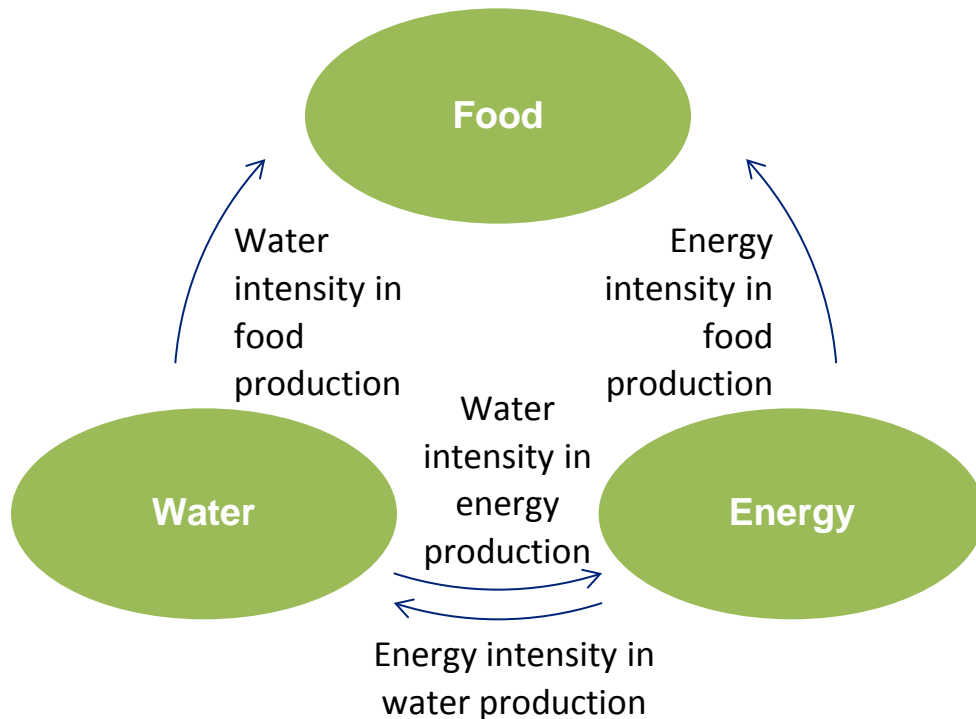
### Water Scarcity



Several forces will continue to increase demand for energy, water and food



## Energy – water – food *security*



### Food – Water Demand

The agriculture sector will need to increase production by 70% to 100% to meet demand in the next 20 years

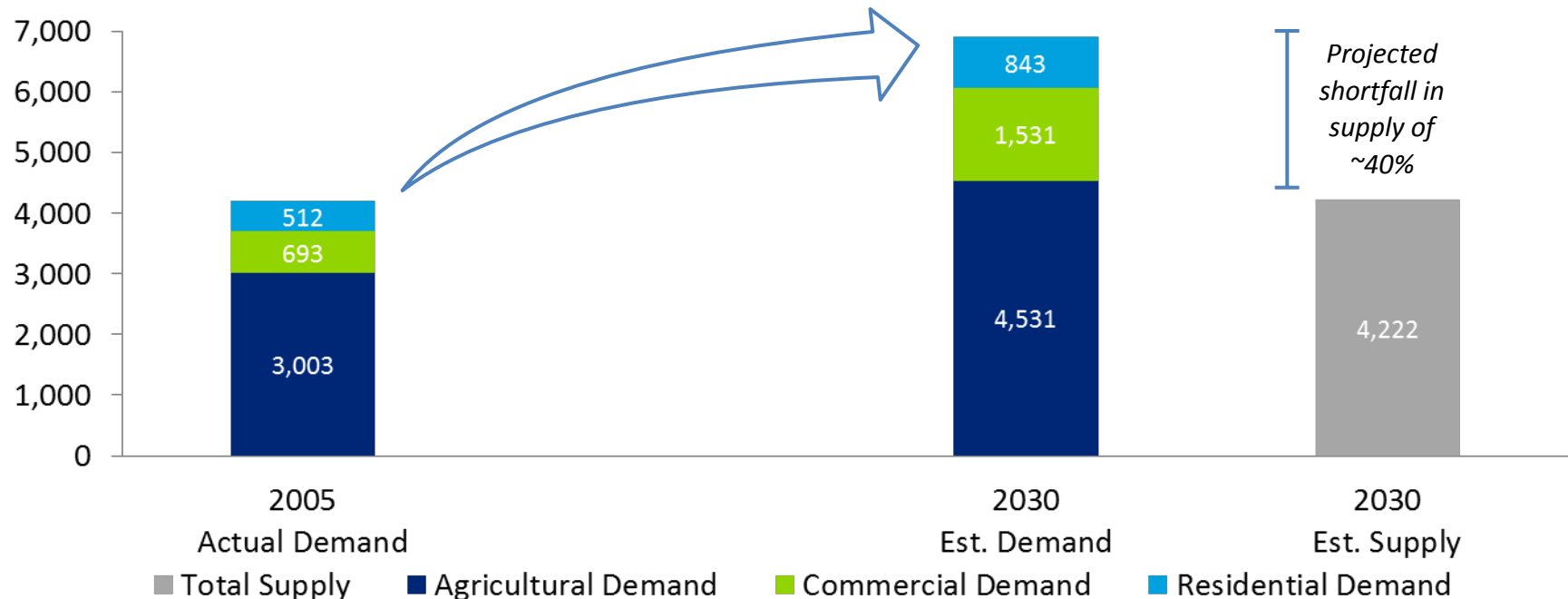
### Energy – Water Demand

There is a projected 40% increase in energy demand by 2030 in the US energy sector. This increase equals an increase in freshwater needs of 165 %

**How to reconcile the ambitious growth strategies of multinationals in consumer products, energy and power with increased water scarcity?**

