



# Can business risk help us get flows?

---

Stuart Orr  
WWF-International  
April 2015







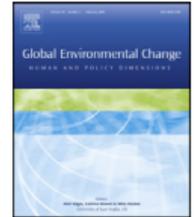
- 6 -17% increase in water consumption
- 7 -155% pasture land
- 6 - 59% crop land



Contents lists available at [SciVerse ScienceDirect](#)

## Global Environmental Change

journal homepage: [www.elsevier.com/locate/gloenvcha](http://www.elsevier.com/locate/gloenvcha)



### Dams on the Mekong River: Lost fish protein and the implications for land and water resources

Stuart Orr<sup>a,\*</sup>, Jamie Pittock<sup>b</sup>, Ashok Chapagain<sup>c</sup>, David Dumaresq<sup>d</sup>

<sup>a</sup> WWF International, Ave du Mont Blanc, Gland 1196, Switzerland

<sup>b</sup> Crawford School of Economics & Government, Australian National University, Canberra ACT 0200, Australia

<sup>c</sup> WWF UK, Panda House, Weyside Park, Godalming, Surrey GU7 1XR, United Kingdom

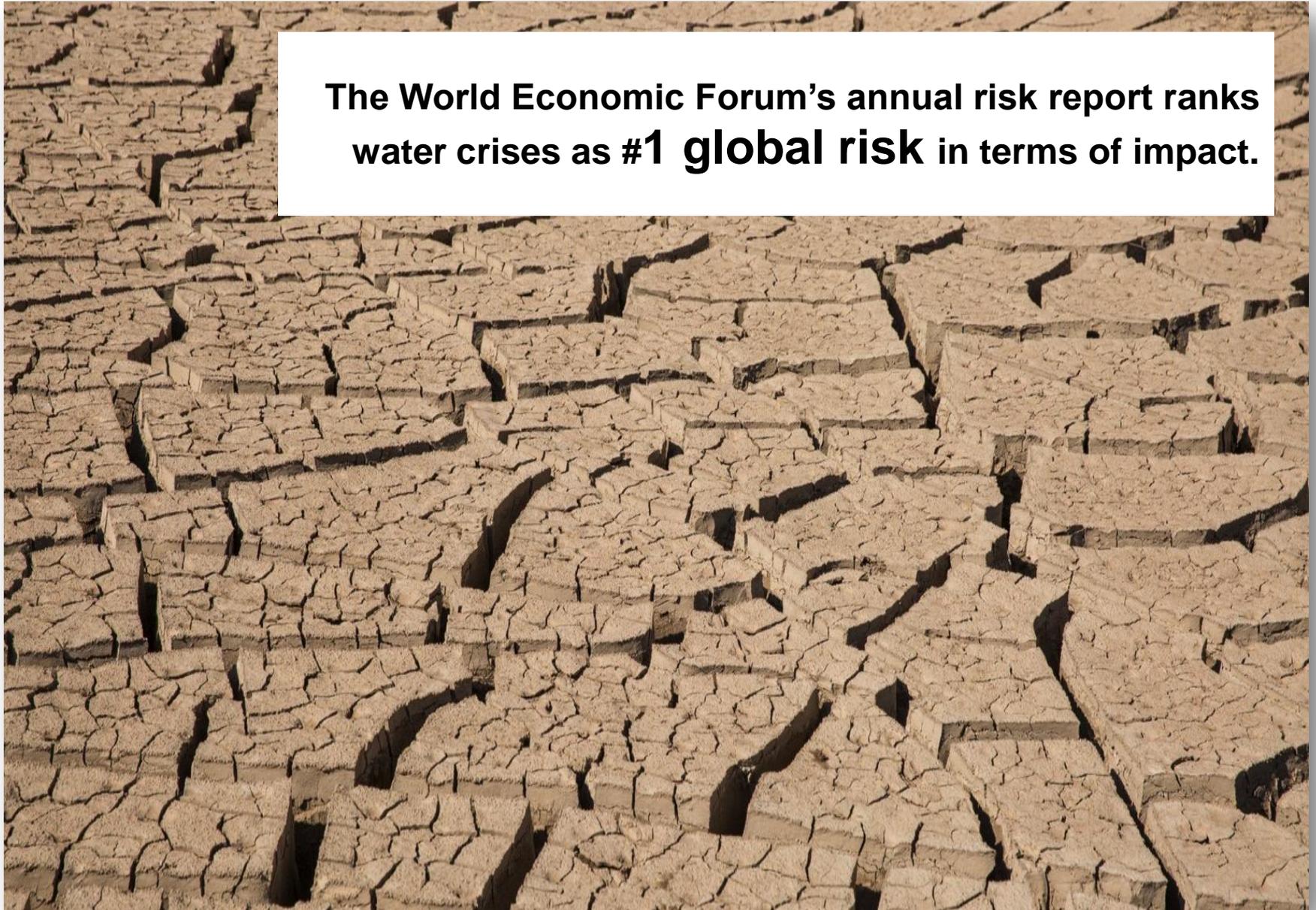
<sup>d</sup> Fenner School of Environment & Society, Australian National University, Canberra ACT 0200, Australia







The World Economic Forum's annual risk report ranks water crises as **#1 global risk** in terms of impact.





