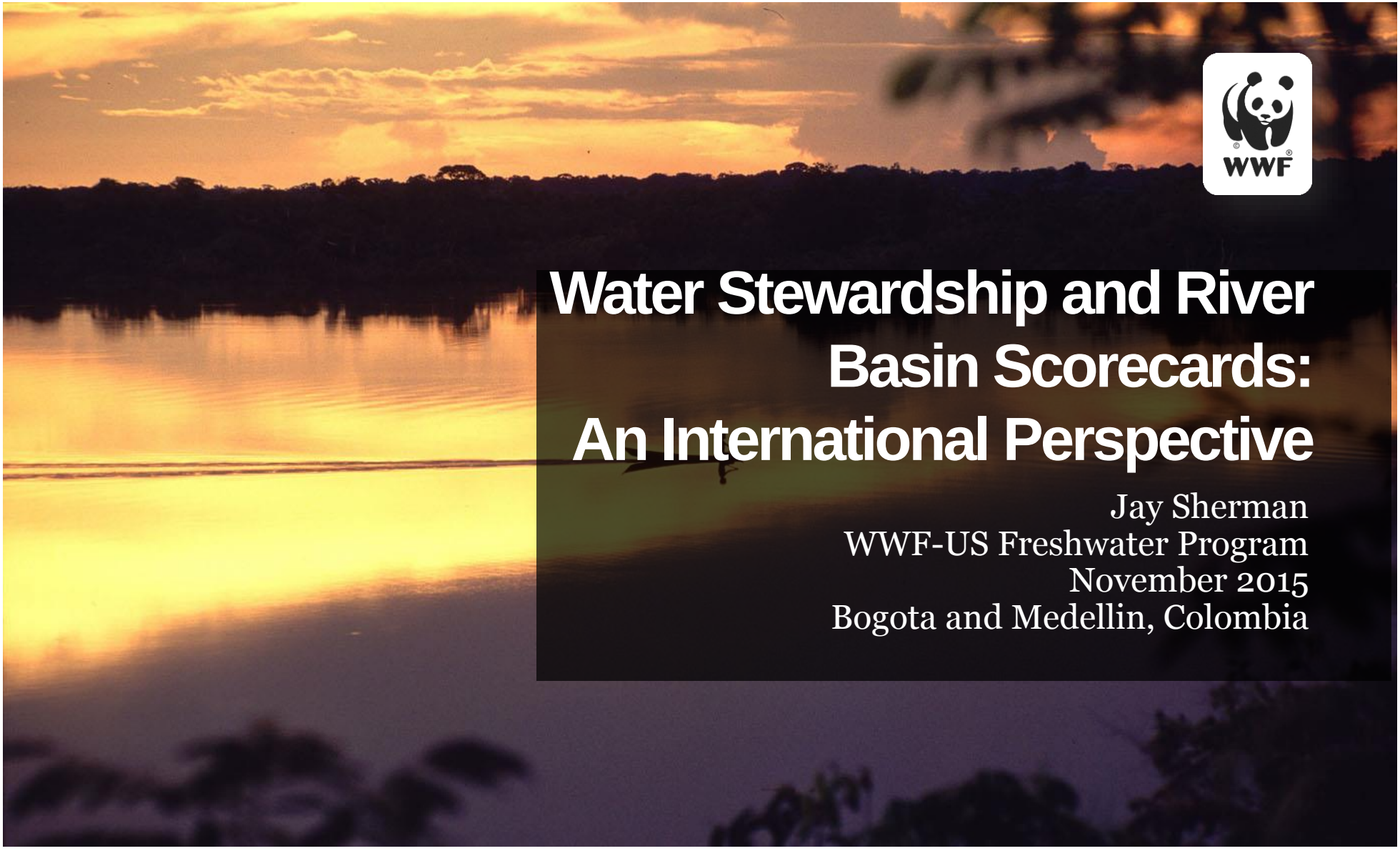


Water Stewardship and River Basin Scorecards: An International Perspective

Jay Sherman
WWF-US Freshwater Program
November 2015
Bogota and Medellin, Colombia

© Michel Roggo / WWF-Canon

Our Mission

Conserve nature and reduce the most pressing threats to the diversity of life on Earth.

WWF

> 100

WWF works in more than 100 countries on 6 continents

> 5M

We have more than 5 million supporters

> 5,000

WWF has more than 5,000 staff worldwide

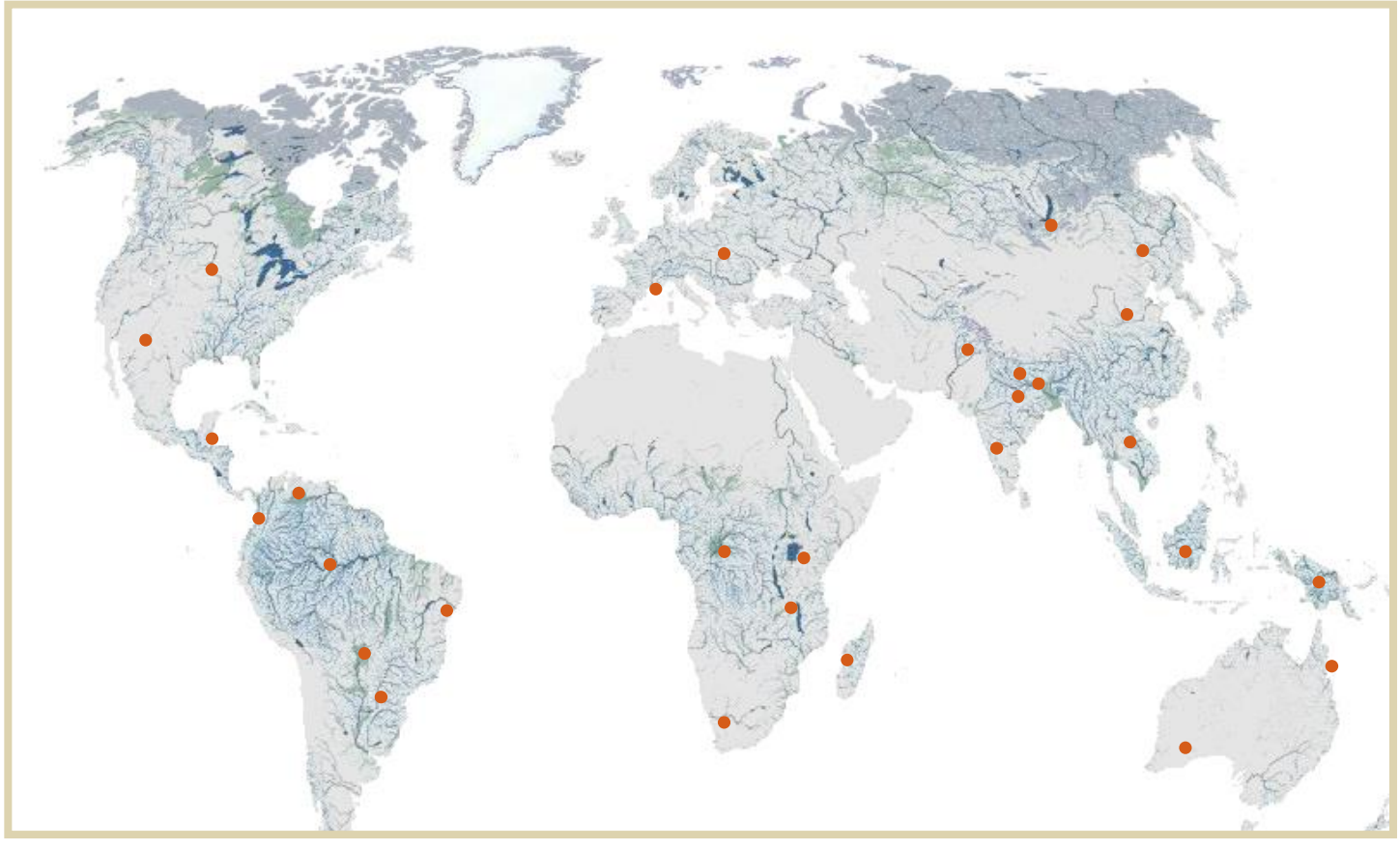
1961

WWF, a leading organization since 1961

Our Mission

Secure water for people & nature:

By 2020, **the world's major river basins have measurably improved** the sustainability of their freshwater systems in order to maintain nature's diversity, strengthen climate resiliency, and support human well-being.



Water Issues:

Trends and Projections

We are on a water scarcity trajectory . . .

Cycles of drought and changing usage patterns are not new

. . . BUT . . .

