

## Water Risk Tools:

# Lessons & Updates from the Water Risk Filter

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# The Water Risk Filter



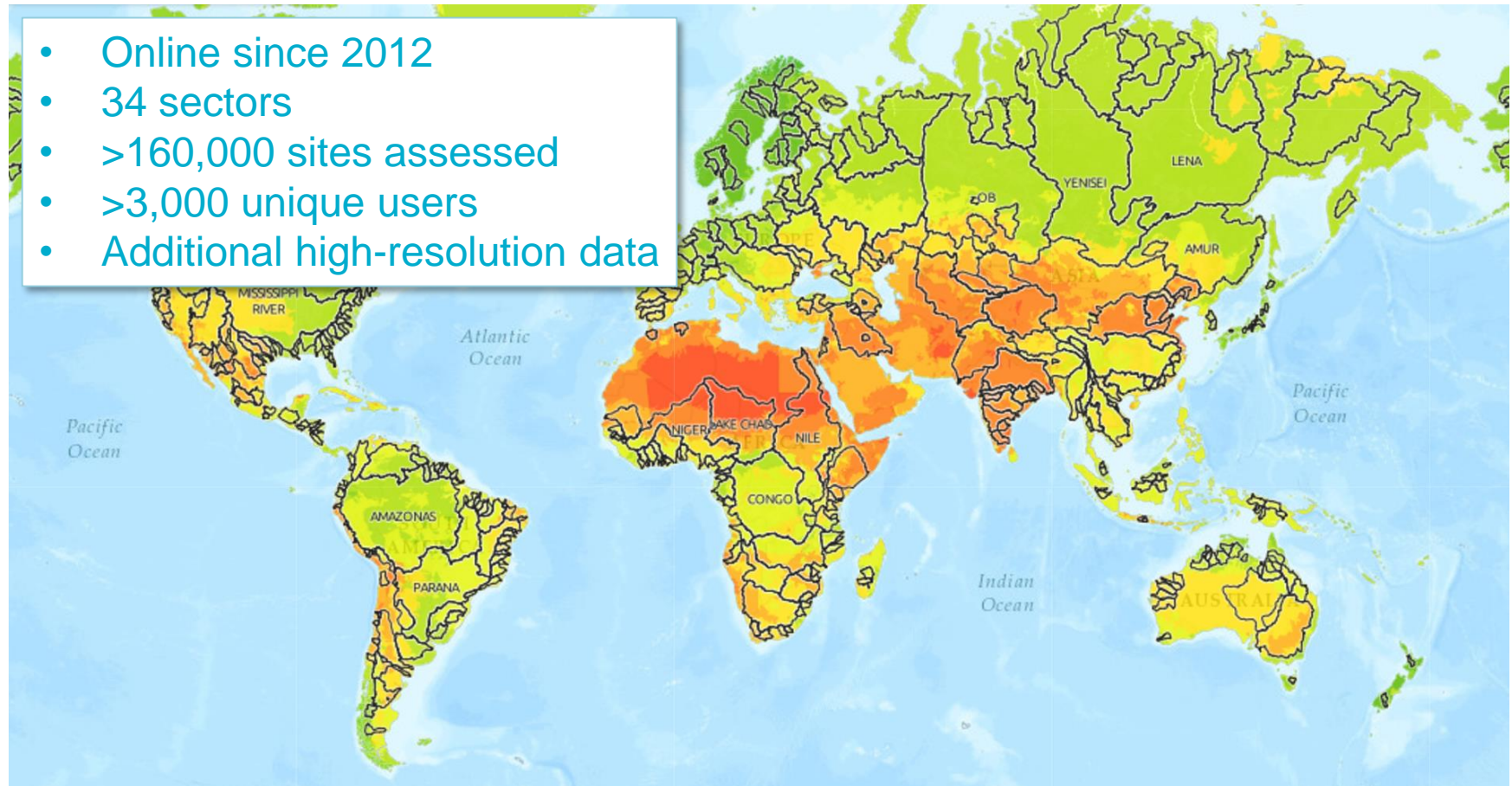
## THE WATER RISK FILTER

[www.waterriskfilter.panda.org](http://www.waterriskfilter.panda.org)