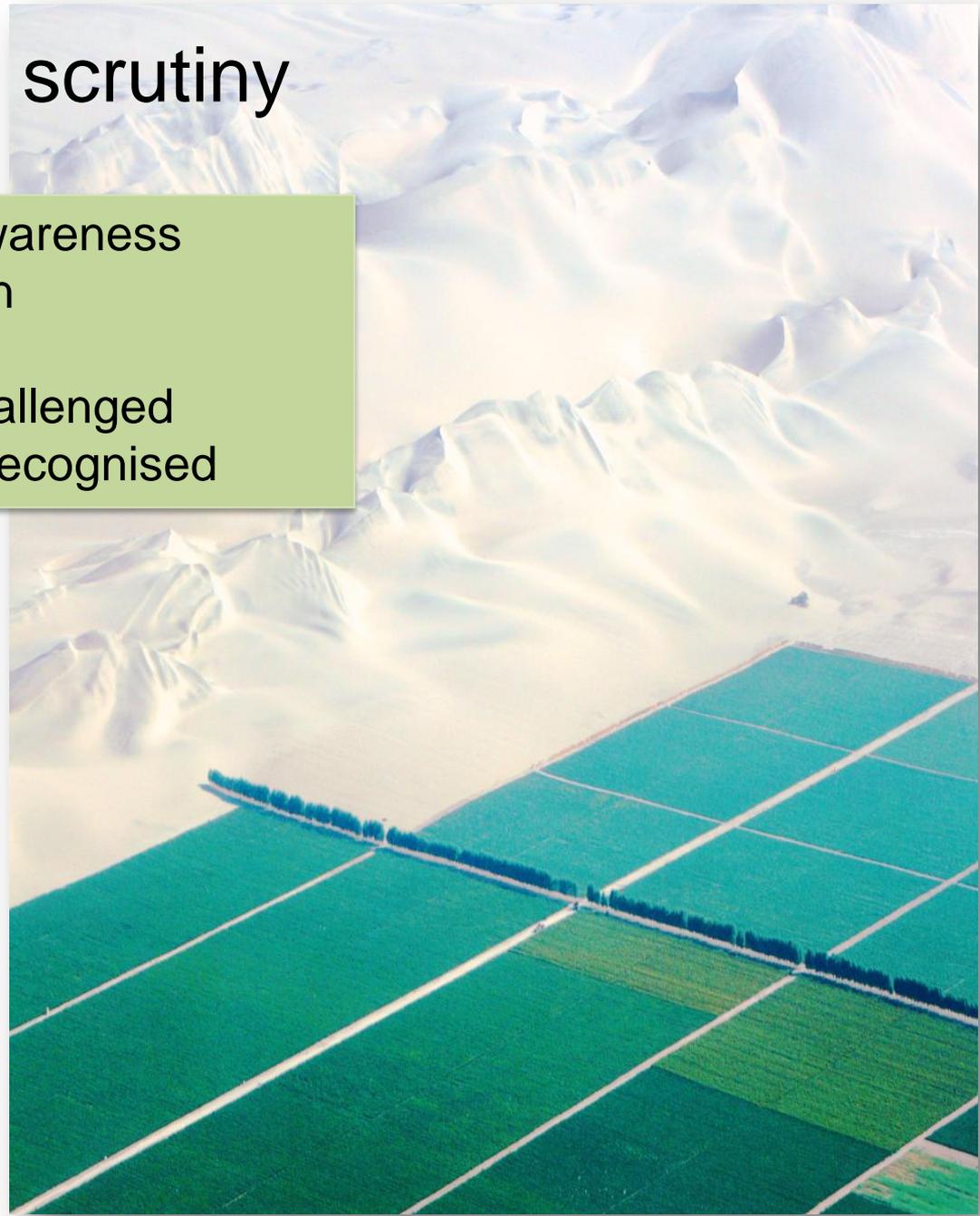
# Low flows and the bottom line?

- Stalling of planned power plants
- Heavy opposition by other water users
- Inflation in food and commodity prices
- Expected adjustments of water allocation/regulation
- Insurance and Finance costs and concerns





# Supply chain scrutiny



- NGO questions and awareness
- Reputations in question
- Investor warnings
- Stewardship claims challenged
- Dependence and risk recognised



# Stranded assets (drying and drowning)



- Value at Risk
- Investor warnings
- Shareholder concerns
- Higher costs to secure water
- Legacy of bad interventions



# Investors



Investors also know how damaging inaction, inappropriate action or delaying interventions on water-related issues can be... The global economy will favour businesses that take a pro-active approach to water stewardship.

**Eurizon Capital**

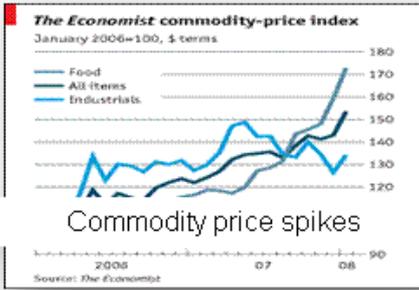
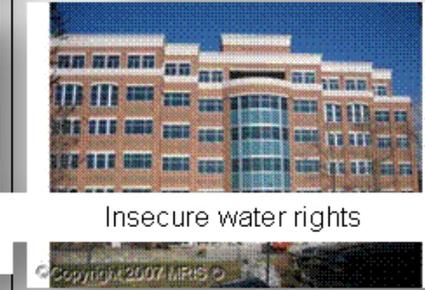
FEBRUARY 13, 2013 CORPORATES

**MOODY'S**  
INVESTORS SERVICE

**SPECIAL COMMENT**      Global Mining Industry  
**Water Scarcity to Raise Capex and Operating Costs, Heighten Operational Risks**



# Matrix of water-related risks

| Point of impact:          | Supply chain  | Production process   | Product use  |
|---------------------------|---|--|--|
| Type of risk:             |   |  |  |
| Physical                  |  <p>Commodity price spikes</p>                                 |  <p>Disruption in water supply</p>                 |  <p>Scarcity limiting sales</p> |
| Regulatory (+ litigation) |  <p>Water quality standards constraining power generation</p> |  <p>Court settlement to scale back operations</p> |  <p>Insecure water rights</p>  |
| Reputation                |  <p>Multinationals' suppliers singled out for violations</p> |  <p>Competition with social uses</p>             |  <p>Profligate water use</p>  |



# Investors



## Moving beyond business as usual

A need for a step change in water risk management  
CDP Global Water Report 2013

Written on behalf of 520 investors with US\$507 billion in assets



Lead sponsor and report writer

**Deloitte**

70% - one or more water-related risk could substantively affect their business

Two thirds of risks expected to impact both direct operations (65%) and supply chains (62%) in next five years.