Surge in Demand

Increasing population and resource needs

- 60% more food by 2050
- 80% more energy by 2050
- 55% more water by 2050

Supply Challenges

Long term "droughts" Public Policy

- weather predictability
- water rights

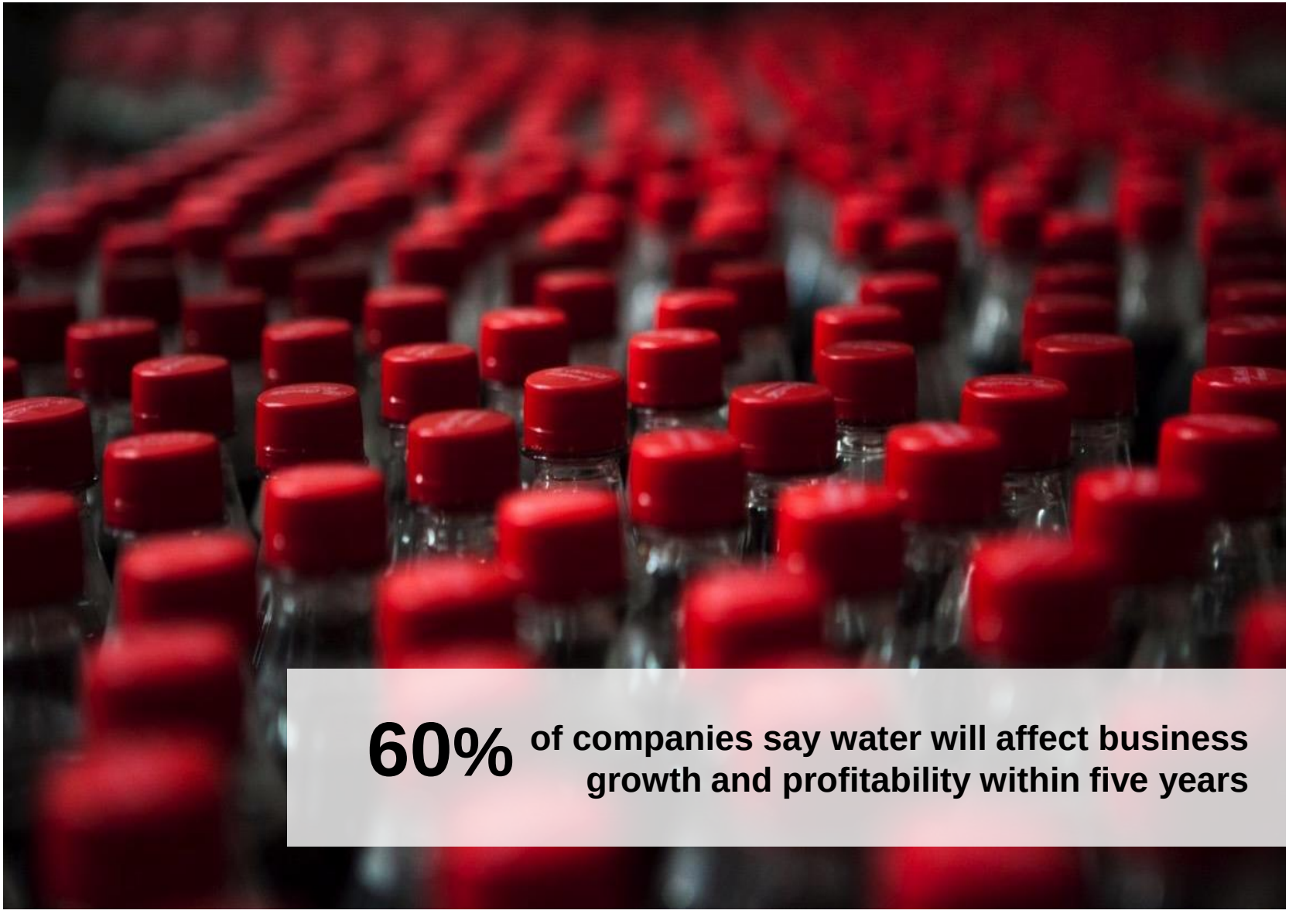
Depleted Assets

Groundwater
Surface water

- greater extraction
- lower recharge

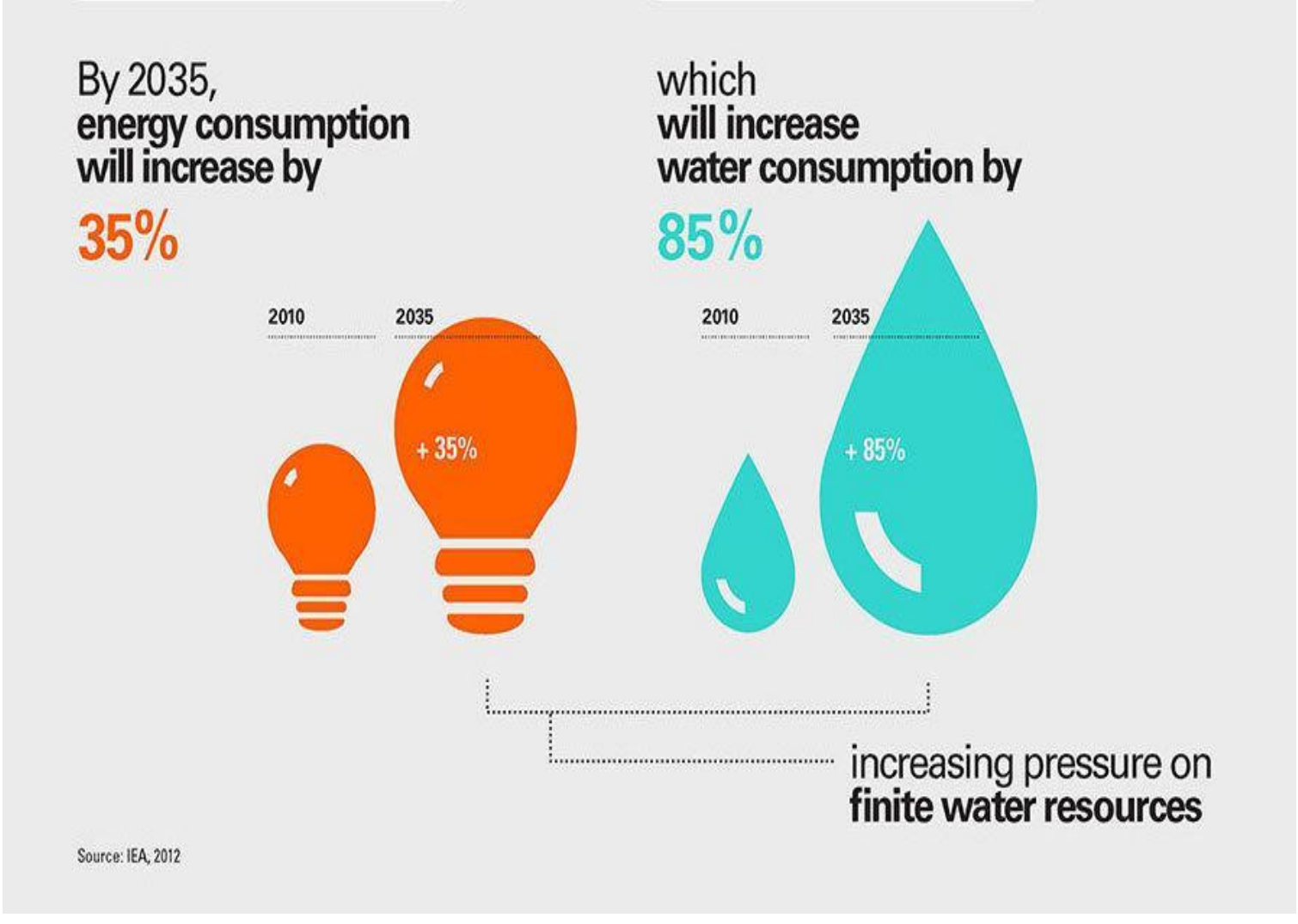
Executive Summary

More than **2.7** billion people live in river basins that experience severe water scarcity at least one month a year


60% of companies say water will affect business growth and profitability within five years

Freshwater species are most at risk

Energy

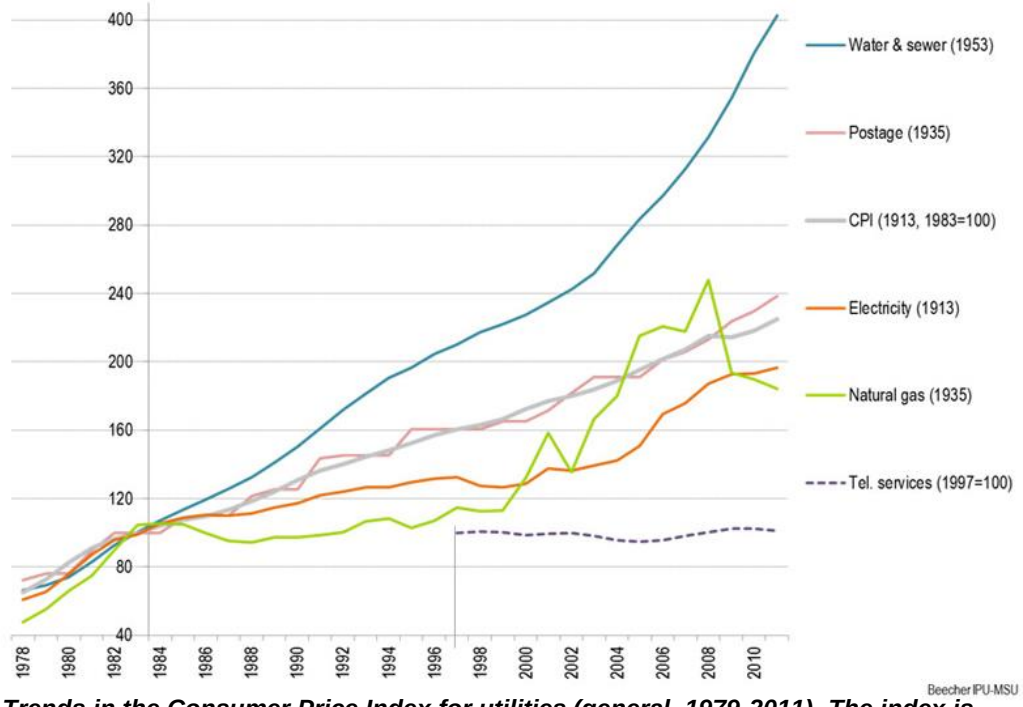

By 2035,
energy consumption
will increase by
35%
2010
2035
+ 35%
which
will increase
water consumption by
85%
2010
2035
+ 85%
increasing pressure on
finite water resources
Source: IEA, 2012

Integrating Our Focus

Business Implications

Water prices are beginning to increase

Trends in Consumer Prices (CPI) for Utilities[1]



Trends in the Consumer Price Index for utilities (general, 1979-2011). The index is set to 100 for 1982-1984 except for telephone services, where the index is set to 100 for 1997.