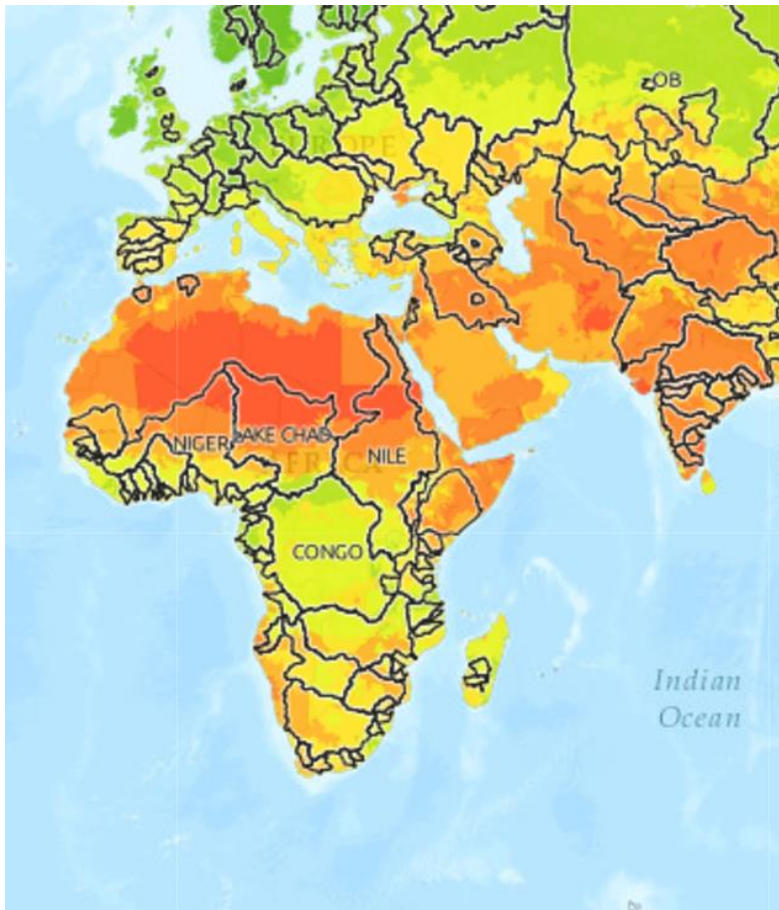
A free online tool to:

- Assess water risk
- Analyse results
- Explore mitigation options & country profiles

- Online since 2012
- 34 sectors
- >160,000 sites assessed
- >3,000 unique users
- Additional high-resolution data