Only 6% of have targets or goals for community engagement, 4% for supply chain, 3% for watershed management, 1% for transparency, and NO respondents set goals around public policy

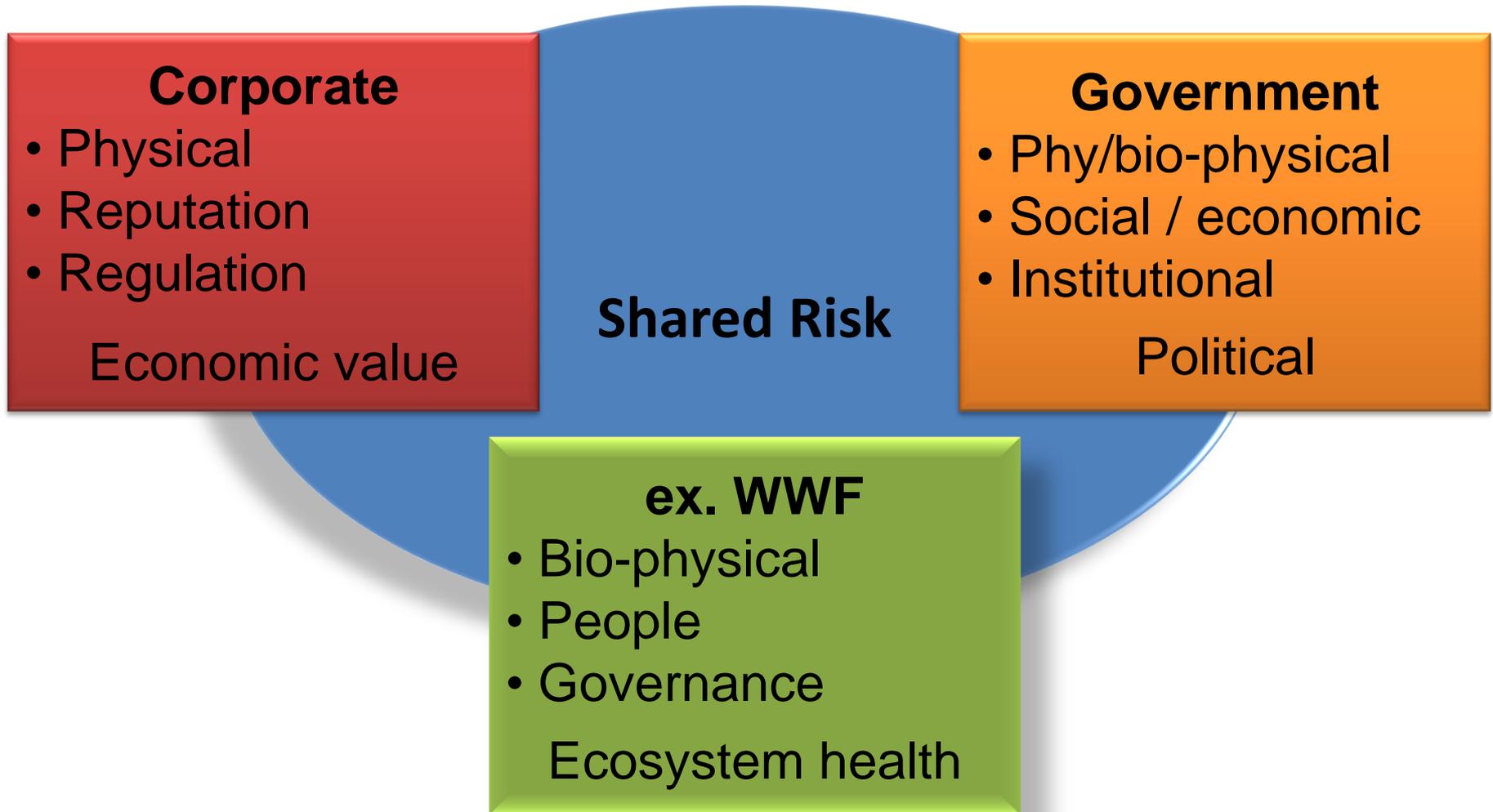
Larson

First pants,  
THEN  
your shoes



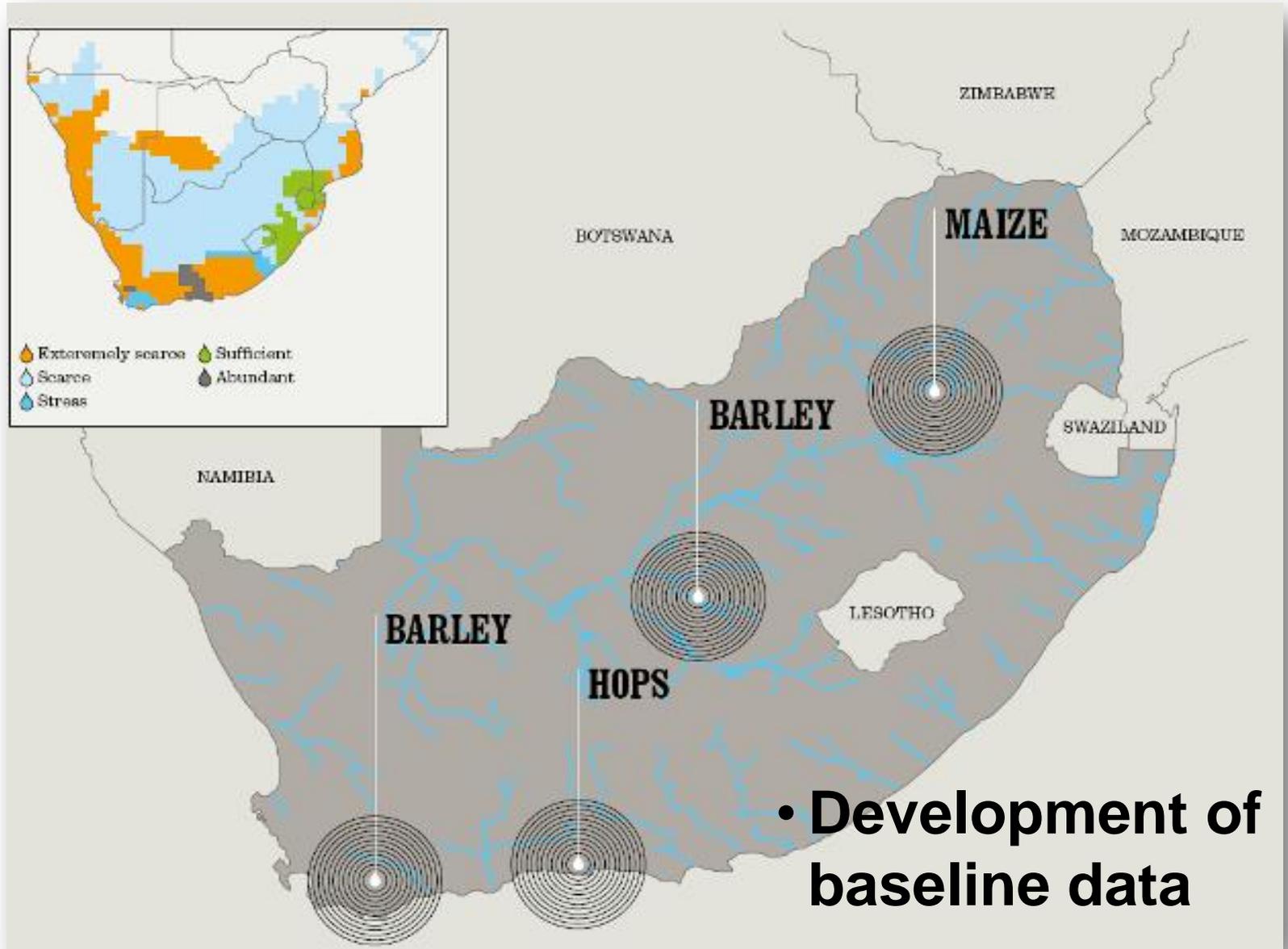


# Neighboring up?





# What are companies doing?





# What are companies doing?



RSS

| CONTACT

search



[Home](#)

[About AWS](#)

[Who are we](#)

[What we do](#)

[Where we work](#)

[Events](#)

[News](#)

[Get involved](#)