Demand is projected to exceed supply by almost 40%<sup>1</sup>

Global Supply and Demand of Freshwater: 2005-2030

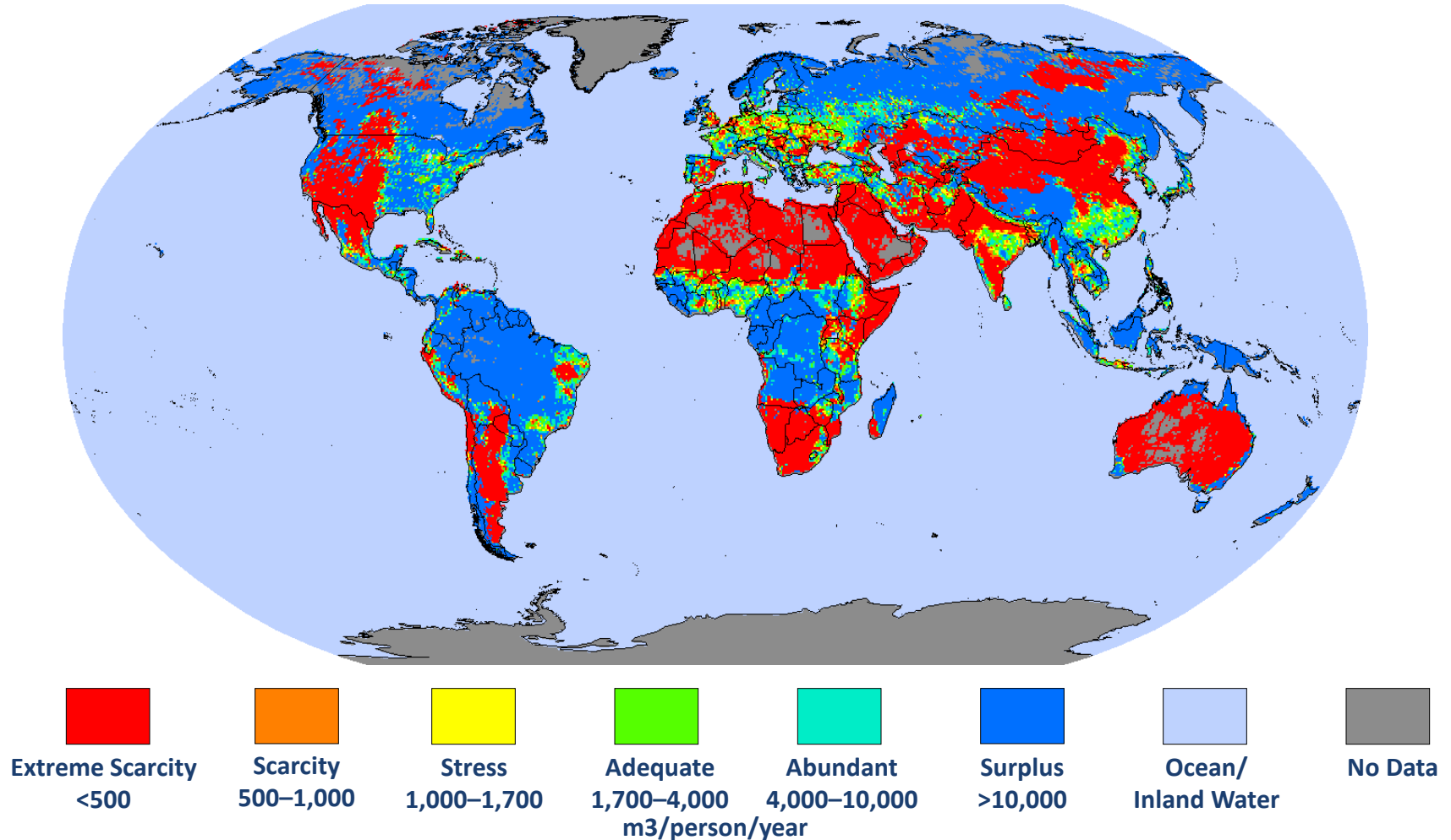


**47% of the world's population will face water shortages of some kind by 2030.<sup>2</sup>**

1 – “[Charting Our Water Future: Economic Frameworks to Inform Decision-Making](#)”, World Economic Forum, 2009.

2 – “[Environmental Outlook to 2030](#)”, OECD, 2008.