# What have we learned about water risk, context and improvement opportunities?

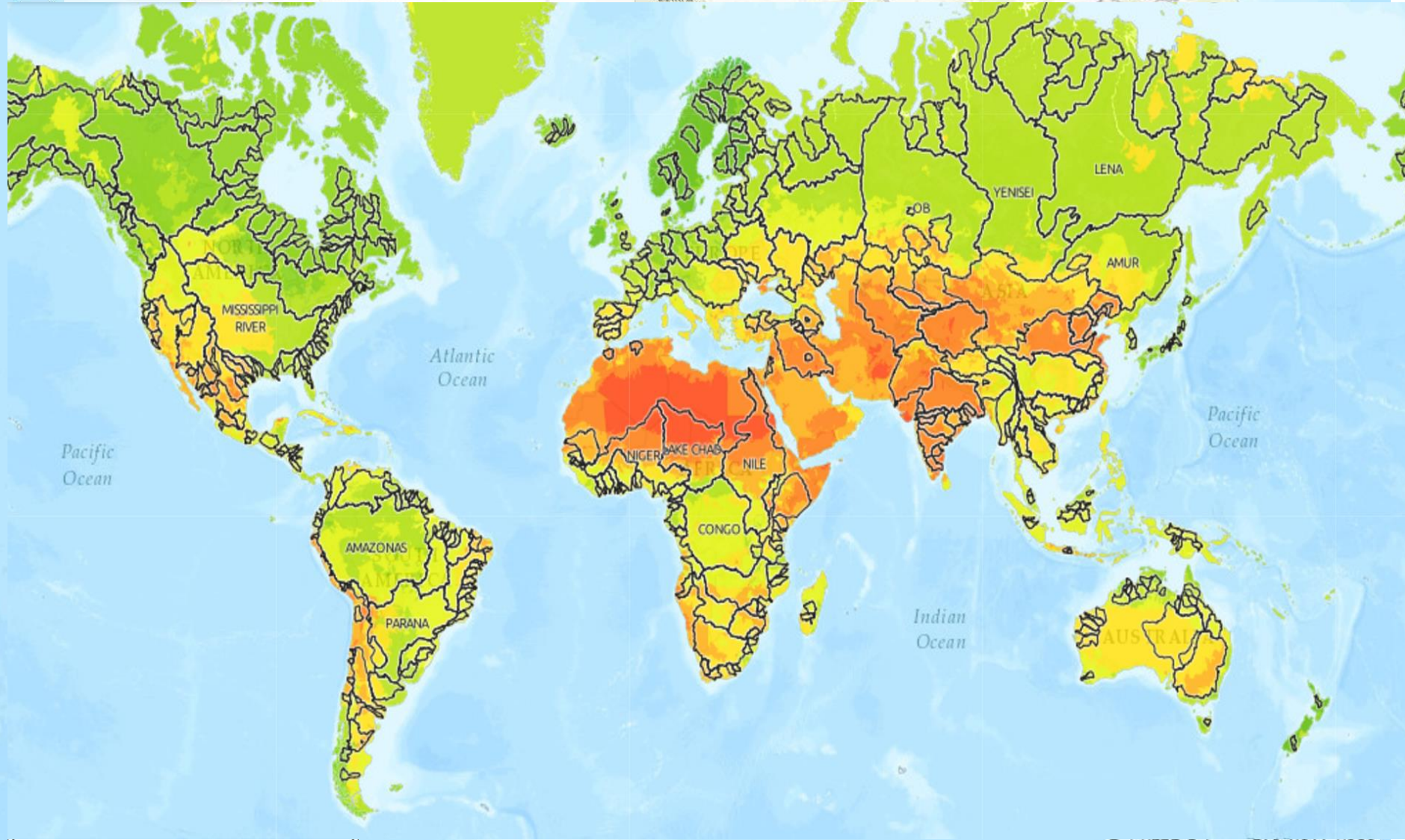


1. Assessing water risk is a global and local process
2. Water risk is both basin and operational
3. Water risk needs to be about assessment **and** mitigation
4. Water risk models should be considered in combination
5. Water risk = context (& can help move towards context-based water targets)
6. Water risk is more meaningful if it links to value.



# 1) Assessing water Risk is Global & Local

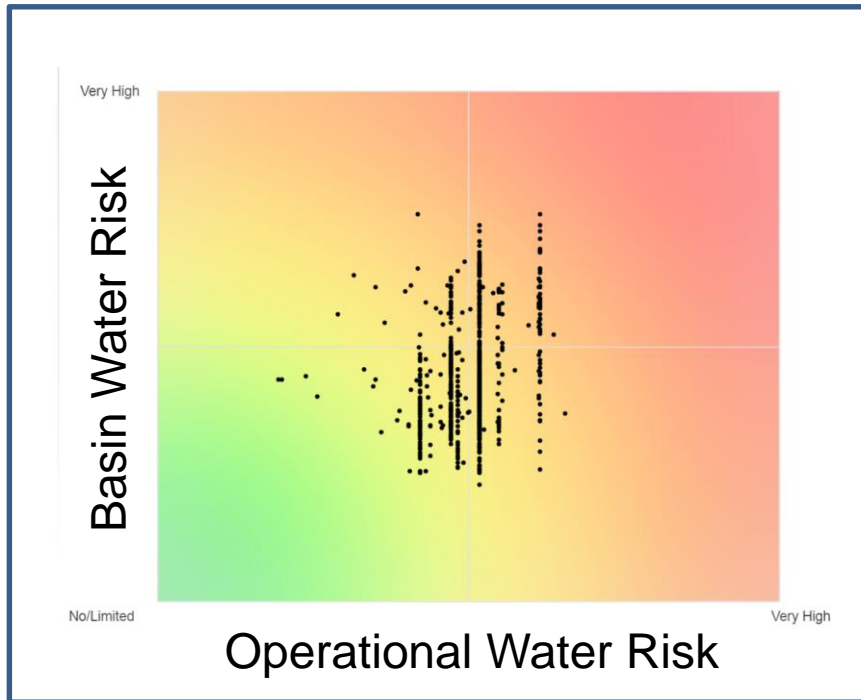
WRF Upgrade: > high resolution data





## 2) Water Risk is both Basin & Operational

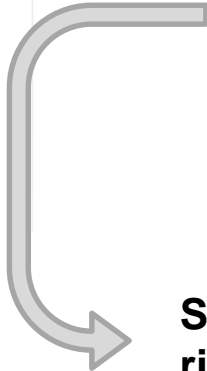
### WRF Upgrade: Data & indicator overhaul



Risk Type	Risk Sub-Type
Physical	Quantity – scarcity*
	Quantity – flooding*
	Quality*
	Ecosystem service status*
Regulatory	Enabling environment (laws & policy)
	Institutions & governance
	Management instruments
	Infrastructure & finance
Reputational	Cultural importance of water
	Media scrutiny
	Corporate trust
	Water conflicts

\*Climate change projections (coming)

Water Risk Assessment		Portfolio results	Questionnaire	Analysis		
<b>Basin related risk</b>						
Risk	Nº	Score	Indicator		Answer	
Physical Risk Scarcity (Quantity)	1	4 High risk	Annual average monthly net water depletion (WaterGap) Global dataset Basin level indicator		High depletion (Seasonal)	
	2	4 High risk	Number of months per year net water depletion exceeds <60% (WaterGap) Global dataset Basin level indicator		4-9 months	
	3	5 Very high risk	Net water depletion in the month in which net water depletion is the highest in this river basin (Water Gap) Global dataset Basin level indicator		Very high depletion (>75%)	
	3a	2 Limited risk	Aridity Global dataset Grid level indicator		Dry sub-humid	



### Suggested potential water risk mitigation actions

- Option A
- Option B
- Option C
- Etc.