## ▶ Water Stewardship Field Trial Report from Australia

Report from Australia on water stewardship field trial in dairy industry

## ▶ First certifications for European Water Stewardship (EWS)

Coca Cola awarded first certifications for European Water Stewardship (EWS)

## ▶ Beta Version of AWS Standard Released

The Alliance for Water Stewardship is pleased to release the beta version of the AWS Standard.

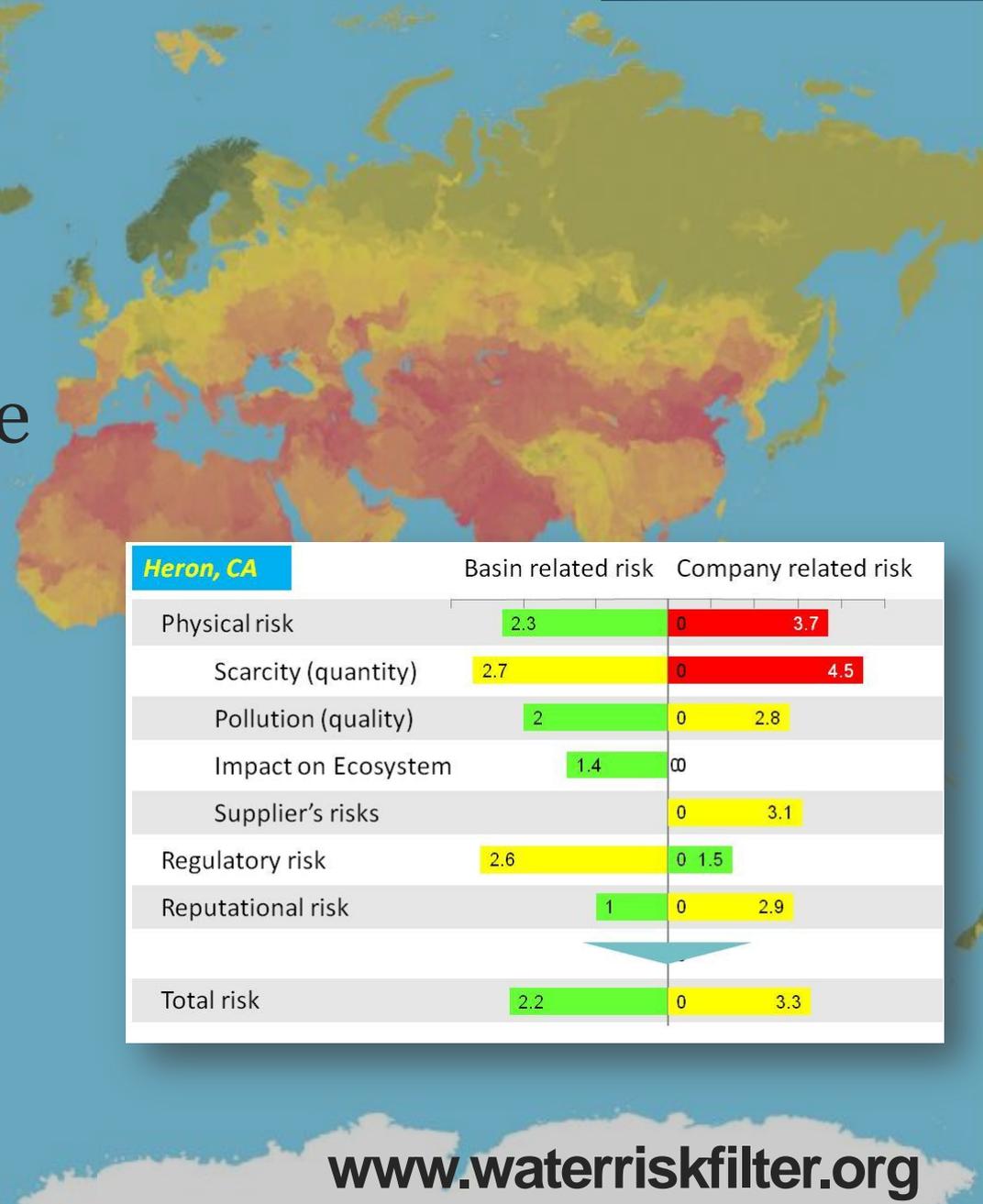
Latest News

Coca Cola awarded first certifications for European Water Stewardship (EWS)