- **US water prices are increasing at approximately 6-7% annually and have increased 25% since 2010[2]**
- The amount that Americans pay for water is rising faster than US inflation and faster than the amount paid to any other utility service[3]
- Energy and water conservation are becoming linked (“conservation synergy”)

Sources: [1]"Trends in Consumer Prices (CPI) for Utilities Through 2011," Michigan State University, 2012; [2]"The Price of Water 2013," Circle of Blue, 2013; [3]"The Price of Water 2012," Circle of Blue, 2012.

Water risk – physical, regulatory, reputational

	Supply Chain	Operations	Product Use
Physical	Water scarcity drives up input prices (~2%-20%)	Increased capital expenditure on water treatment, extraction or alternative technologies raises costs	Non-availability or scarcity of water required for using product or service limits growth
Regulatory	Suspension or withdrawal of supplier's water license or discharge permits disrupts supply chain	Reallocation to more urgent needs during drought disrupts operations	Restrictions on use of particular products or services due to water intensity raises costs or checks growth
Reputational	Responsibility "by association" for suppliers' water pollution damages brand or reputation, hinders growth	Competition with household demands, or pollution incidents, damages brand or reputation, hinders growth	Public outcry regarding water intensity of product damages brand, reputation, hinders growth

Financial Impact

- **Lost revenue**
- **Higher costs** from:
  - Supply chain
  - Changes in production
  - Capital expenditure
  - Regulatory compliance
  - Increasing price of consuming or discharging water
- **Delayed or suppressed growth**
- Potential **higher cost of capital**

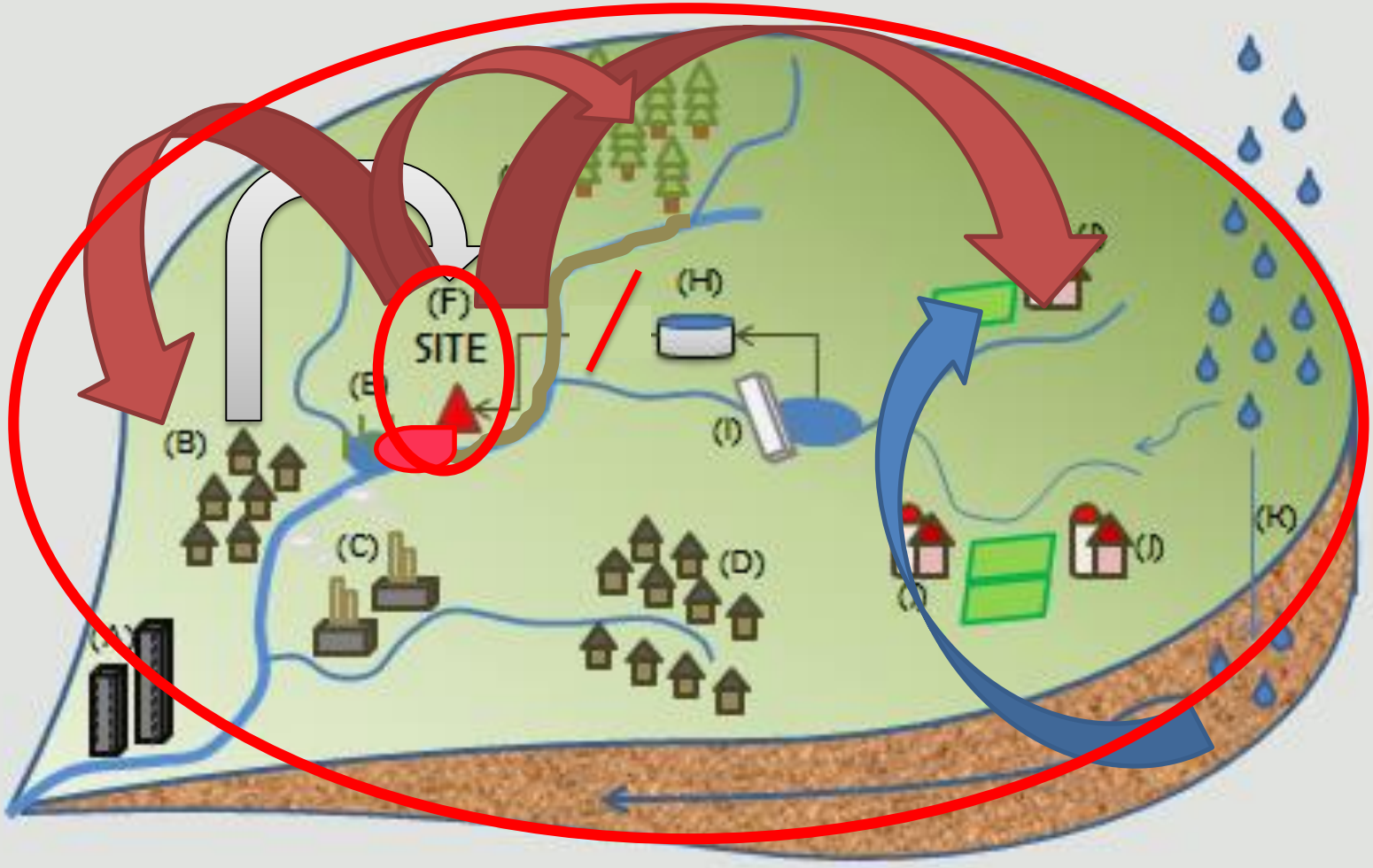
1 – "Watching Water," JP Morgan Chase Global Equity Research, April 2008.

Becoming a Water Steward

WATER STEWARDSHIP DEFINITION

"The use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves **site** *and* **catchment-based actions**."