Table 2: Summary of Key Areas of Corporate Water Management Identified in the App Gap

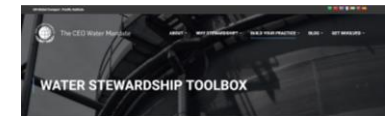
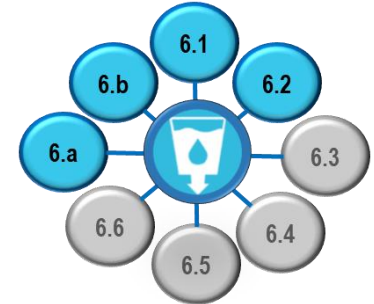
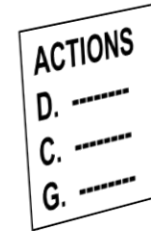
Category	Subcategory	Description The Company	Activity
WATER MANAGEMENT	Data Gathering	Collects and monitors data related to:	1.1. Its own regulatory compliance, water use, and discharge 1.2. Its own environmental and social impacts on direct water sources 1.3. External factors affecting direct water sources 1.4. Stakeholder perceptions and concerns related to water issues 1.5. Effectiveness of supplier water management practices 1.6. Direct operations 1.7. Supply chain
	Assessment	Identifies and quantifies water-related risks for its:	1.8. Direct operations 1.9. Supply chain
	Governance	Sets accountability for water through:	2.1. Board of directors 2.2. Senior management 2.3. Public policy and lobbying positions 2.4. Publicly available water policy/statement
	Policies & Standards	Sets performance standards and goals through:	2.5. Standards and goals on water withdrawal/consumption for direct operations 2.6. Standards and goals on wastewater discharge for direct operations 2.7. Plans to address their water-related risks 2.8. Supplier standards and goals, assessment and contracting practices
WATER EFFICIENCY	Business Planning	Integrates water in decision-making related to:	2.9. Business planning and capital allocation 2.10. Product design and development 2.11. Opportunity identification 2.12. Local communities 2.13. Employees 2.14. Suppliers
	Stakeholder Engagement	Engages with internal and external stakeholders on water-related issues:	3.1. Governments and regulators 3.2. Nicks and community groups 3.3. Other industrial/commercial/water users 3.4. Customers
	Disclosure		3.5. Water-related information 3.6. Data and analysis related to water in financial statements 3.7. Audited/assured water-related data



### ASSESS



### MITIGATE



### Basin & Operational Risk Results



Corporate or **Facility?**

Country or Basin?

New or Experienced?

Specific Risk you want to mitigate?



## 4) Consider water risk models in combination

WRF Upgrade: Water Risk Filter AND (not or) Aqueduct

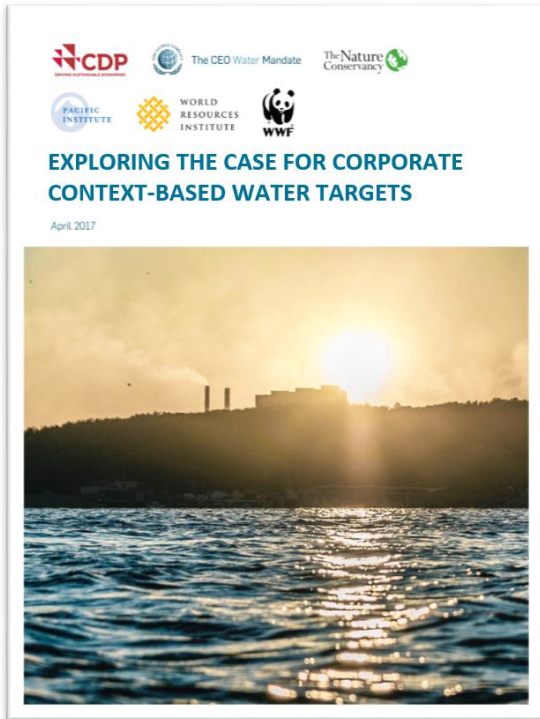


4<sup>th</sup> IPCC Assessment highlights 23 (!!!)  
and uses 15 models, why wouldn't we use  
at least two?