# The Water Risk Filter

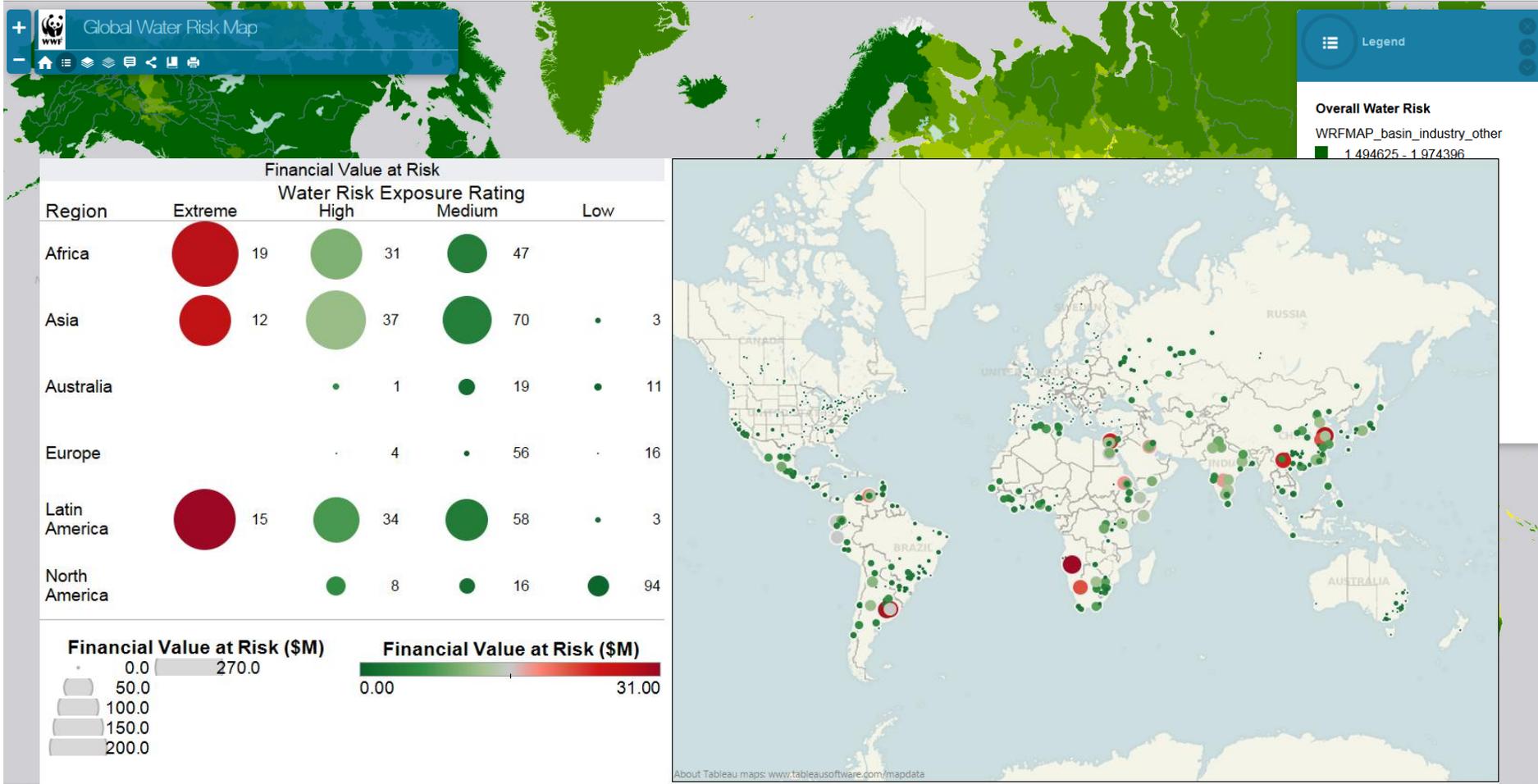
Assessing exposure to water related risks, covering all industries and all countries in the world



| <b>Heron, CA</b>    | Basin related risk |          | Company related risk |  |
|---------------------|--------------------|----------|----------------------|--|
| Physical risk       | 2.3                | 0        | 3.7                  |  |
| Scarcity (quantity) | 2.7                | 0        | 4.5                  |  |
| Pollution (quality) | 2                  | 0        | 2.8                  |  |
| Impact on Ecosystem | 1.4                | 0        |                      |  |
| Supplier's risks    |                    | 0        | 3.1                  |  |
| Regulatory risk     | 2.6                | 0        | 1.5                  |  |
| Reputational risk   | 1                  | 0        | 2.9                  |  |
| <b>Total risk</b>   | <b>2.2</b>         | <b>0</b> | <b>3.3</b>           |  |



# Risk to value at Risk



POWERED BY 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>



## INFLUENCE GOVERNANCE

Government incentivised and motivated to manage and invest in water basins in a sustainable way

## COLLECTIVE ACTION

Companies, communities, public sector and NGOs are engaged together in collective action to address issues

## INTERNAL ACTION

Companies take action to optimise internal water governance, improve water efficiency and reduce pollution

## KNOWLEDGE OF IMPACT

Companies have detailed understanding of impact they and their suppliers have (incl. footprint and risk)

## WATER AWARENESS

Companies, their suppliers and customers have (high level) understanding of the global water challenges, and their dependence on freshwater

An orange bracket graphic that connects the five funnel segments on the left to the two text blocks on the right.