## Visualize supply chains and emerging markets: 1975 2000 2025





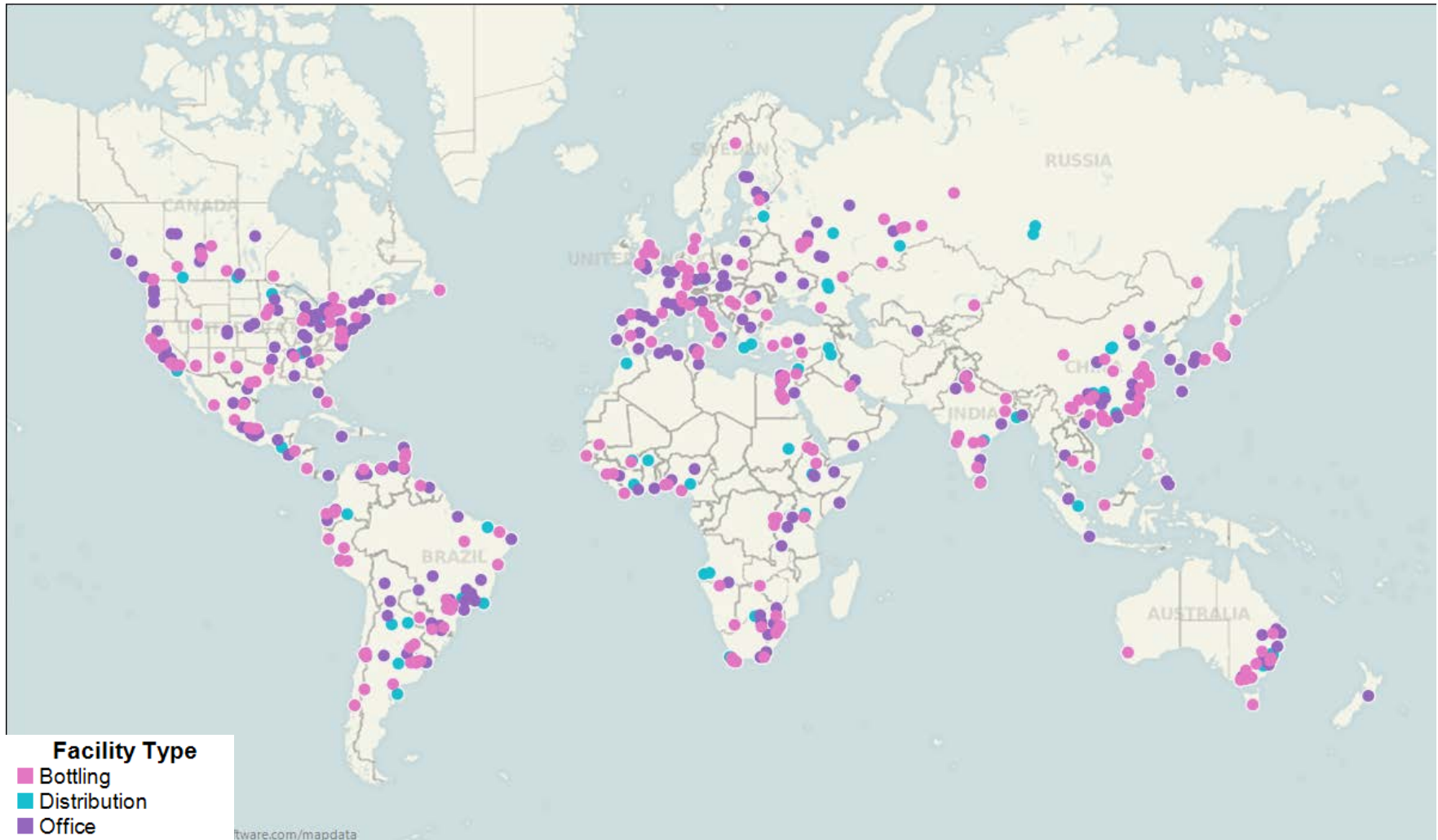
## Water risk to business value at risk



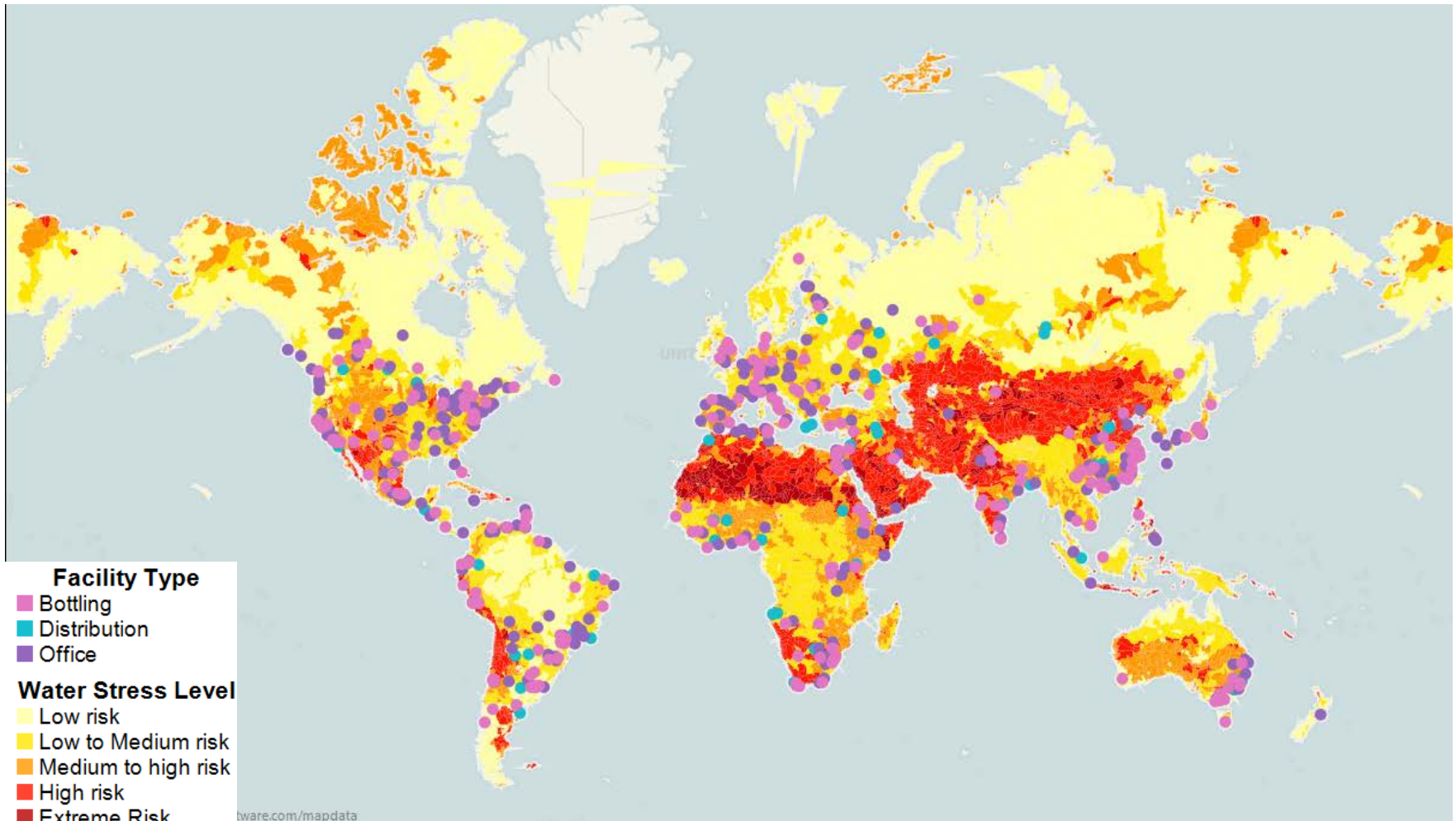
**BUSINESS VALUE AT RISK**



## Hypothetical beverage company

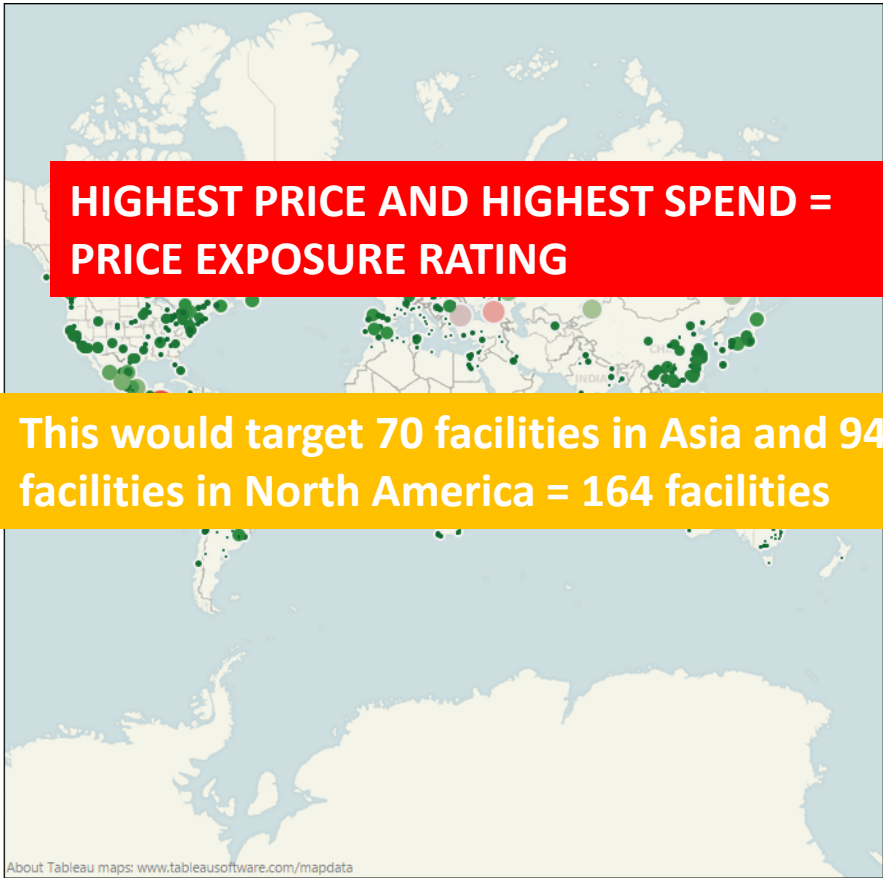
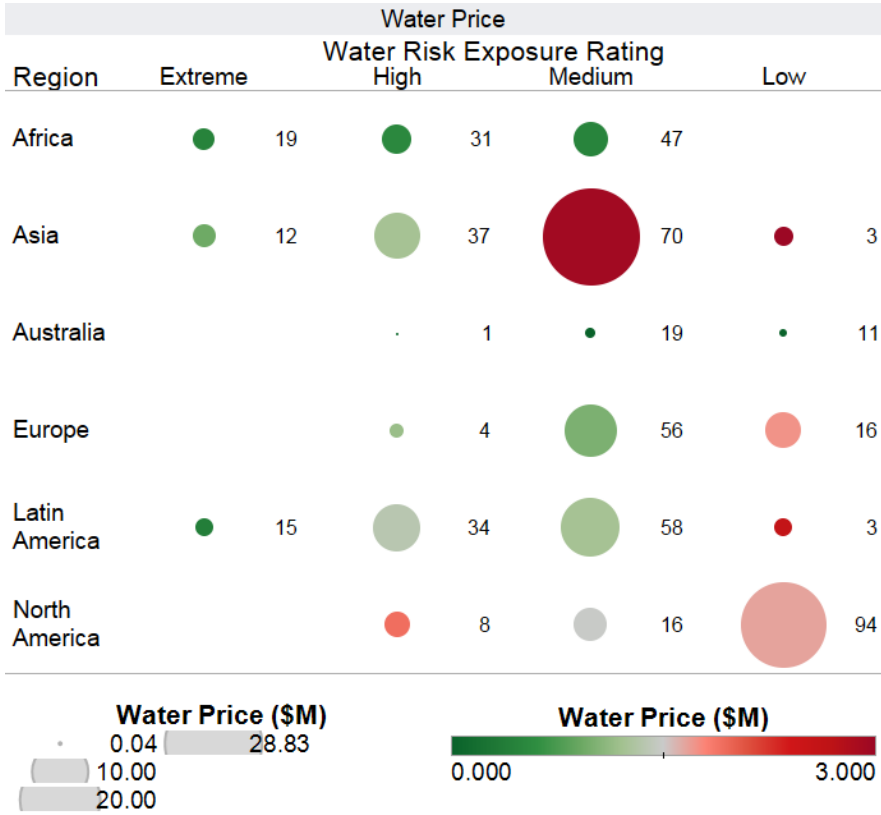


