

# Water Security: Challenges and Opportunities

Swapna Patil  
WBCSD

# THE WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT

## WHAT WE DO

**MISSION:** To accelerate the transition to a sustainable world by making more sustainable business more successful.

**VISION:** is to create a world where more than nine billion people are all living well and within the boundaries of our planet, by 2050.



### GLOBAL

200 members span across the globe and all economic sectors.



### UNIQUE PLATFORM

Access to a sustainable business community and a safe space to exchange ideas and information.



### CEO-LED

WBCSD is oriented towards and led by member-company CEOs.



### MARKET-DRIVEN

Put business at the center of sustainable development.



# WBCSD'S TARGETED SOLUTIONS

Programs

Projects



## Circular Economy

Factor10  
Circular Economy Hub  
Plastics\*

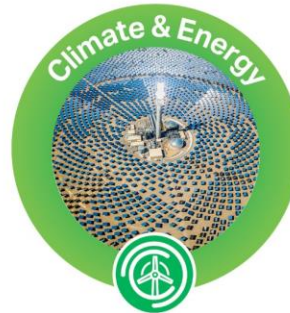


## Sustainable Cities

City Dialogues  
Climate Action in Cities  
SBT4buildings  
Built Environment\*

## Transforming Mobility

SIMPlify  
Transforming Urban Mobility



## Climate and Energy

Climate Action and Policy  
REscale  
Transforming Heavy Transport  
Natural Climate Solutions  
New Energy Solutions  
SBT4utilities



## Food and Land Use

Food Reform for Sustainability  
and Health ( FReSH)  
Climate Smart Agriculture  
Soft Commodities Forum  
Water Policy and Advocacy  
Water Solutions



## Social Impact

Business and Human Rights  
Future of Work

## SDGs

SDGs Action & Policy  
SDGs Sector Roadmaps

## Sustainable Lifestyles

Sustainable Lifestyles



## Business Decision-Making

Enterprise Risk Management  
Governance & Internal Oversight  
Measurement & Valuation  
Integrated Performance Management

## External Disclosure

Assurance & Internal Controls  
Purpose-driven Disclosure  
Reporting matters  
The Reporting Exchange  
TCFD Preparer Forums

## Investor Decision-Making

Aligning Retirement Assets

\*Scoping

## Sector Projects

Tire Industry Project

Forest Solutions Group

Global Agribusiness Alliance

## Enabling Functions



# WBCSD WATER LEADERSHIP GROUP\*



Rabobank



TOYOTA

\* \*Is the core/strategy group and includes companies closely engaged at the global level and in India  
Several other companies are engaged on projects, or are on Water Policy & Advocacy group





# WBCSD WATER SOLUTIONS

Help businesses become more water secure while contributing to a more water-secure world