STEWARDSHIP



UNDERLYING CATCHMENT CHALLENGES & THEIR BUSINESS IMPACTS

SITE

WATERSHED

Scarcity

Quality

Ecosystem health

Social Equity

DIRECT OPERATIONS

SUPPLY CHAIN

Physical Risk

Reputational Risk

Regulatory Risk

Financial Risk

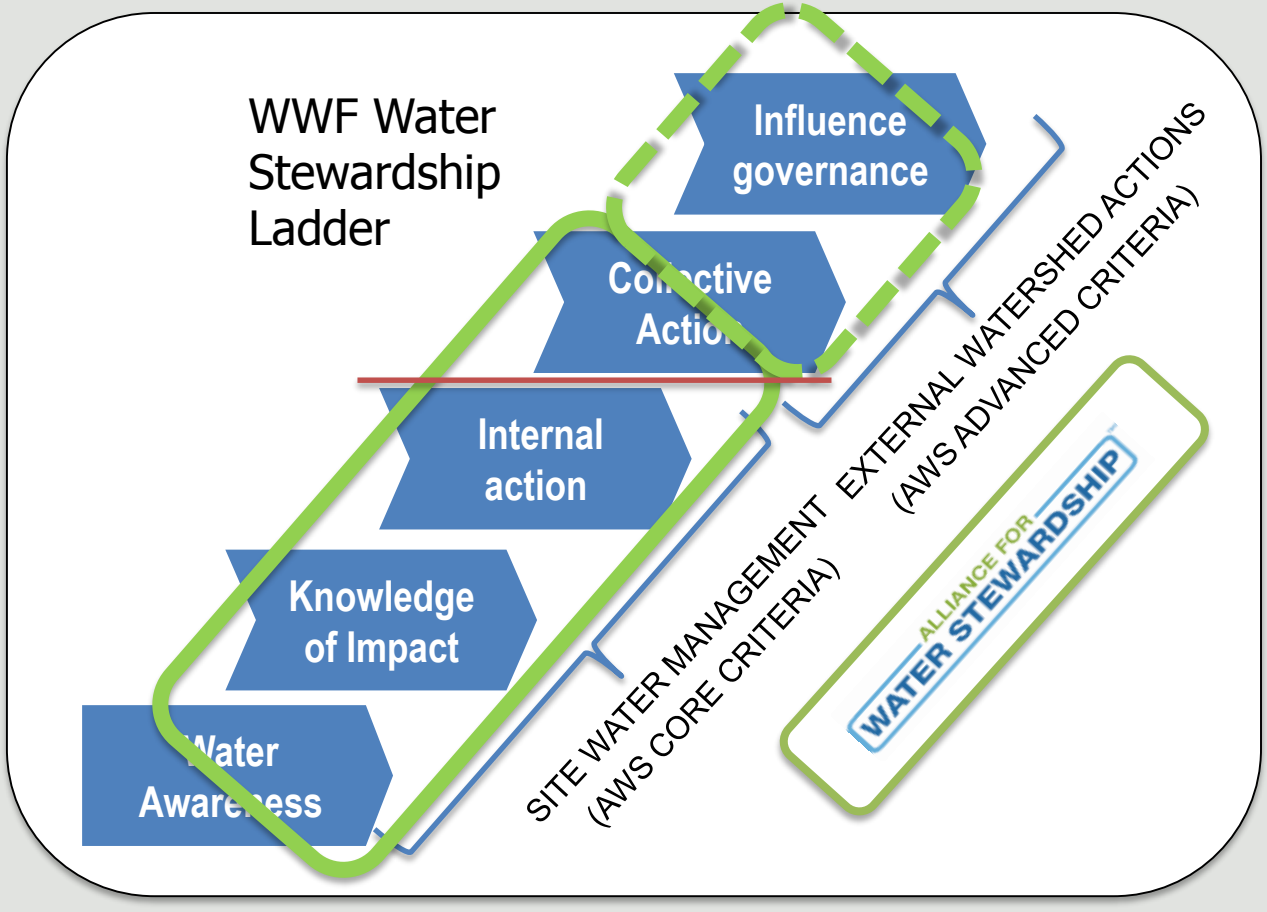
Cost/time savings

Improved productivity

Competitive advantage

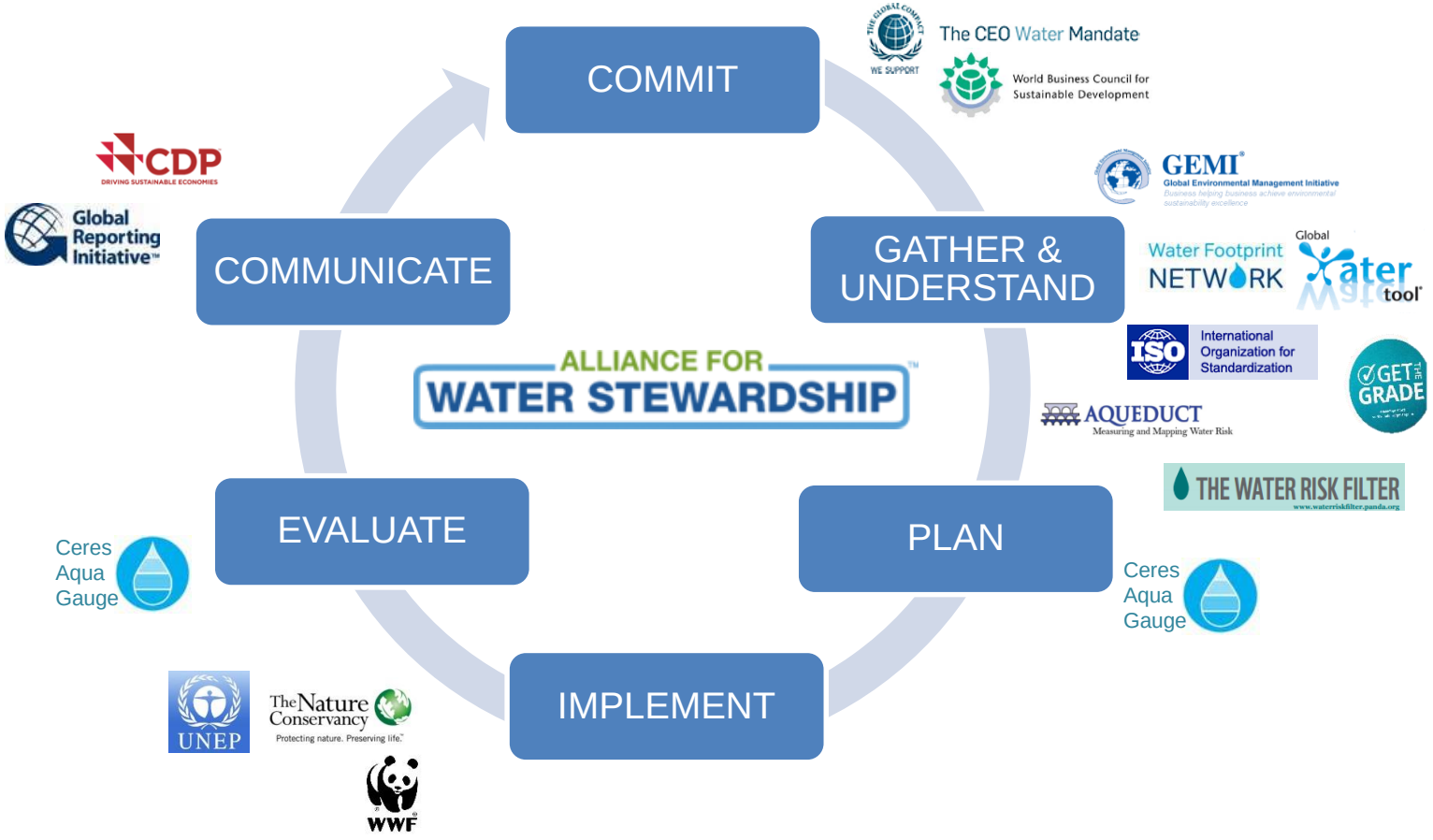
Decreased liabilities

WWF'S WATER STEWARDSHIP LADDER



Tools & Resources

Landscape of Water Stewardship: Information, Tools & Programs



What is the CEO Water Mandate?

The CEO Water Mandate seeks to mobilize a critical mass of business leaders to advance corporate water stewardship – in partnership with the United Nations, civil society organizations, governments, and other stakeholders.

(click here for more information)

WATER AND THE BOTTOM LINE

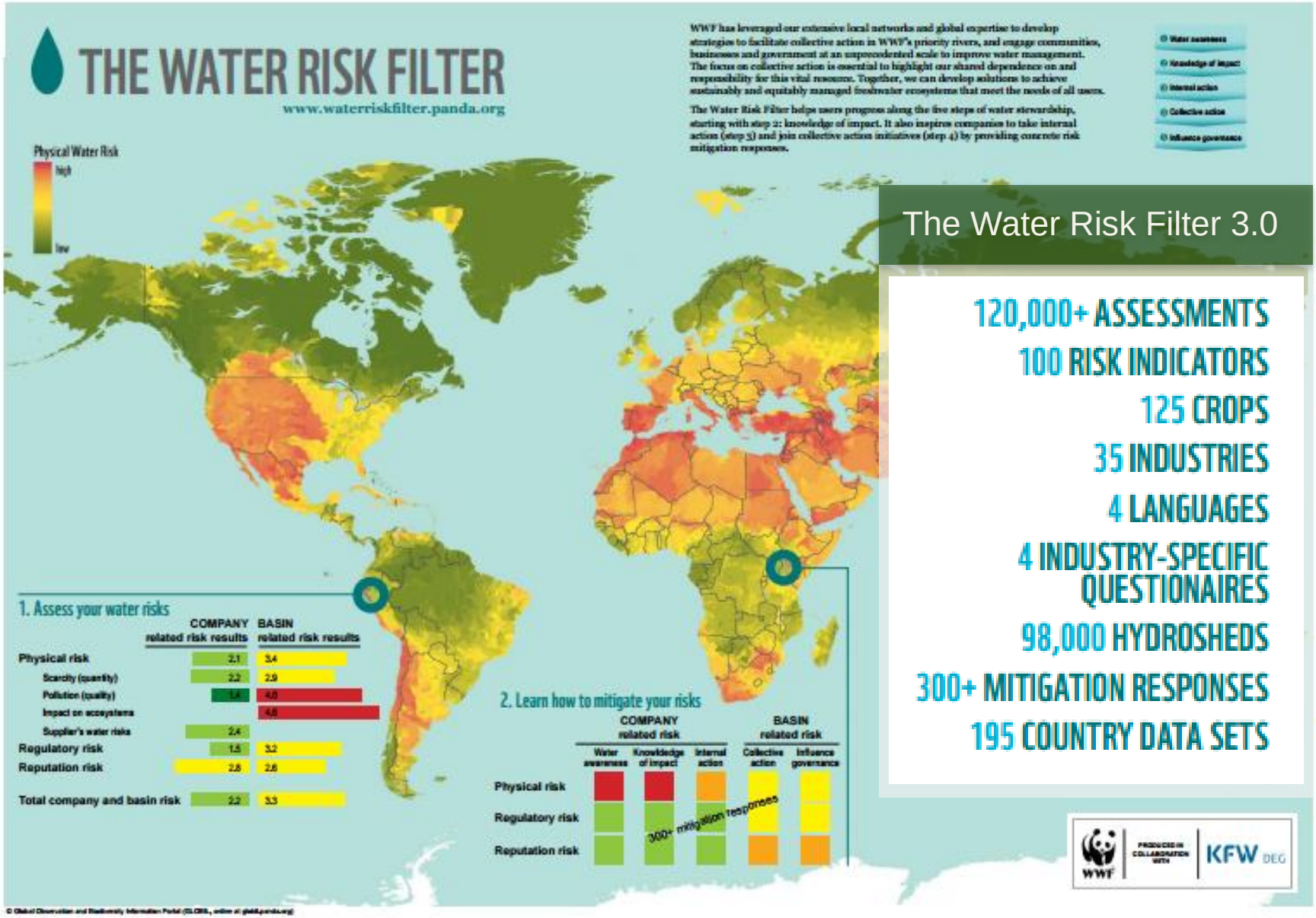
Learn how local water supplies affect your