## Mapping physical water scarcity



Source: Gassert, F., M. Luck, M. Landis, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0." Working Paper. Washington, DC: World Resources Institute. Available online at <http://wri.org/publication/aqueduct-metadata-global>.

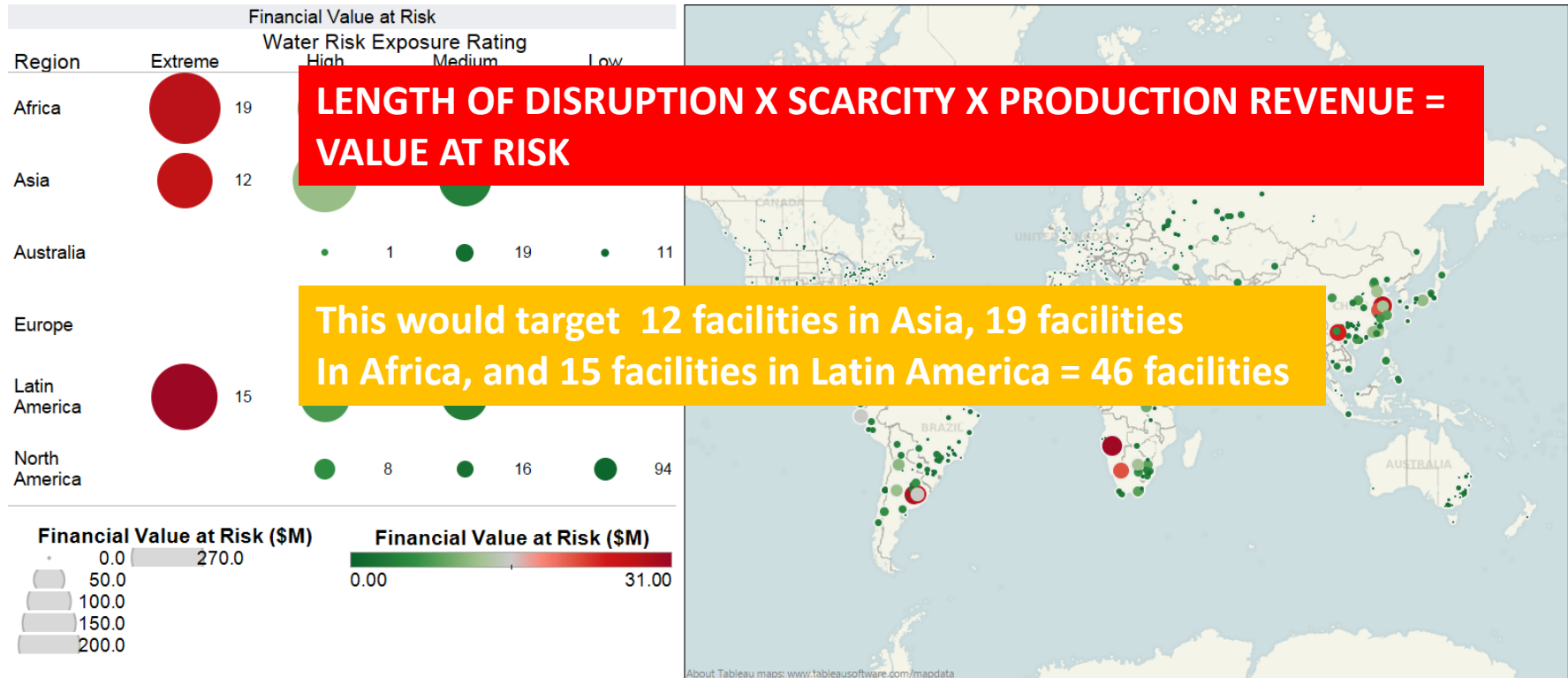
## Mapping water price exposure



Global Water Intelligence (GWI) and the Organisation for Economic Cooperation and Development (OECD).

Source: Water price data is based on country and regional data collected by Global Water Intelligence (GWI) and the Organization for Economic Cooperation and Development (OECD) and water usage estimates