# 5) Water risk = context

## WRF Upgrade: Linking to Context Based Water Targets



Sustainability & Water Risk Mitigation

### BUSINESS AS USUAL

Top-down, global targets for facility water use, efficiency & pollution reduction

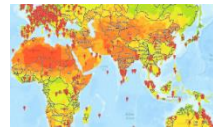
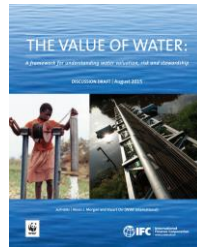
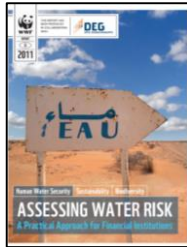
### CONDITIONAL WATER TARGETS

Draws from basin & operational water risk conditions to inform focus

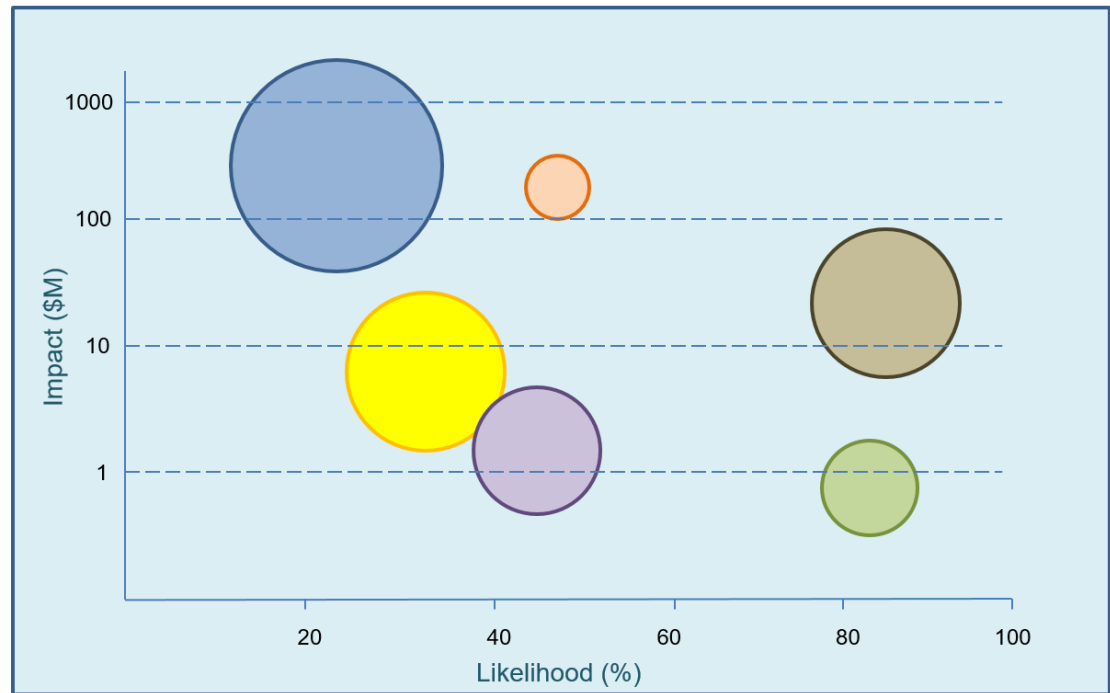
### INITIAL CONTEXT-BASED WATER TARGETS

Draws from a specific "CBWT method" and a hydrological model to inform quantitative thresholds.

Time & Resources



- **Logic model** to link water risk events to financial impacts (“stress testing”)
- User guided
- Informed by WWF, Veolia, Equarius +
- Excel → Online



**Financial Value Elements:** 1. Operational & Maintenance costs | 2. Administrative & Regulatory Costs | 3. Capital costs | 4. Lost Revenue impacts | 5. Financial Costs | 6. Social & Natural Capital Costs

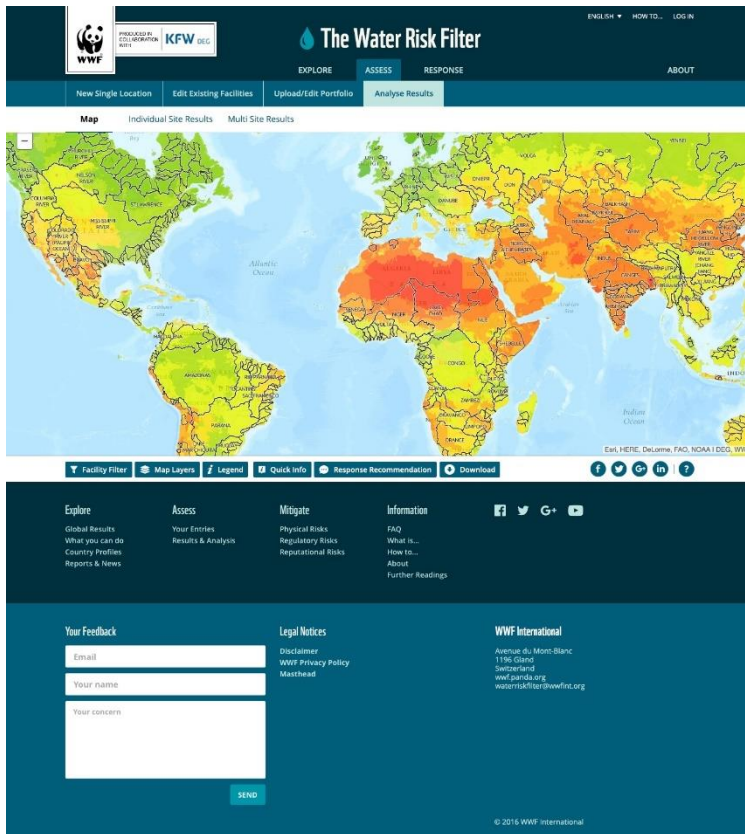
○ Bubble size reflects average aggregate total value for each financial value element