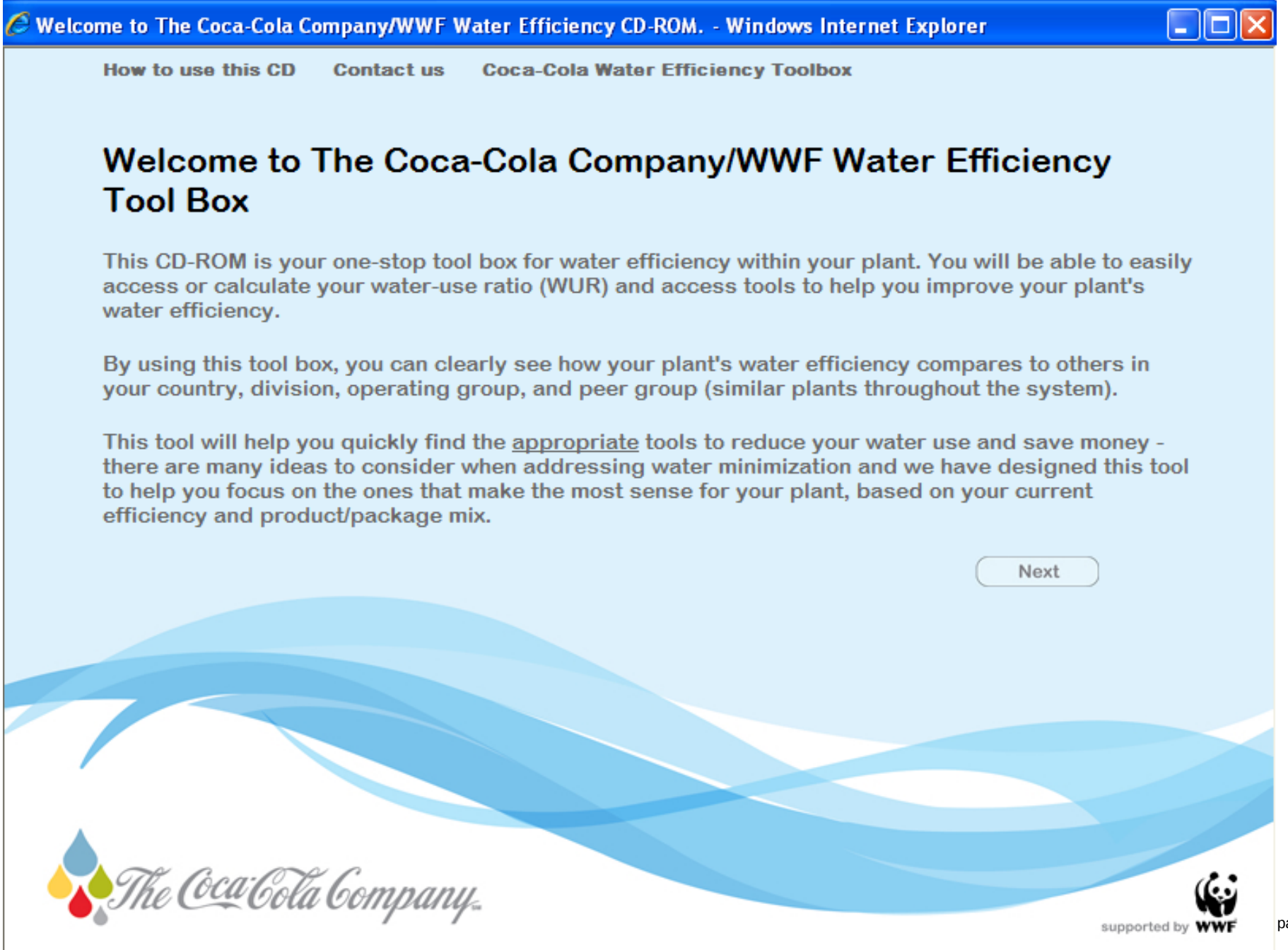
TAKE ACTION

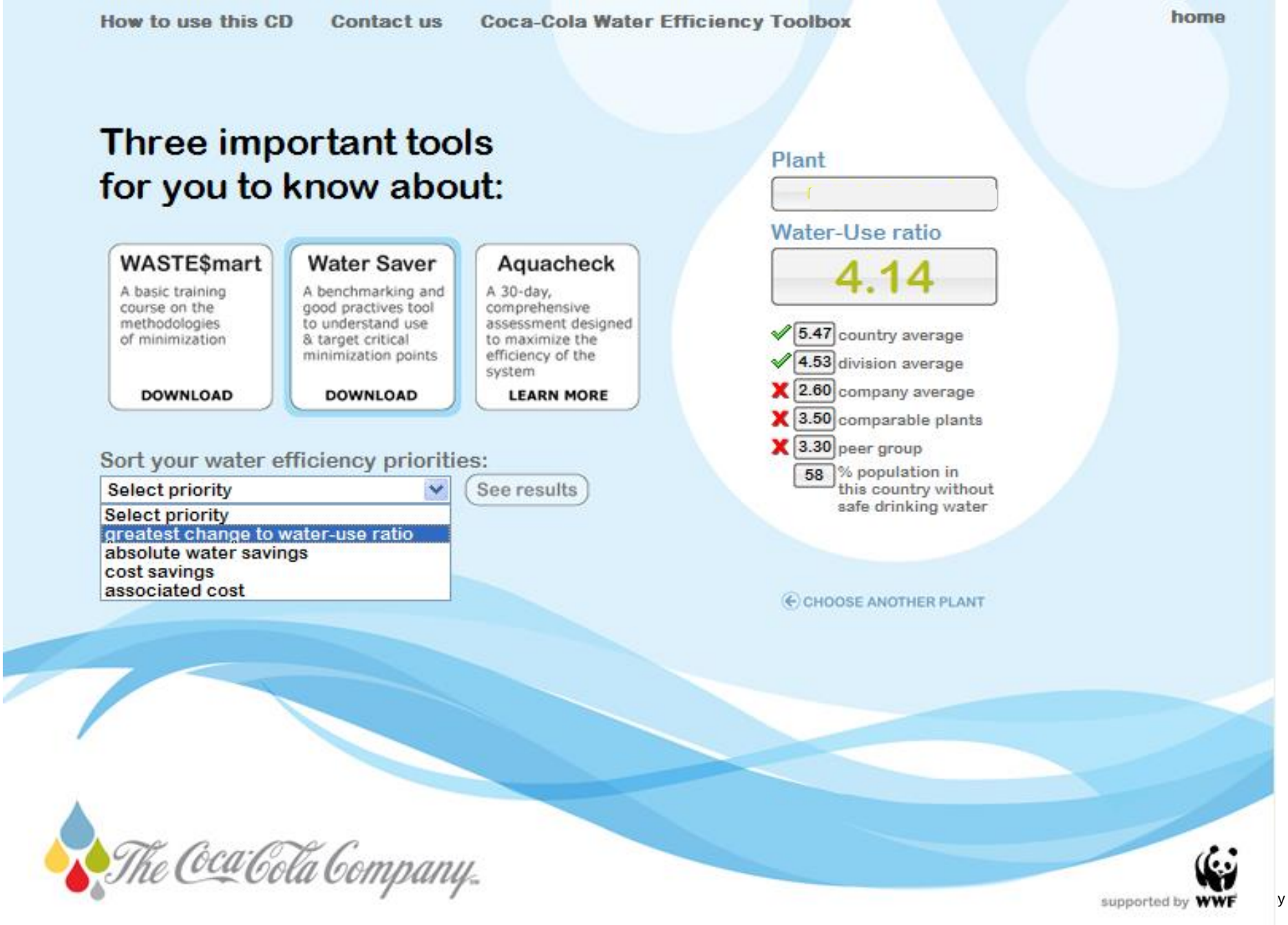
Browse through this clearinghouse for more

ABOUT THE CEO WATER MANDATE

The Mandate's Six Core Elements


THE WATER RISK FILTER
www.waterriskfilter.panda.org
WWF has leveraged our extensive local networks and global expertise to develop strategies to facilitate collective action in WWF's priority rivers, and engage communities, businesses and government at an unprecedented scale to improve water management. The focus on collective action is essential to highlight our shared dependence on and responsibility for this vital resource. Together, we can develop solutions to achieve sustainably and equitably managed freshwater ecosystems that meet the needs of all users.
The Water Risk Filter helps users progress along the five steps of water stewardship, starting with step 2: knowledge of impact. It also inspires companies to take internal action (step 3) and join collective action initiatives (step 4) by providing concrete risk mitigation responses.
Water awareness
Knowledge of impact
Internal action
Collective action
Influence governance
Physical Water Risk
high
low
1. Assess your water risks
COMPANY related risk results
BASIN related risk results
Physical risk
Scarcity (quantity)
Pollution (quality)
Impact on ecosystems
Supplier's water risks
Regulatory risk
Reputation risk
Total company and basin risk
2.1
2.2
1.4
2.4
1.5
2.8
2.2
3.4
2.9
4.8
4.8
3.2
2.8
3.3
2. Learn how to mitigate your risks
COMPANY related risk
BASIN related risk
Water awareness
Knowledge of impact
Internal action
Collective action
Influence governance
Physical risk
Regulatory risk
Reputation risk
300+ mitigation responses
The Water Risk Filter 3.0
120,000+ ASSESSMENTS
100 RISK INDICATORS
125 CROPS
35 INDUSTRIES
4 LANGUAGES
4 INDUSTRY-SPECIFIC QUESTIONAIRES
98,000 HYDROSHEDS
300+ MITIGATION RESPONSES
195 COUNTRY DATA SETS
WWF
PRODUCED IN COLLABORATION WITH
KFW DEG


Welcome to The Coca-Cola Company/WWF Water Efficiency CD-ROM. - Windows Internet Explorer
How to use this CD
Contact us
Coca-Cola Water Efficiency Toolbox
Welcome to The Coca-Cola Company/WWF Water Efficiency Tool Box
This CD-ROM is your one-stop tool box for water efficiency within your plant. You will be able to easily access or calculate your water-use ratio (WUR) and access tools to help you improve your plant's water efficiency.
By using this tool box, you can clearly see how your plant's water efficiency compares to others in your country, division, operating group, and peer group (similar plants throughout the system).
This tool will help you quickly find the appropriate tools to reduce your water use and save money - there are many ideas to consider when addressing water minimization and we have designed this tool to help you focus on the ones that make the most sense for your plant, based on your current efficiency and product/package mix.
Next
The Coca-Cola Company
supported by WWF


How to use this CD
Contact us
Coca-Cola Water Efficiency Toolbox
home
Three important tools for you to know about:
WASTE$mart
A basic training course on the methodologies of minimization
DOWNLOAD
Water Saver
A benchmarking and good practives tool to understand use & target critical minimization points
DOWNLOAD
Aquacheck
A 30-day, comprehensive assessment designed to maximize the efficiency of the system
LEARN MORE
Sort your water efficiency priorities:
Select priority
Select priority
greatest change to water-use ratio
absolute water savings
cost savings
associated cost
See results
Plant
Water-Use ratio
4.14
5.47 country average
4.53 division average
2.60 company average
3.50 comparable plants
3.30 peer group
58 % population in this country without safe drinking water
CHOOSE ANOTHER PLANT
The Coca-Cola Company
supported by WWF

« Back to Global Water Stewardship

Logout

Home | Search Practices | Full List of Practices | Training Materials | Need Help Getting Started?