## Mapping financial value at risk (physical scarcity)

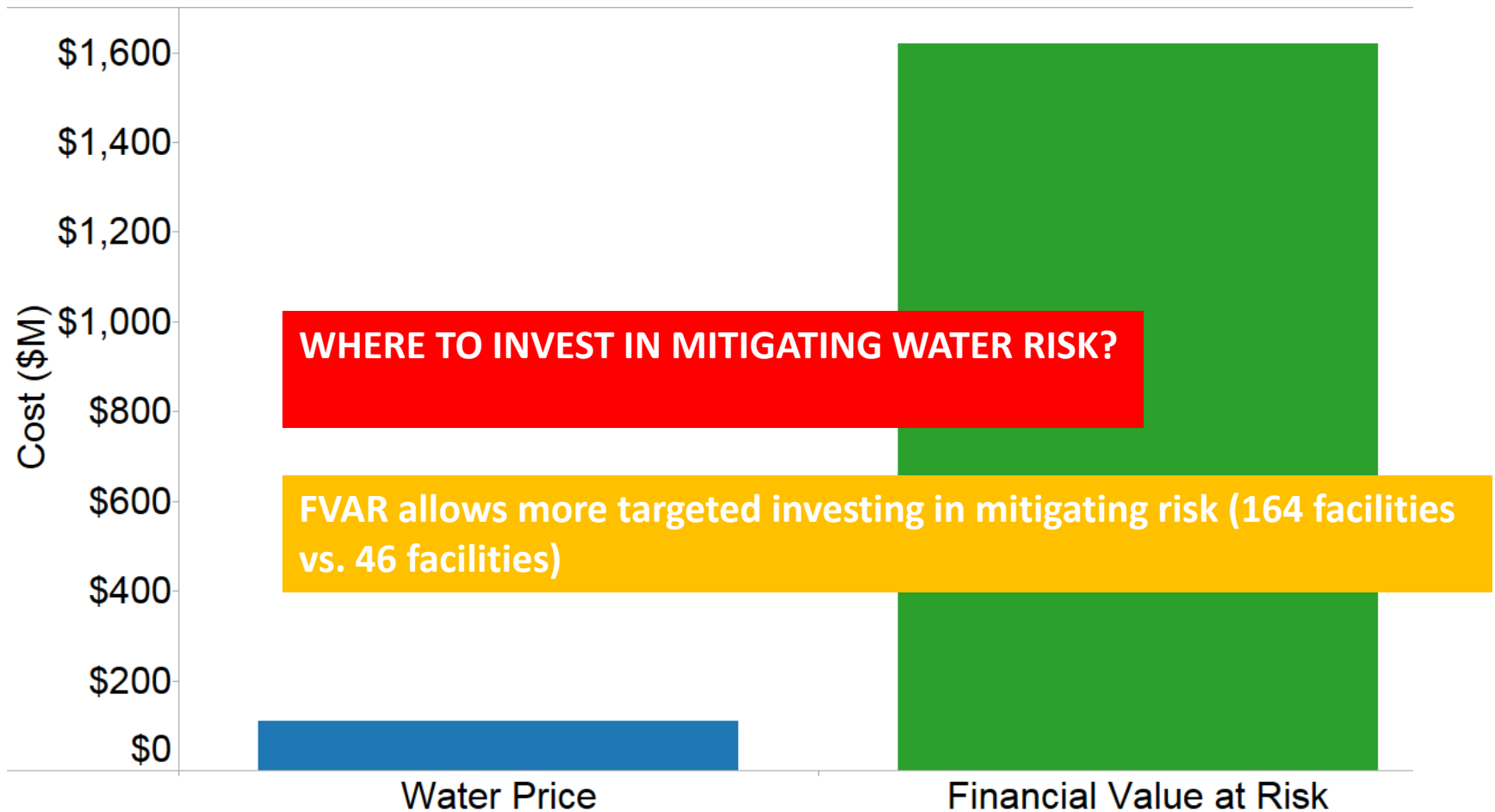


Global Water Intelligence (GWI) and the Organisation for Economic Cooperation and Development (OECD).  
 "The true cost of water". Libby Bernick. <http://www.greenbiz.com/blog/2013/04/29/true-cost-water>

Source: Financial value at risk calculations are based on assumptions around physical supply disruptions (quantity or quality) and are based on facility specific estimates of the likelihood of an event occurring and the severity if an event were to occur  
 Gassert, F., M. Luck, M. Landis, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0." Working Paper. Washington, DC: World Resources Institute. Available online at <http://wri.org/publication/aqueduct-metadata-global>.



## Value at risk exceeds water price



Global Water Intelligence (GWI) and the Organisation for Economic Cooperation and Development (OECD).

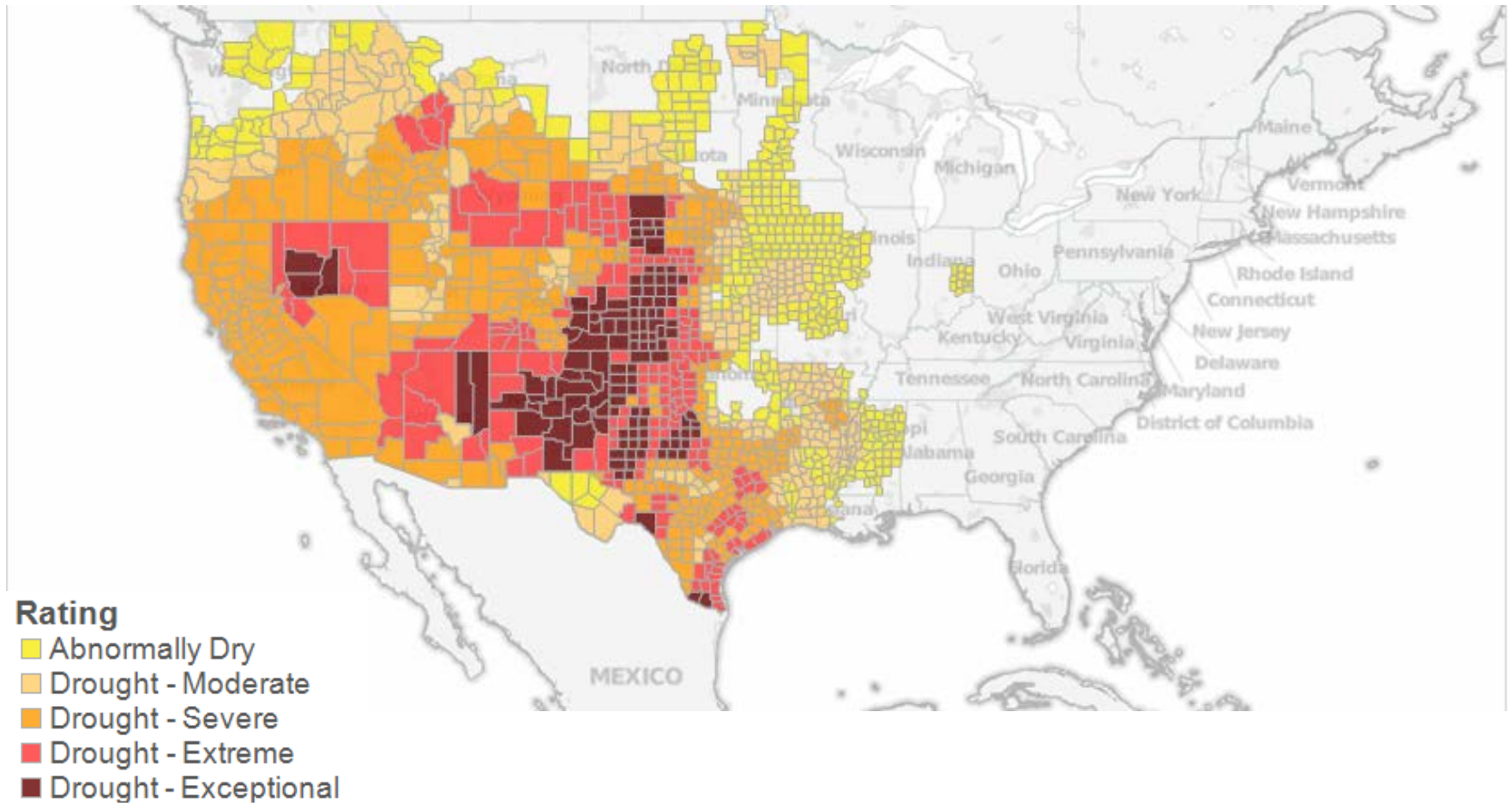
Source: Global Water Intelligence (GWI) and the Organization for Economic Cooperation and Development (OECD)

Gassert, F., M. Luck, M. Landis, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0." Working Paper. Washington, DC: World Resources Institute. Available online at <http://wri.org/publication/aqueduct-metadata-global>.