**Drive risk awareness among global companies**

**Highlight water's role in basin economies**

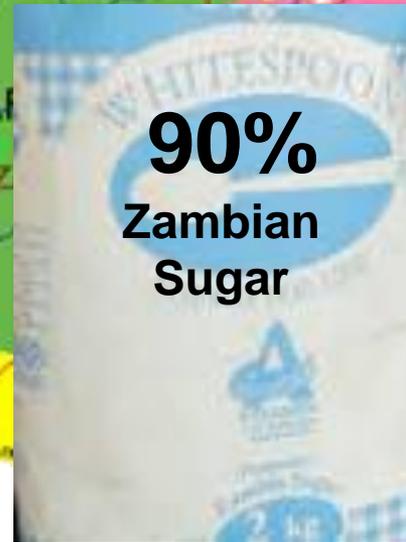
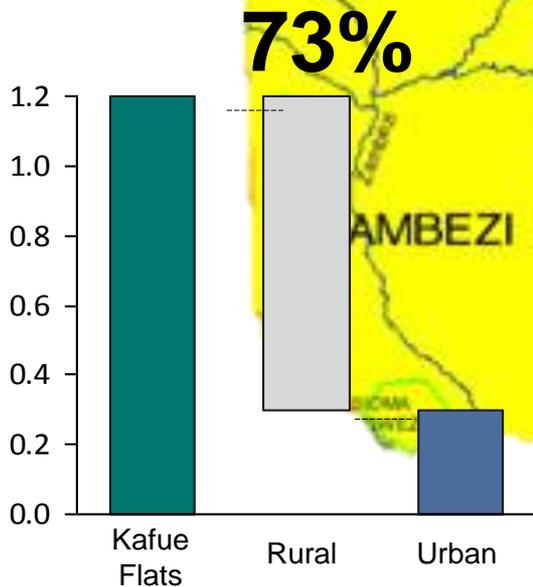
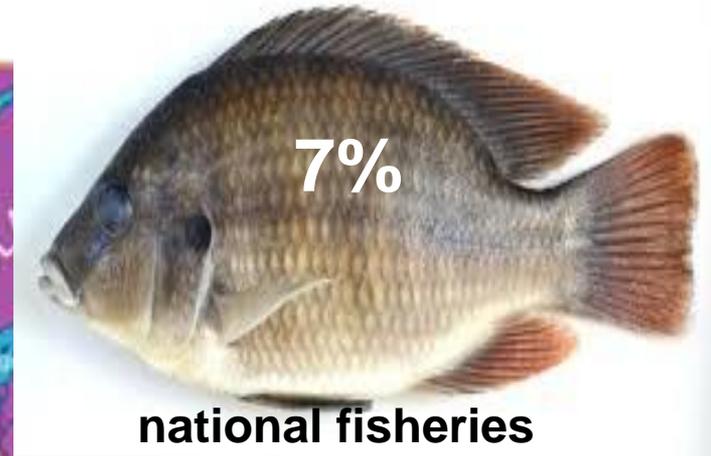
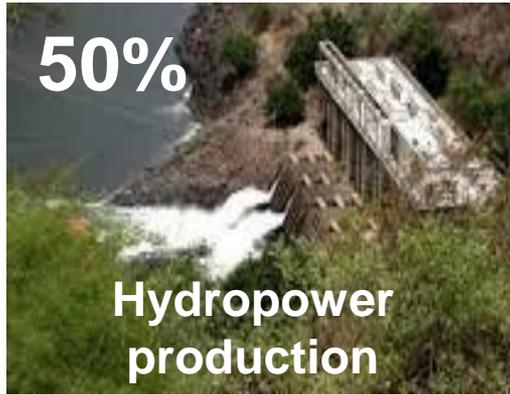


WWF . Better Earth . Better Business.

Connection to flows?