Implement your source water protection plan to meet your 2020 goals.

Practices and Implementation Tools

for Water Stewardship

Find Practices for Your Plant:

by Risk/Vulnerability

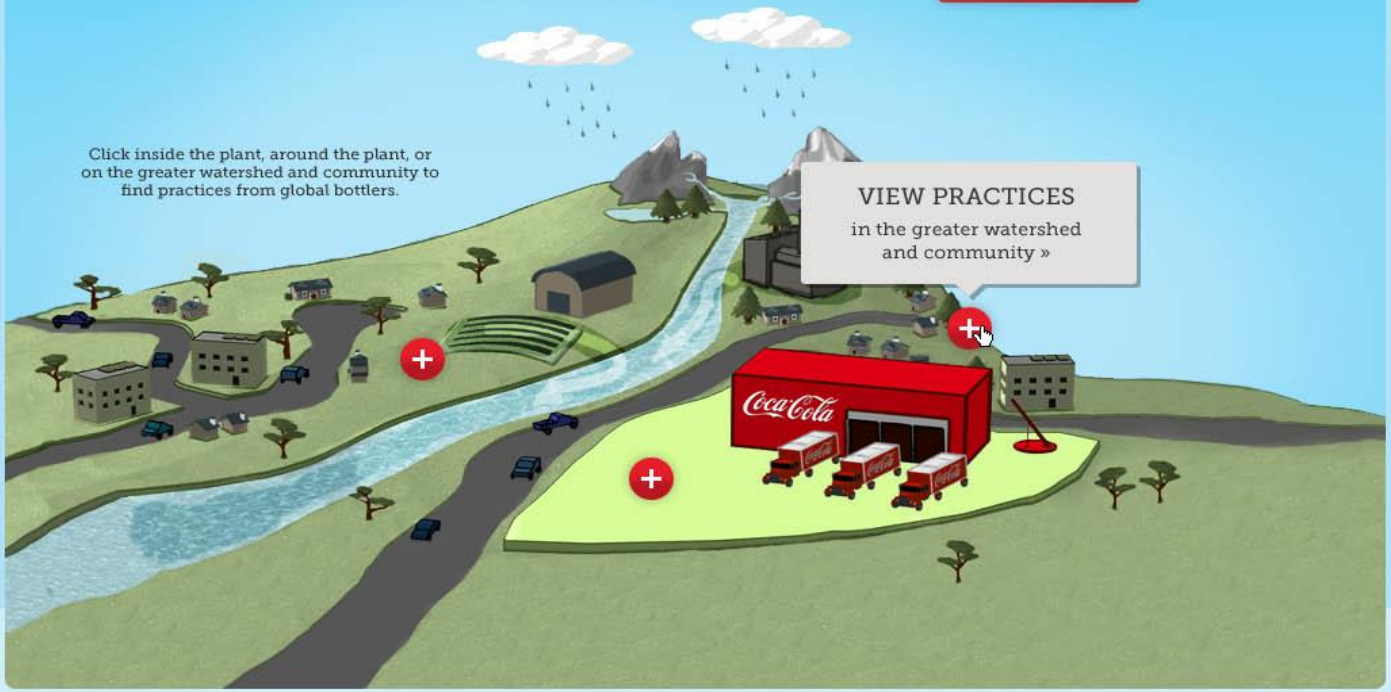
OR by Goal

OR by Placement Text

OR by Keyword(s)

SEARCH

Advanced Search »



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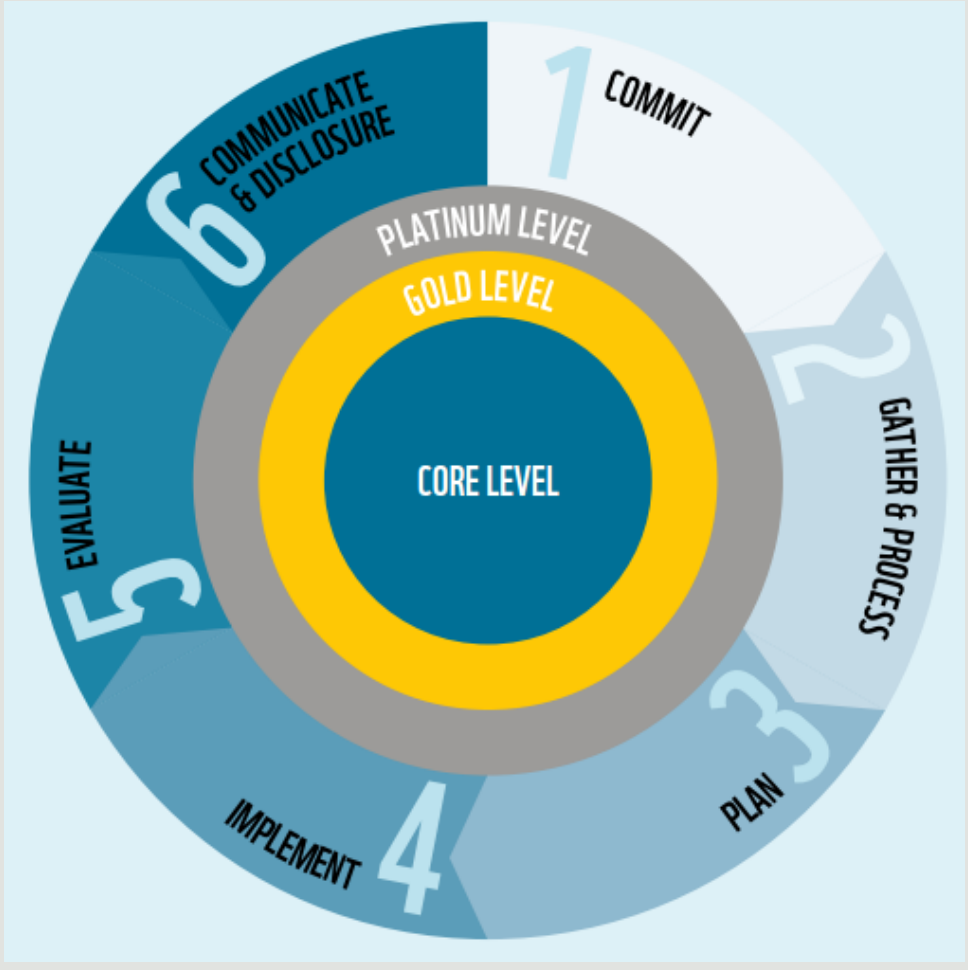
The Coca-Cola Company

WWF

The AWS Water Stewardship Standard



FOUR KEY OUTCOMES

1. Good water governance
2. Sustainable water balance
3. Good water quality status
4. Healthy important water-related areas

Basin Report Cards

River Basin Scorecards

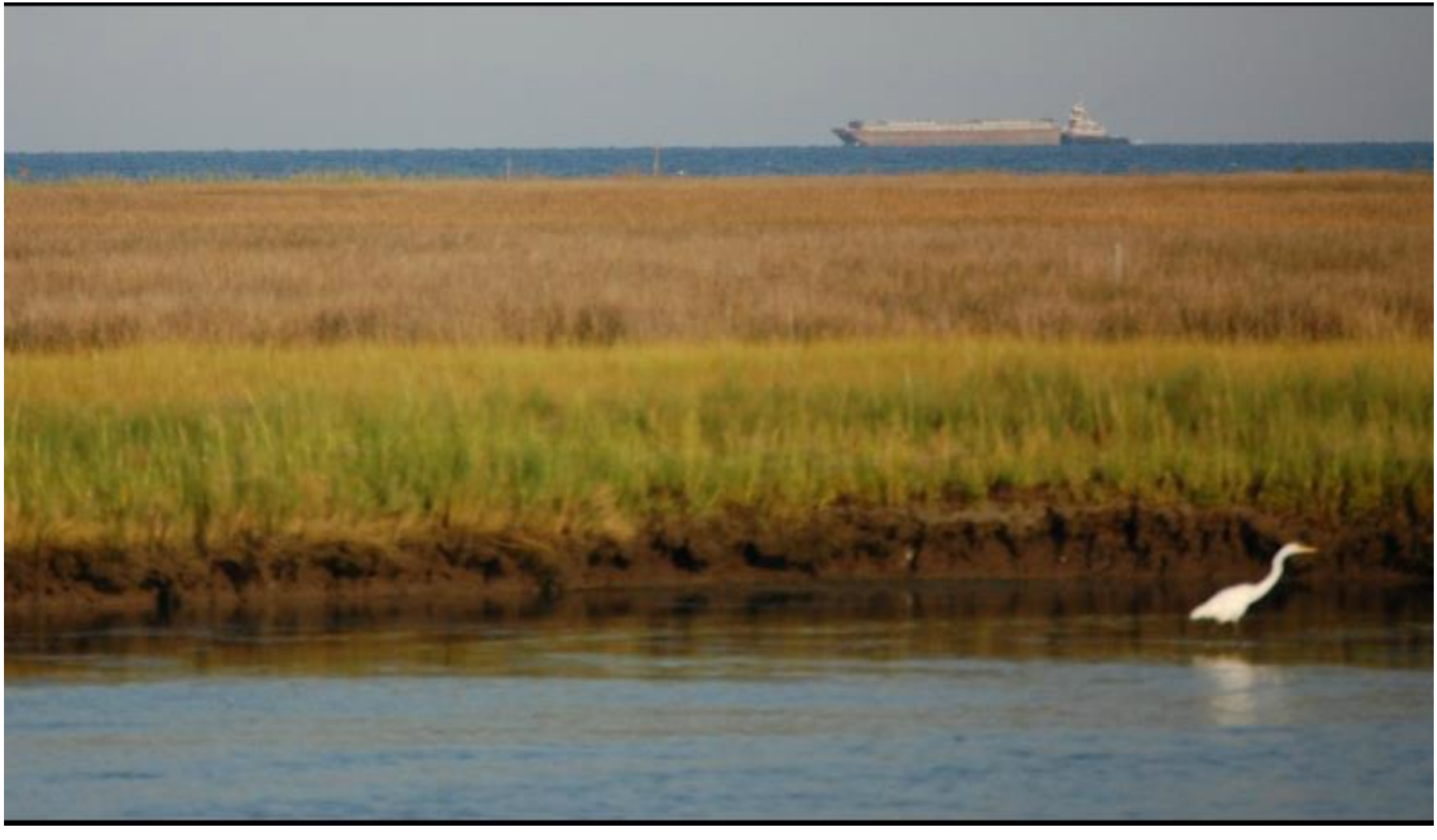
- **Understanding More than Your Company**
- **The Importance of Public Education**
- **What is an River Basin Scorecard?**
- **Dissemination of Scorecards**
- **Adaptation in Colombia**
- **The Importance of Private Sector Engagement**