# **WATER AND FOOD RISKS**

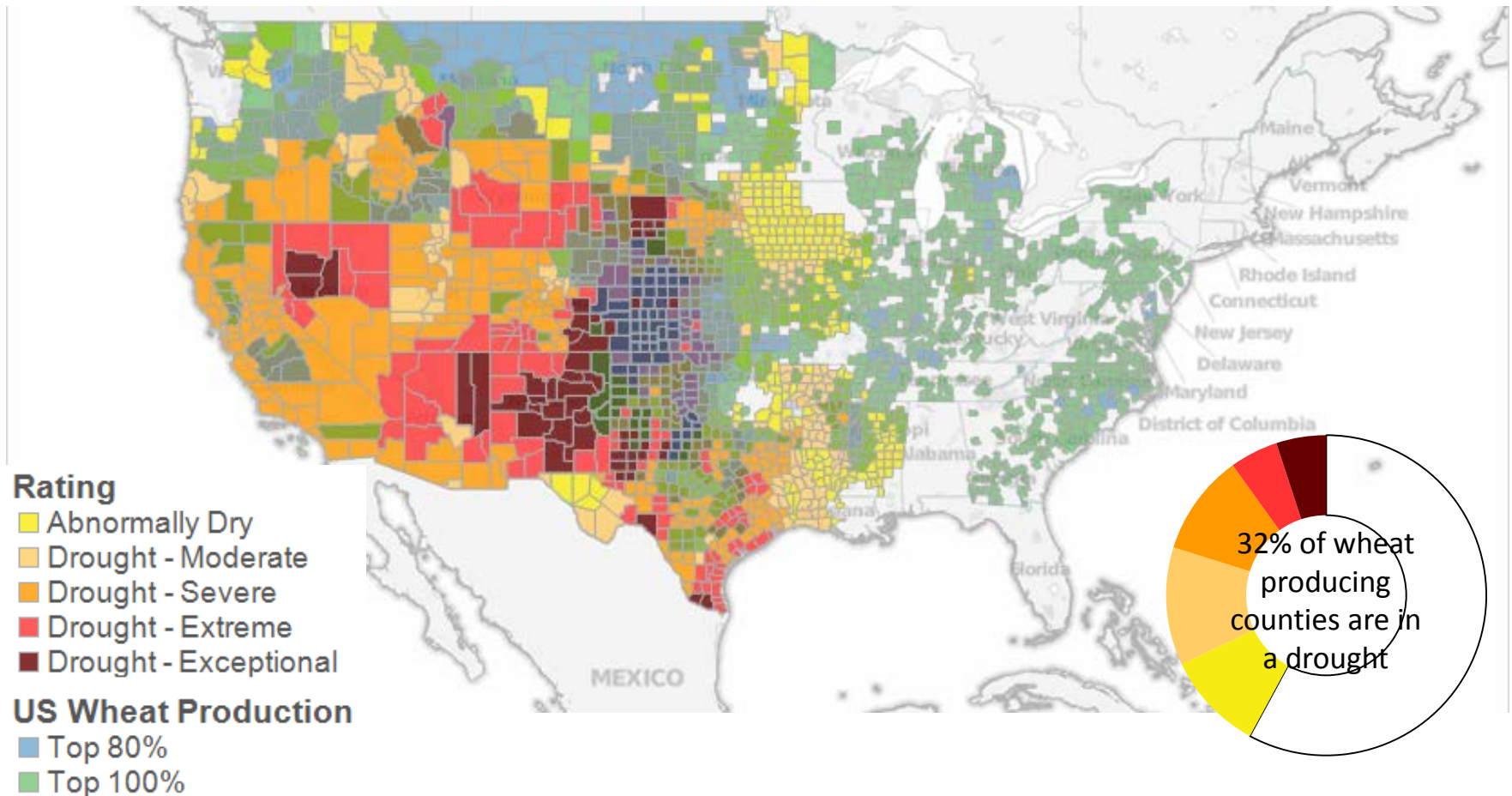


## Current US drought conditions



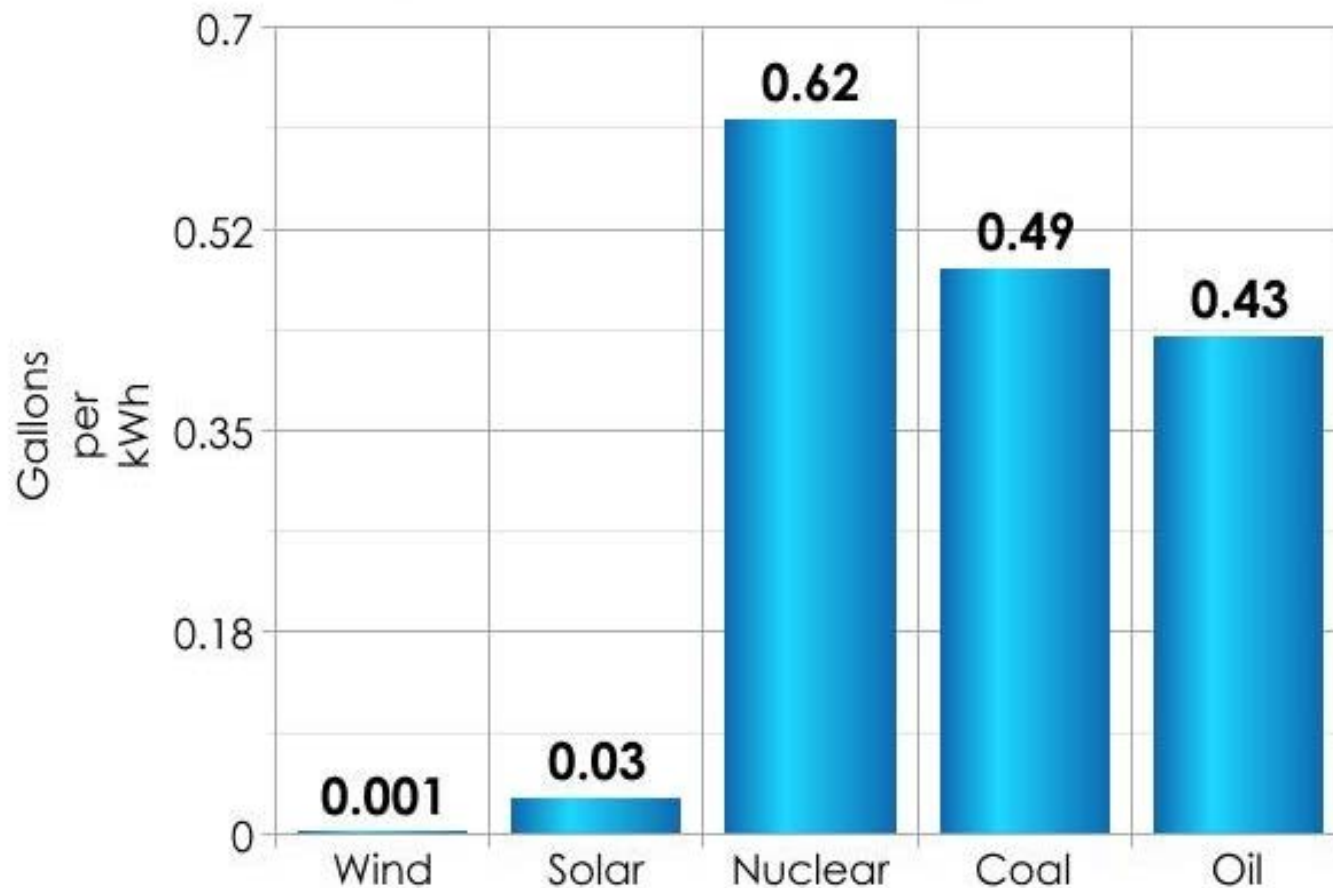


## US wheat production and physical scarcity