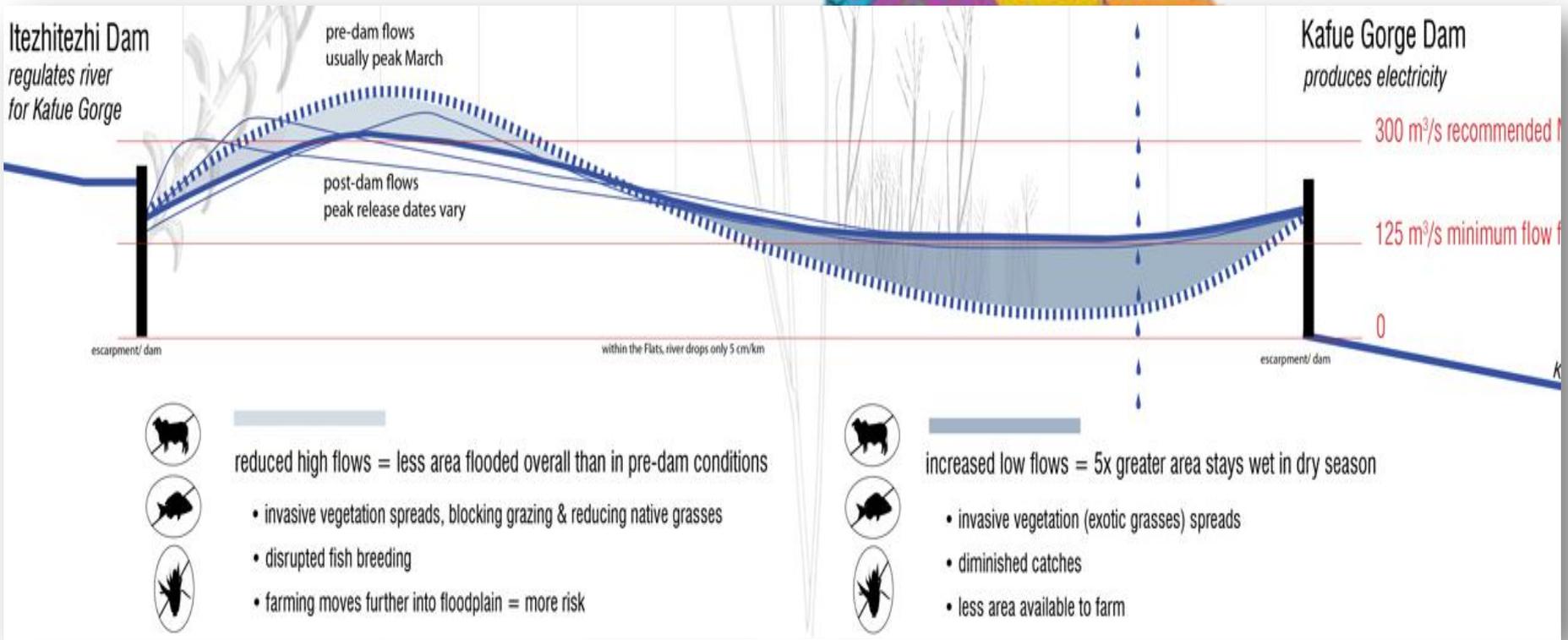


# Kafue Flats – Economic Engine for Zambia



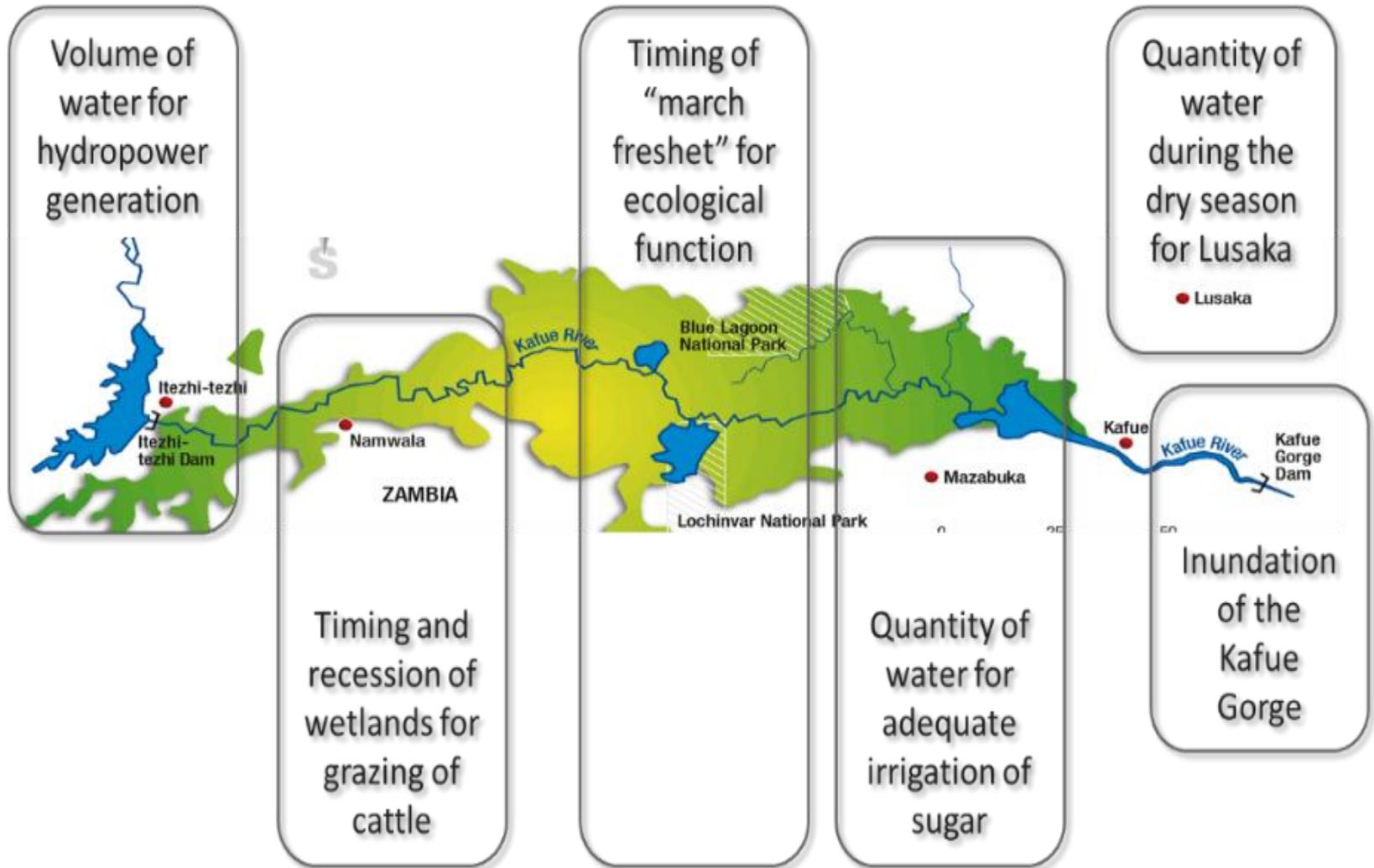


# Zambezi River, Zambia



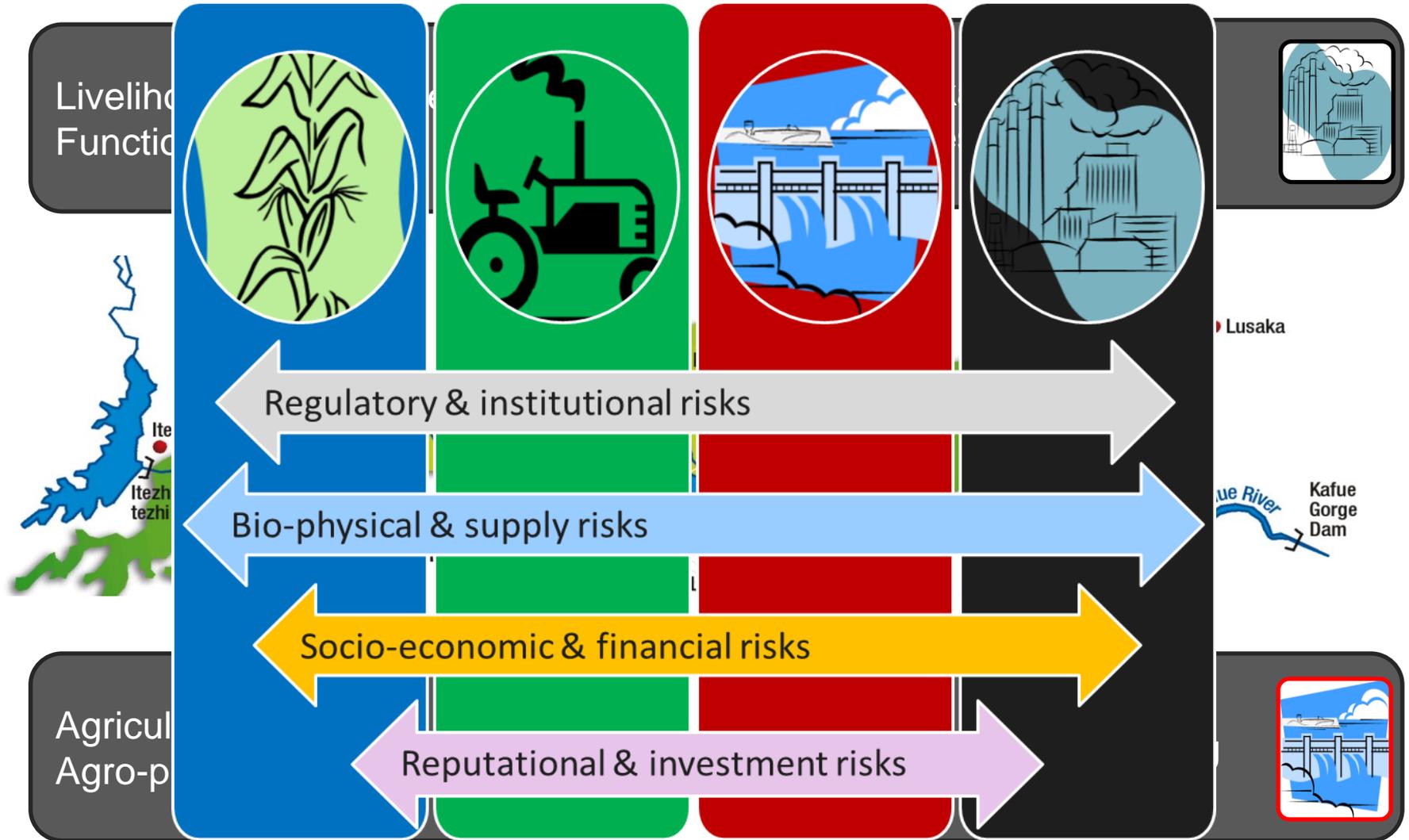


# Geographic Risks along the Kafue





# Key Risk Narratives





WATER FUTURES PARTNERSHIP

ES: Beyond 2012



WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Innovative Water Partnerships  
Experiences, Lessons Learned and Proposed Way Forward

**PRI** Principles for Responsible Investment

## PRI-COORDINATED ENGAGEMENT ON WATER RISKS IN AGRICULTURAL SUPPLY CHAINS

INVESTOR GUIDANCE DOCUMENT

IN COLLABORATION WITH:  
World Wildlife Fund (WWF), PwC Germany and the PRI investor steering committee on water risks