Importance of Public Education

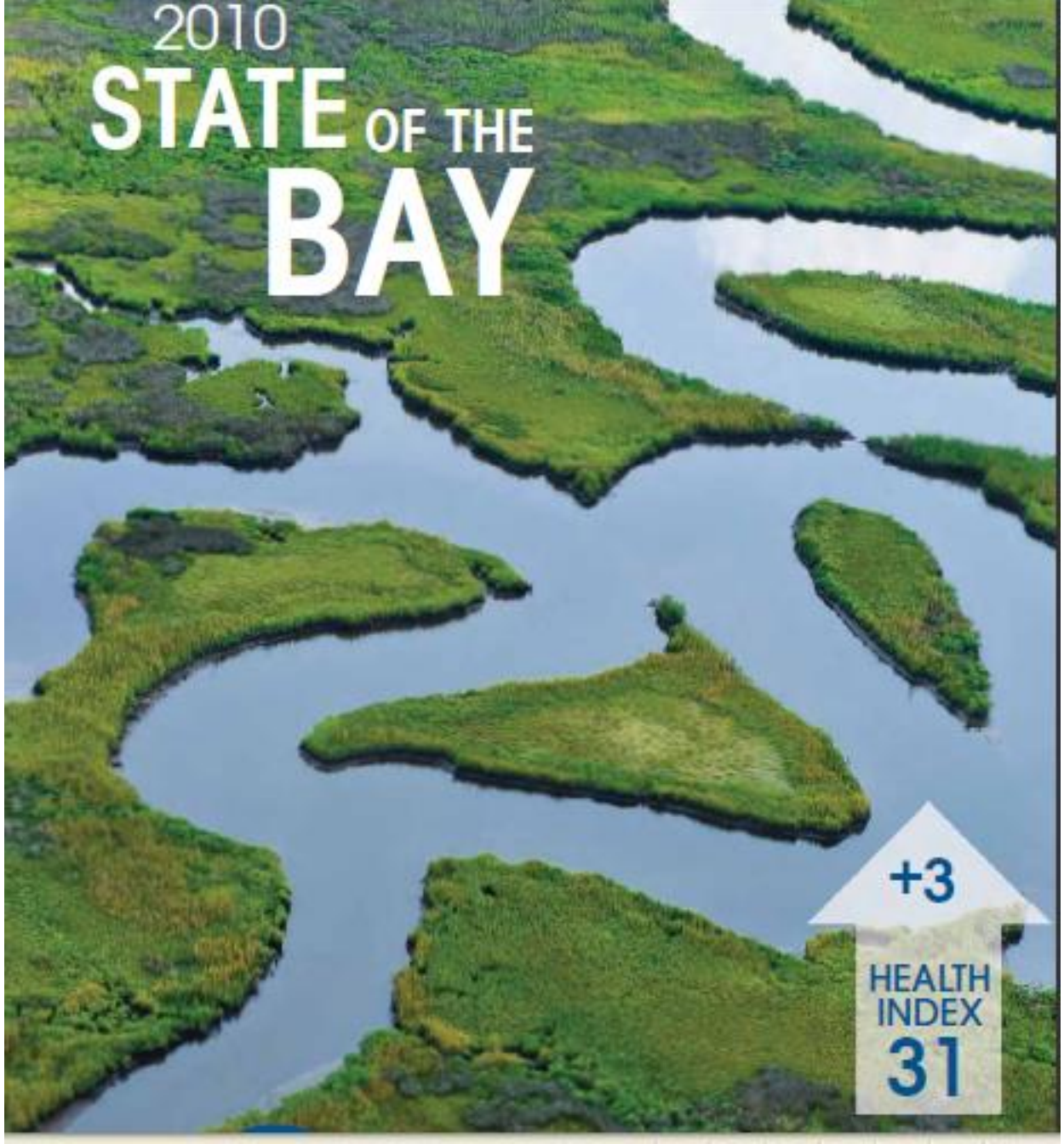
- **Leaders need watershed concepts**
- **Watershed management needs support of the people**
- **People need to know the specific problems of the river**
- **More understanding leads to more effective solutions**
- **An accessible, concise, non-technical report is needed**

What is a River Basin Scorecard?

- **An annual score of environmental indicators**
- **Letter or numerical grades**
- **Important categories include pollution, habitat, fisheries, water quantity, natural resource-related employment, and public health**
- **Specific environmental indicators within each category**



The Chesapeake Bay Watershed


2010
STATE OF THE
BAY
+3
HEALTH
INDEX
31

How We Create Our Report

The *State of the Bay* report is based on the best available information about the Chesapeake for indicators representing three major categories: pollution, habitat, and fisheries. Monitoring data serve as the primary foundation for the report, supplemented by in-the-field observations.

We measure the current state of the Bay against the healthiest Chesapeake we can describe—the Bay Captain John Smith depicted in his exploration narratives from the early 1600s, a theoretical 100.

We assign each indicator a score and then average the scores in the three categories to determine the overall state of the Chesapeake Bay. Our number scores correlate with letter grades as follows:

70 or better	A+
60–69	A
50–59	B+
45–49	B
40–44	C+
35–39	C
30–34	D+
25–29	D
20–25	D-
Below 20	F

ABOUT THE COVER:
A team of internationally known photographers from the International League of Conservation Photographers (ILCP) donated time to help CBF. Many photos in this year's *State of the Bay* report are from their expeditions in August, 2010, including this beautiful aerial shot of wetlands.

PHOTO CREDITS:
cover: © 2010 Garth Lenz/ILCP
page 4: © 2010 Neil Ever Osborne/ILCP
page 8: © 2010 Krista Schlyer/ILCP
page 12: John Surrick/CBF Staff
page 16: © 2010 Karine Aigner/ILCP

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

Maryland
Philip Merrill Environmental Center
6 Herndon Avenue
Annapolis, MD 21403
410/268-8816
410/269-0481 (from Baltimore metro)
301/261-2350 (from D.C. metro)

Pennsylvania
The Old Water Works Building
614 North Front Street, Suite G
Harrisburg, PA 17101
717/234-5550

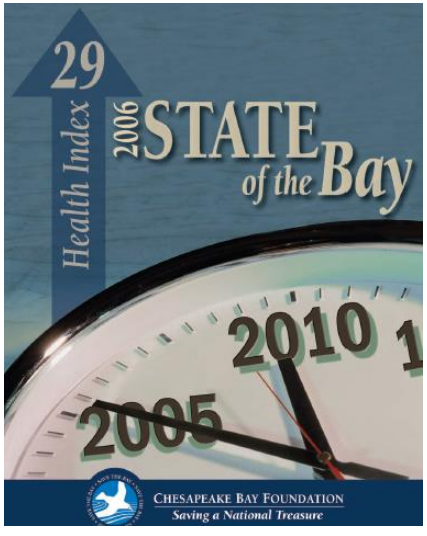
Virginia
Capitol Place
1108 East Main Street, Suite 1600
Richmond, VA 23219
804/780-1392