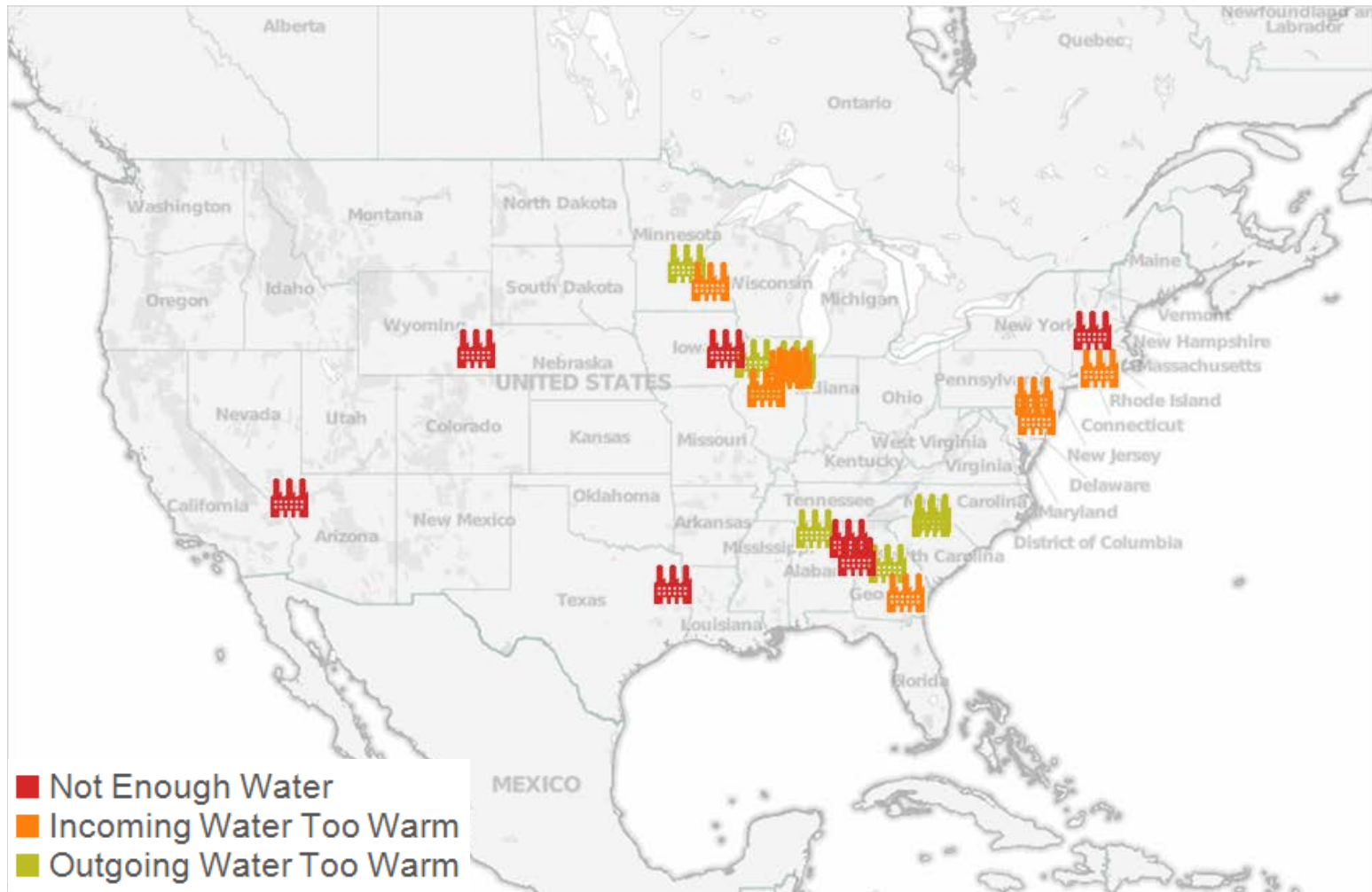
# **WATER AND ENERGY RISKS**

Not all energy production is created equal



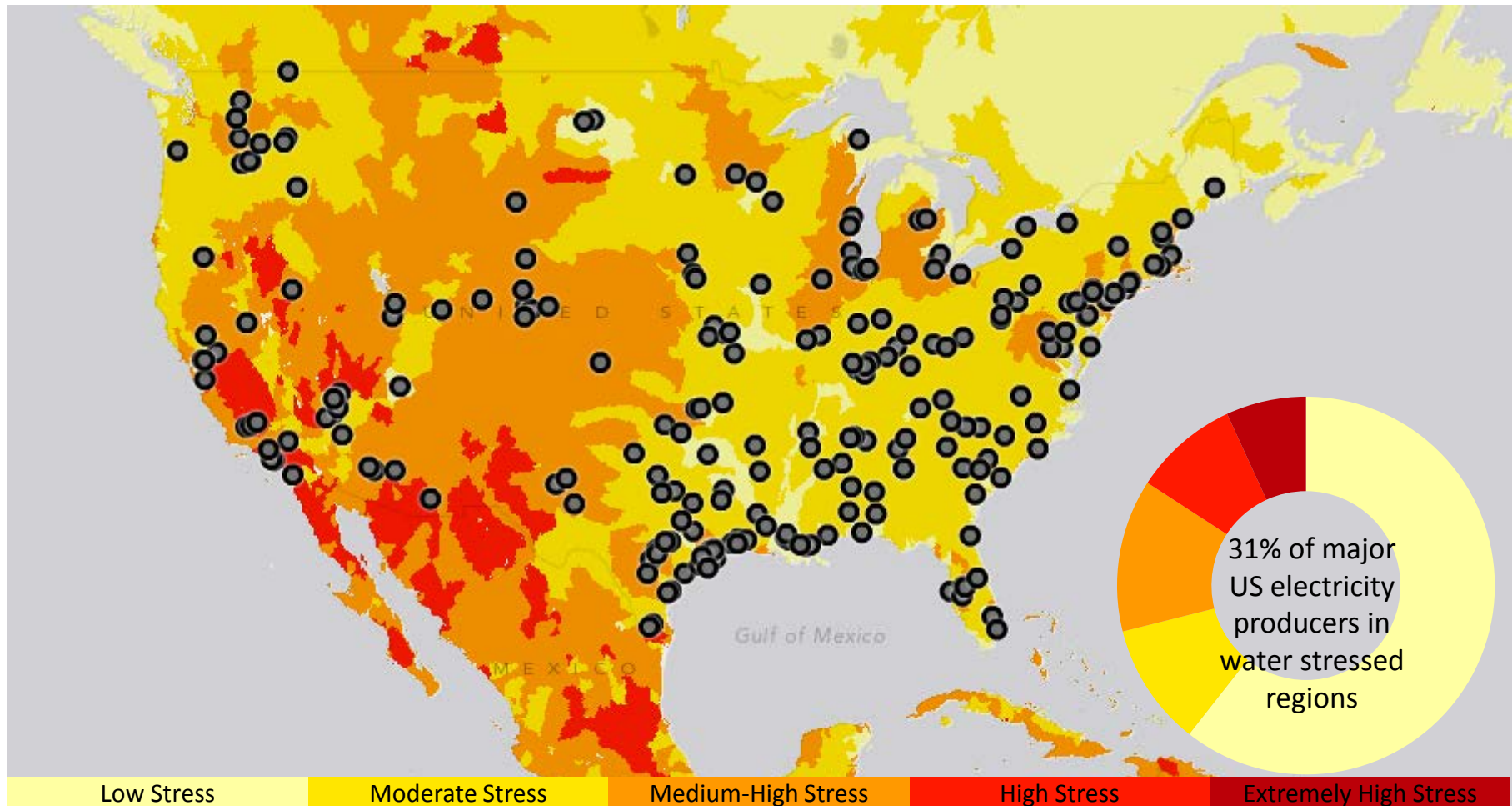
Source: Paul Gipe, "Wind Energy Comes of Age"