A new tool to more rigorously think through how water risk can affect the financial value of assets



# Water Risk Filter

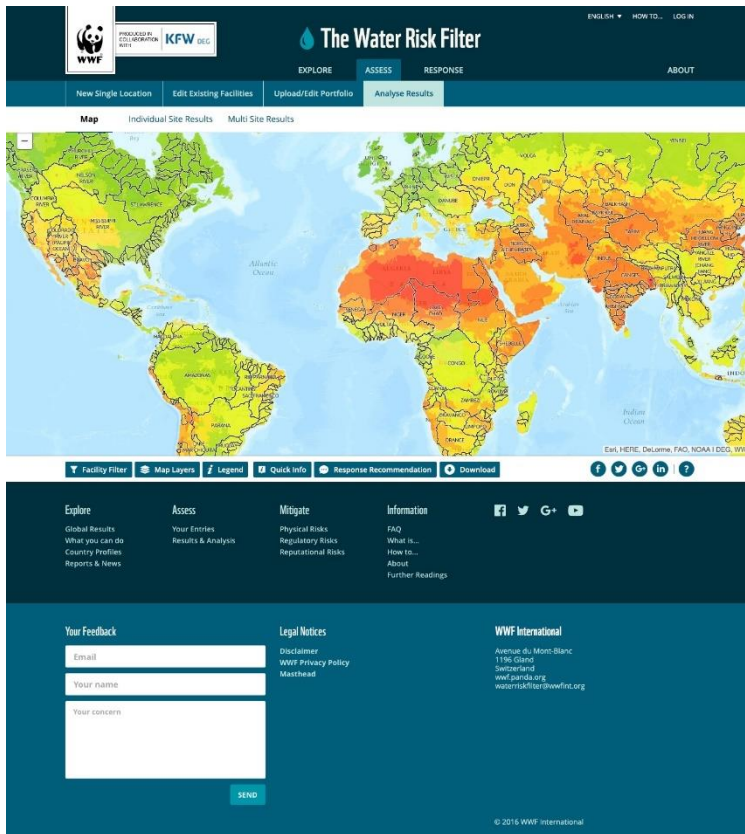
## Summary & overview of upcoming upgrades



1. New interface (cleaner, simpler, intuitive, more powerful)
2. Indicator updating (basin & corporate) with improved questionnaire
3. New, assessment-linked risk mitigation toolbox
4. Additional high-resolution areas
5. Additional (WWF) basin data
6. New business model
7. Enhanced communications (& links with Aqueduct)
8. Valuation module



# What have we learned about water risk, context and improvement opportunities?



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THANK YOU!



# ADDITIONAL BACKGROUND SLIDES

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# Water Risk Filter

## Major Change #1 – New Interface



The screenshot displays the Water Risk Filter website interface. At the top, there is a navigation bar with the WWF logo, a 'PRODUCED IN COLLABORATION WITH KFW DEG' badge, and the title 'The Water Risk Filter'. Below this is a secondary navigation bar with 'EXPLORE', 'ASSESS', 'RESPONSE', and 'ABOUT' tabs. The main content area features a world map color-coded by risk level, with a legend and various filter options like 'Facility Filter', 'Map Layers', and 'Download'. A footer section contains links for 'Explore', 'Assess', 'Mitigate', and 'Information', along with a 'Your Feedback' form and 'Legal Notices'.