2012 **Resource Institute** Changing finance. Fixing change. Resource Institute in partnership with UNCTD Finance Initiative and UN Global Compact

United Nations Global Compact

**WWF BRIEF 2013**

## WATER STEWARDSHIP

Perspectives on business risks and responses to water challenges

**ICMM**  
International Council on Mining & Metals

**inBrief**

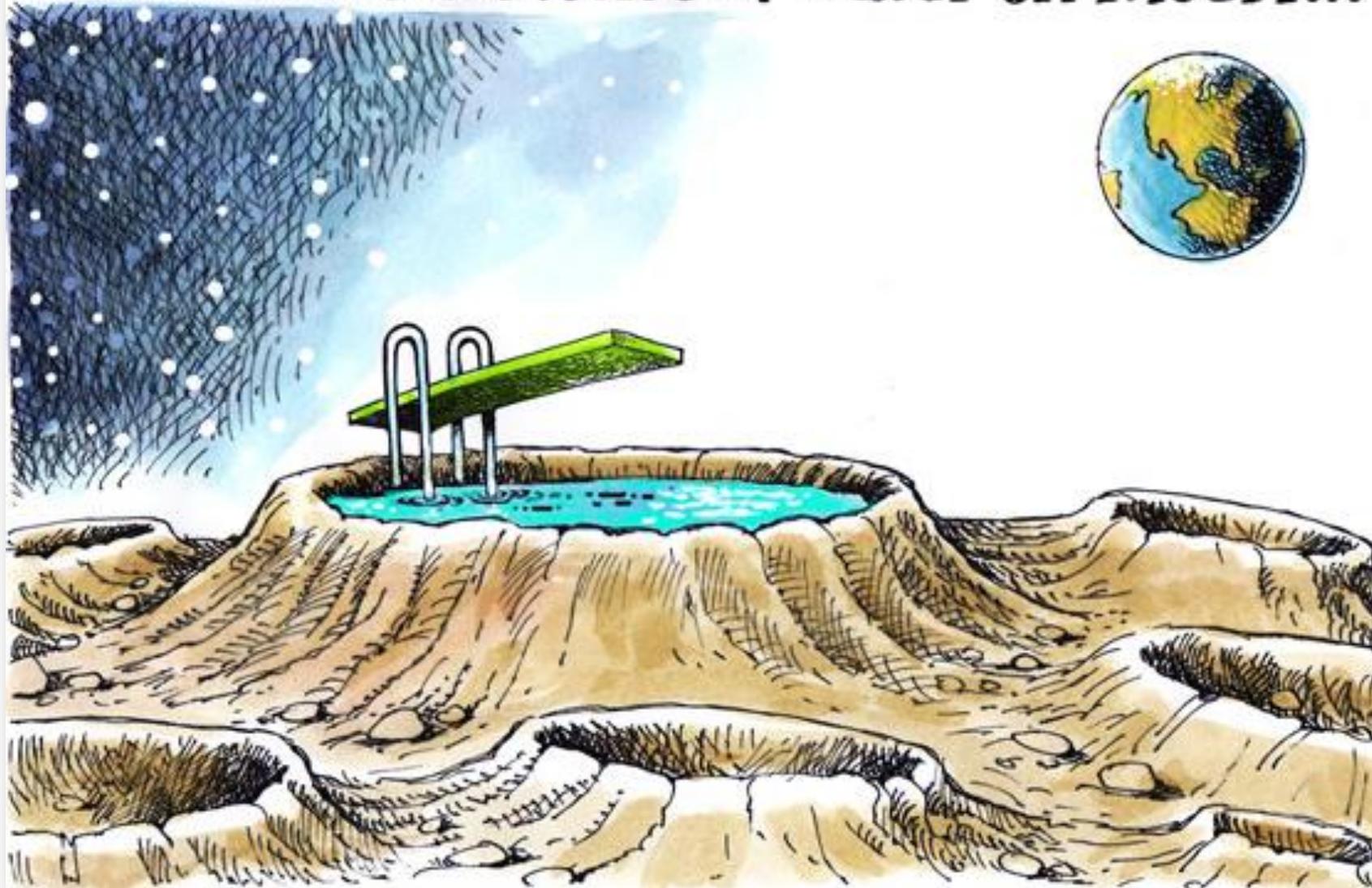
## Water stewardship framework

Environment and Climate Change  
April 2014

New York, March 2013

**STRATEGIC WATER PARTNERS NETWORK SOUTH AFRICA**  
Closing the water gap by 2030

# NASA finds evidence of water on Moon...





**Stuart Orr – Head of Water Stewardship**

[sorr@wwfint.org](mailto:sorr@wwfint.org)

<http://wwf.panda.org/ws>