## Recent energy generation disruptions – physical risks





## Water stress and energy generation



Source: Gassert, F., M. Luck, M. Landis, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0." Working Paper. Washington, DC: World Resources Institute. Available online at <http://wri.org/publication/aqueduct-metadata-global>.

Energy plant location data from eGrid2012 v1.0, USEPA, <http://epa.gov/cleanenergy/energy-resources/egrid/index.html>

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# Global **Sustainability** Summit

UNCOVER THE POSSIBILITIES



Kim Marotta  
Director of Sustainability  
MillerCoors





# Water is a Material Issue

**Private sector has an enormous stake in helping solve the water crisis.**







# Shared Responsibility

**In order to create real change,  
we must collaborate.**





# Ensuring a Secure Future Through Water Stewardship

- **Water Efficiency**
- **Watershed Assessments**
- **Water Footprinting**
- **Community Investments**



MillerCoors







**Make More Beer.  
Use Less Water.**







# Watershed Risk Assessment

## Brewery Communities





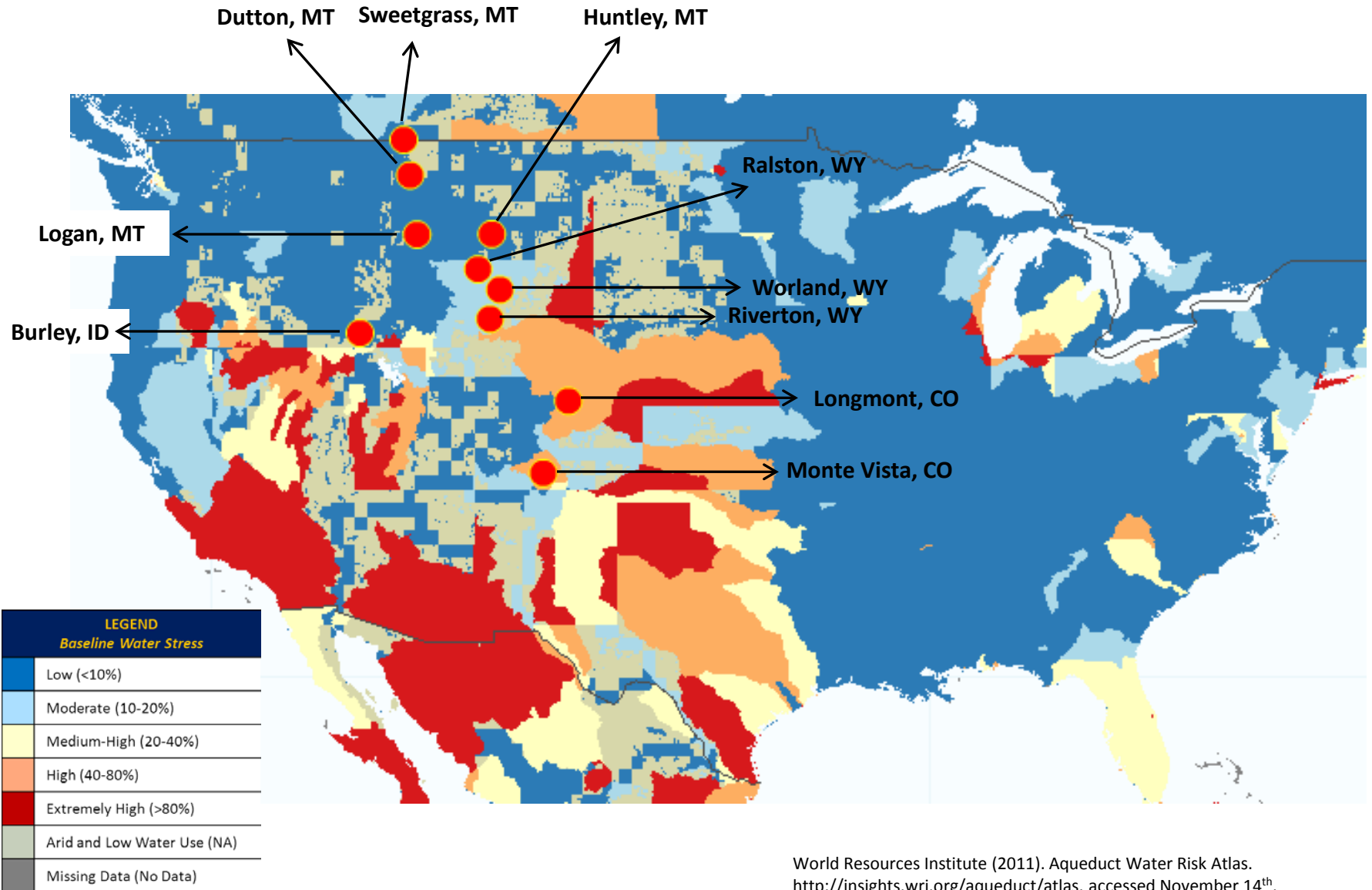


# Watershed Risk Assessment

## Agriculture- Water as a Crop



# Watershed Risk Assessment



World Resources Institute (2011). Aqueduct Water Risk Atlas.  
<http://insights.wri.org/aqueduct/atlas>, accessed November 14<sup>th</sup>,  
2011. Global water risk maps provided by The Coca-Cola Company.



# Water Footprint

**More than 90% in the  
agricultural supply chain.**

# Silver Creek, ID and Barley Farmers







# Ecological Modeling and Watershed Enhancement Plan





# Partnership with The Nature Conservancy and our Barley Farmers

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SPONSIBILITY™





# Showcase Barley Farm





# Expanding to 50% of Barley Growers





# Community Investment





# Global Sustainability Summit