- Simpler
- Intuitive
- Flexible
- Faster
- New colours
- New branding
  
- **In short:** easier & more powerful



# Water Risk Filter

## Major Change #5 – Data & WWF Basins



### Serve additional basin data

### WWF basin story maps

- Details about WWF basins (what, why, how)
- Stories + pictures + videos + maps to illustrate our work

The screenshot displays the 'The Water Risk Filter' website interface. At the top, there is a navigation bar with 'EXPLORE', 'ASSESS', 'RESPONSE', and 'ABOUT' tabs. Below this, a 'Ganges - Priority basin' story map is shown. The map includes a legend for 'Cities and their issues' with categories like Sugar, Pulp and Paper, Future focus cities, Domestic sewage, Religious tourism, Tanneries, and Metalware. A sidebar on the left provides details about the Ganges basin, including its location in India and the specific issues being addressed, such as pollution and unsustainable water use. The bottom of the page features a footer with navigation links for 'Explore', 'Assess', 'Mitigate', and 'Information', along with social media icons and contact information for WWF International.



# Water Risk Filter

## Major Change #6 – New Business Model



We will offer external users 3 services:

- 1. For those who have time:**  
**A free, easy-to-use, user-led tool** to explore, assess, and respond to water risks
- 2. For those who seek simplicity:**  
An annual subscription that simplifies your life by providing **annually updated & customized water risk assessment** that provide you with customized site and corporate water risk analysis and recommendations.
- 3. For those who need details:** A bespoke, **in-depth water risk analysis** that draws upon our water stewardship experts to create a detailed report customized to your specific needs (e.g., supply chains).



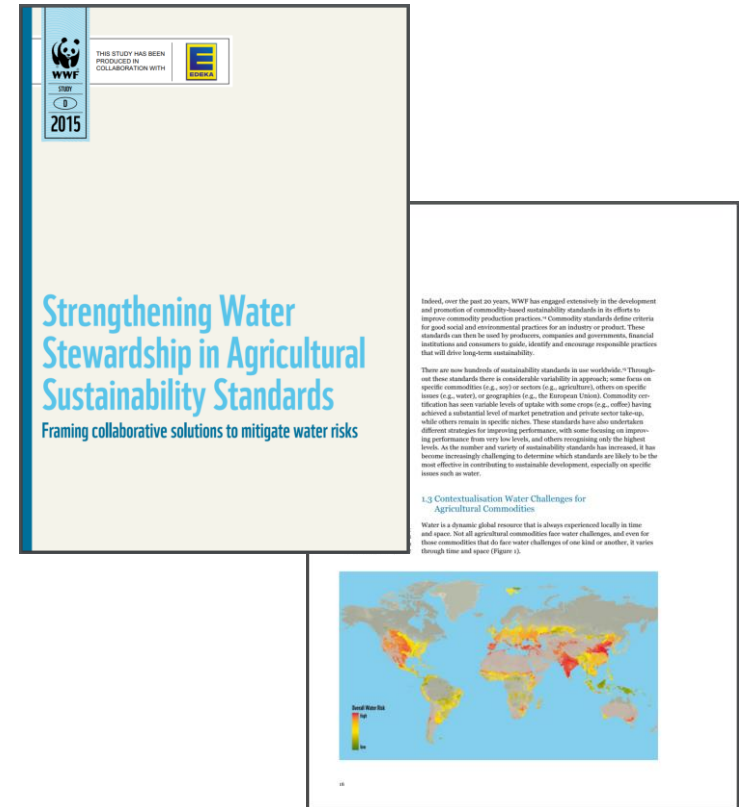


We will be enhancing our communications efforts:

**1. Water Risk reports:** WWF will begin to generate a series of water risk reports & maps to create interest and grow awareness of water risk & stewardship.

**2. Collaboration:**

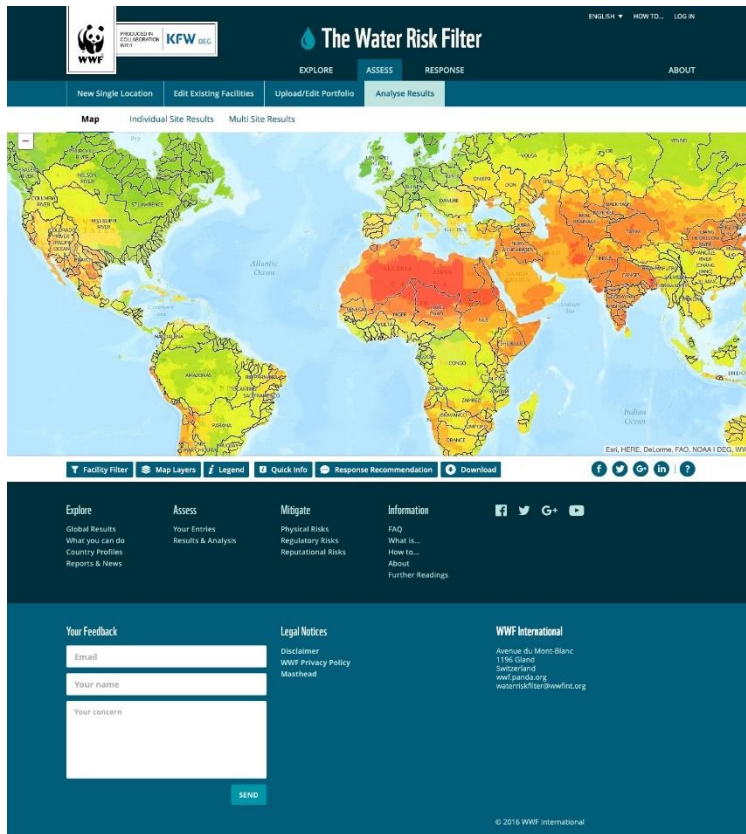
WWF is working with WRI to engage in joint communications, projects (e.g., CBWTs), publications to align and explain how our tools complement one another.