District of Columbia
725 8th Street SE
Washington, DC 20003
202/544-2232

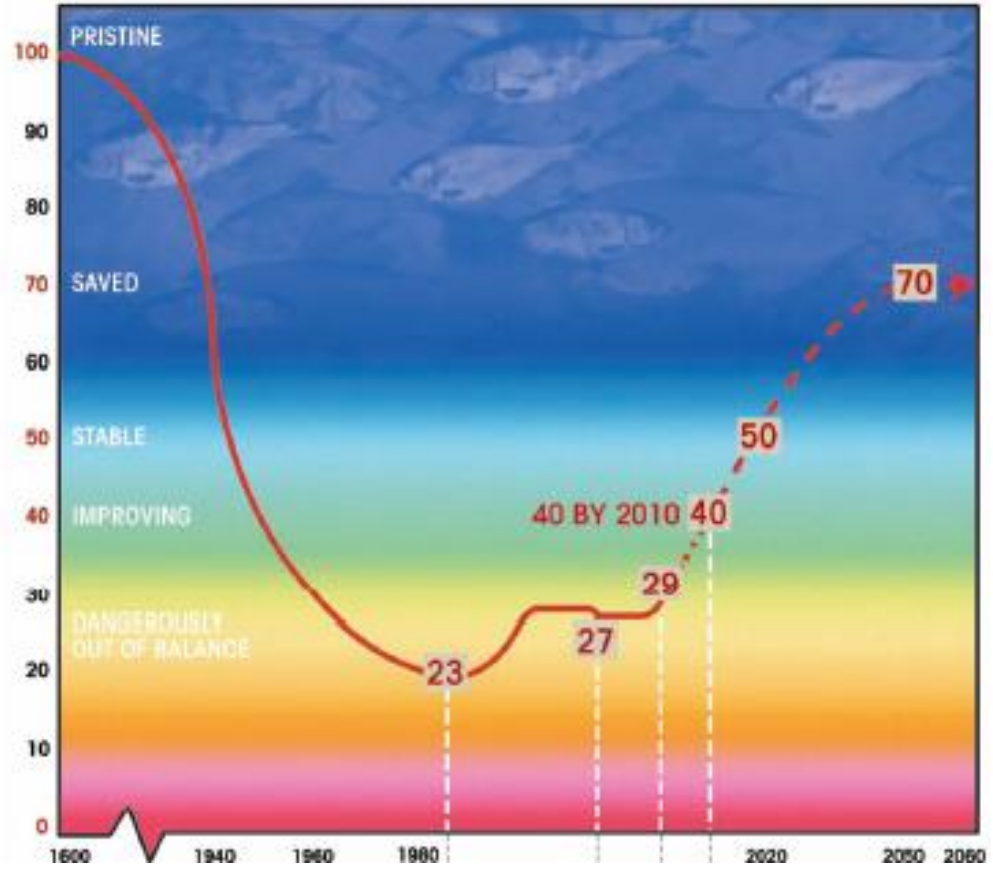
Web site: cbf.org
E-mail: chesapeake@cbf.org
Membership information: 888/SAVEBAY

CHESAPEAKE BAY WATERSHED

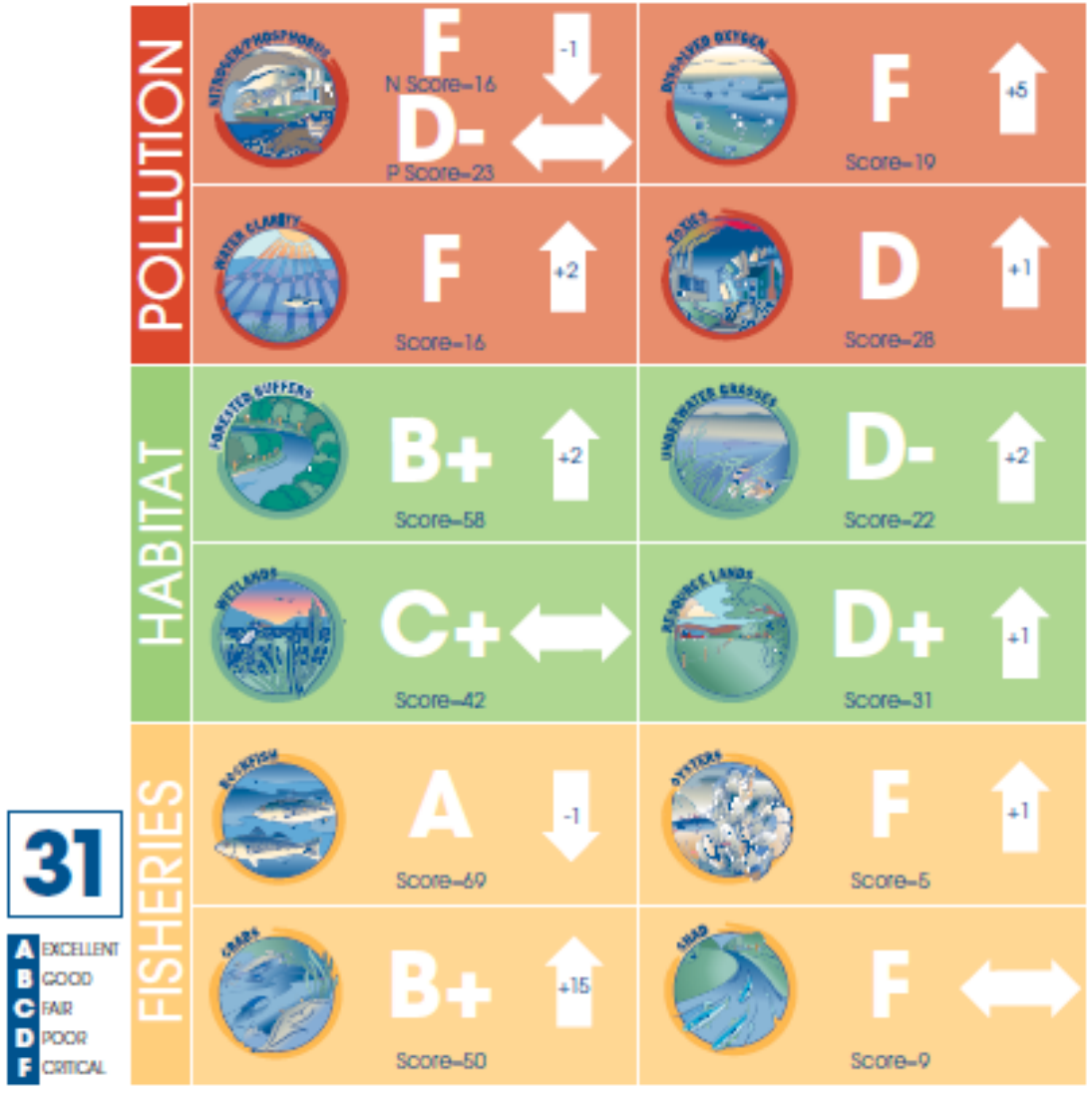
The Chesapeake Bay's 64,000-square-mile watershed covers parts of six states and is home to more than 17 million people.



The Chesapeake Bay Remains Dangerously Out of Balance



State of the Bay in 2010



F 16 ↓ Nitrogen

-1 from 2008

D- 23 ↔ Phosphorus

no change from 2008

Amounts of nitrogen and phosphorus pollution to the Chesapeake remain highly influenced by river flows. In 2010, river flows and the associated pollution loads were well above normal during the winter and early spring (remember all that snow), but below normal in the late spring and early summer.

The total annual average ten-year loads to the Chesapeake Bay are 300 million and 18 million pounds respectively for nitrogen and phosphorus pollution. These loads are well above the recommended limits to restore the Chesapeake and the rivers and streams that feed it. The Bay Total Maximum Daily Load (TMDL), or pollution budget, calls for a 187-million pound cap on nitrogen and a 12-million pound cap for phosphorus.

To achieve these caps, the jurisdictions must reduce and better manage stormwater pollution from urban and agricultural areas, protect and restore natural filters like riparian forest buffers and wetlands, and control erosion from shorelines and construction sites. And, the U.S. Environmental Protection Agency (EPA) must see to it that the states effectively implement these programs.

C+ 42 ⟷ Wetlands

no change from 2008

Wetlands are natural filters that improve water quality by trapping and treating polluted runoff. They also provide important habitat for fish and wildlife and protect shorelines from the effects of flooding.

Despite these important ecological services, efforts to restore wetlands in the Bay watershed have fallen far short of established goals. As of 2009, the Bay states had achieved little more than half of the 25,000 acres restoration goal for 2010. States made some progress last year; in particular, Maryland was responsible for more than half of the 600 acres that were created between 2008 and 2009 (the most recent year for which data were available). In addition, permitted losses of wetlands have slowed in recent years, likely a reflection of the economic slow down and its continuing impact on land development.

CBF supports increasing efforts to protect and restore these ecologically valuable, and vulnerable, habitats.

What are we doing?

- WWF and the University of Maryland's Center for Environment Science launched the Basin Report Card initiative in 2015
- Catalyzing credible report cards developed locally in all of the world's major basins, thus dramatically improving how water is managed around the world
- Improving, packaging and sharing report card development process to help businesses, communities, public officials and NGOs create science-based report cards
- Piloting this "homegrown report card" process by helping local stakeholders develop a report card for the Colombian portion of the Orinoco river basin

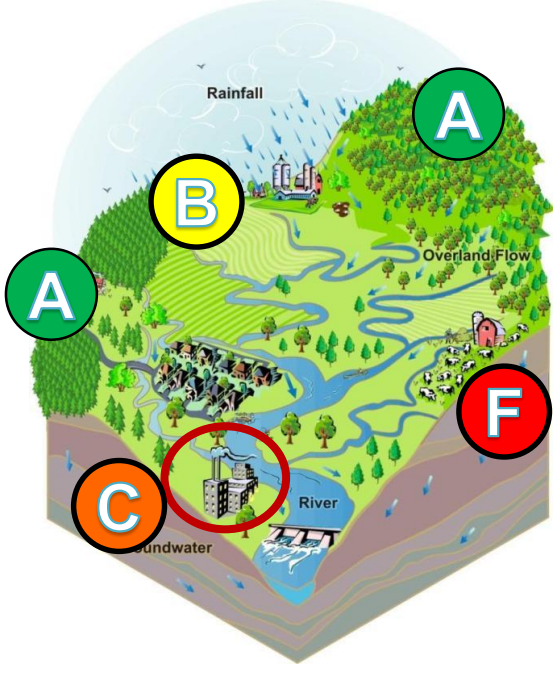
Figure 1. illustrates how BRCs can be leveraged to advance work across multiple steps in WWF's WS Ladder.

Report Card Process

Develop relationships with diverse stakeholder groups
(e.g. Businesses, policy makers, communities)

Understand Basin Impacts
(e.g. water quality, balance, governance)

1. **Values and Threats in the Basin**
   Understand the major water uses in the basin (e.g. industrial, agricultural, commercial, institutional)
2. **Identify Indicators**
3. **Set Thresholds/Vision for Ideal Condition**
4. **Calculations**
5. **Communications**



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