# Summary

## Overview of major changes



1. Water risk assessment as a field continues to learn, shift, and grow
2. Tool developers are responding to user needs and lessons learned
3. Water Risk Filter will be rolling out a major shift this fall/winter



# Water Risk Filter

## Developing a sub-structure



Risk Type	Risk Sub-Type
Physical	Quantity – Scarcity*
	Quantity – Flooding*
	Quality*
	Ecosystem Service Status*
Regulatory	Enabling Environment (Laws & Policy)
	Institutions & Governance
	Management Instruments
	Infrastructure & Finance
Reputational	Community cultural importance
	Media Scrutiny
	Corporate trust
	Community conflict / Tenure Risk

These elements are the master variables in determining flows/consistency of availability, physical impairment and general water use

These elements are generally recognized as the drivers of water governance (be it via SDG 6.5 framework/IWRM principles, or OECD framework)

These elements are some of the key environmental drivers of reputational risks (most of which is driven by operational water risk)

\*Climate change projections (coming)



# Water Risk Filter

## Developing a sub-structure – why?



Risk Type	Risk Sub-Type
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Sub-structure allows for:

- **Adaptation of the WRF to high-resolution country/regional versions** in a manner that maintains the integrity and aims of the system while enabling flexibility of indicators
- **Balanced approach** across the three risk areas (presently the other areas are underdeveloped in the WRF, as well as within competing tools)
- **Supports Freshwater Practice integration** (via Governance in Regulatory Risk, as well as Finance – covered in Regulatory aspect)
- **Enables new data, innovation & partnerships** with players like Globescan, UNEP-DHI, RepRisk, etc.

\*Climate change projections (coming)

# Structuring Regulatory Water Risk

## Two Primary Governance Frameworks

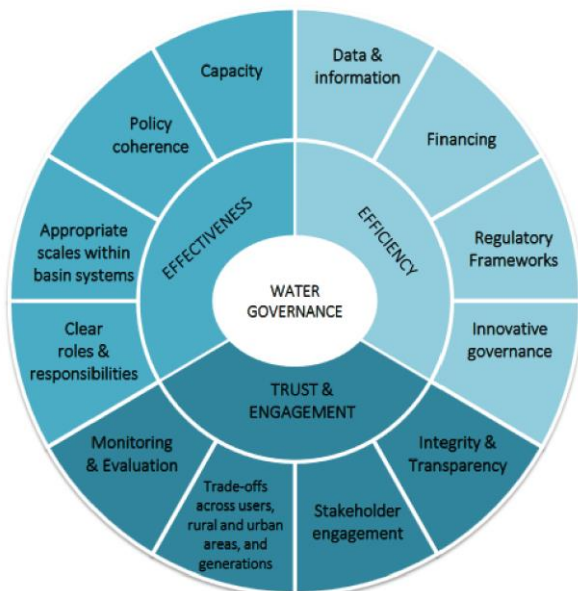


Figure 2. OECD's Principles on Water Governance

### 1. IWRM framework (SDG 6.5.1):

**Pro:** In theory, populated with data in the future by countries; alignment with UNGC (CEO WM) & corporate contributions to SDGs. **Con:** Technically an IWRM framework

### 2. OECD framework:

**Pro:** A dedicated water governance framework with extensive input. **Con:** Not populated with data & less amenable to spatial mapping.

Water Risk Area	Water Risk Sub-Area (per SDG 6.5.1)	Water Risk Sub-Area (per OECD framework)
Regulatory	Enabling Environment (Laws & Policy)	Regulatory frameworks (efficiency); Policy coherence (effectiveness)
	Institutions & Governance	Innovative governance (efficiency); stakeholder engagement + integrity & transparency (trust & engagement); Capacity + clear roles & responsibilities + appropriate scales (effectiveness)
	Management Instruments	Data & Information (efficiency); monitoring & evaluation + trade-off mechanisms (trust & engagement)
	Infrastructure & Finance	Financing (efficiency);