## Advocacy

**Scaling up business voice on water**

Stockholm WWW

World Water Forum

UN High Level Political Forum

UNFCCC COP

## Projects

**Scale-up business action in water stressed geographies**



**Water stewardship**  
*(including WASH)*



**Water-smart agriculture**



**Circular water management**



**Water metrics and valuation**

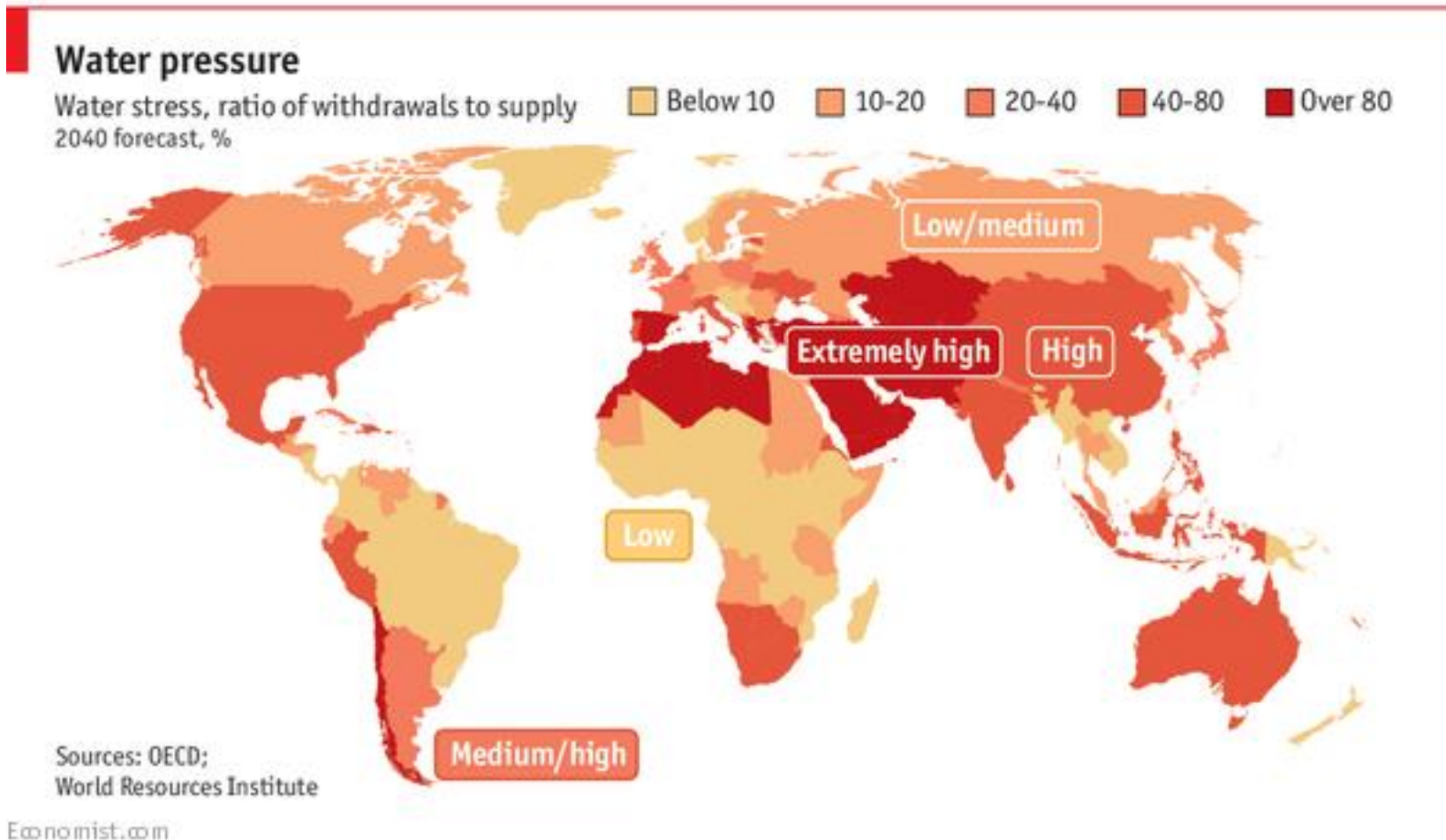
# Water Security: Challenges and Opportunities

Swapna Patil  
WBCSD



# WATER – URGENT RISK FOR SOME PARTS OF THE WORLD

WBCSD WATER – GLOBAL PROJECT WITH SIGNIFICANT INTEREST IN INDIA



BBC Sign in News Sport Weather Shop Reel Travel More

## NEWS

Home Video World Asia UK Business Tech Science Stories Entertainment & Arts

Asia China India

### India facing the 'worst water crisis in its history'

© 15 June 2018

f t Share

GETTY IMAGES

Thousands of Indians die each year as they have no access to clean water

# Chennai industries, IT firms face closure due to water shortage

TE Raja Simhan | Chennai | Updated on October 17, 2018 | Published on October 17, 2018

Save

## No water means no business

### Climate change may cause water shortage for India's power plants: Report

Cooling is critical to a plant's ability to operate --without it, machinery can overheat, causing a shutdown that could disrupt the flow of electricity to homes and businesses

Press Trust of India | Washington  
Last Updated at September 23, 2019 12:08 IST

### MRPL capacity utilisation hit by water shortage

The refinery has three crude units. A 60,000 bpd crude unit and some secondary units are already shut for routine maintenance.

### In an increasingly water-scarce India, life's changing for steelmakers, and how

Two of India's biggest steelmakers, JSW Steel & Tata Steel, have flagged risks due to water shortages.

Bloomberg | Updated: Jul 12, 2019, 01:52 PM IST

Five years on, India may not even get a chance to solve its on-going water crisis risking hundreds of millions of lives



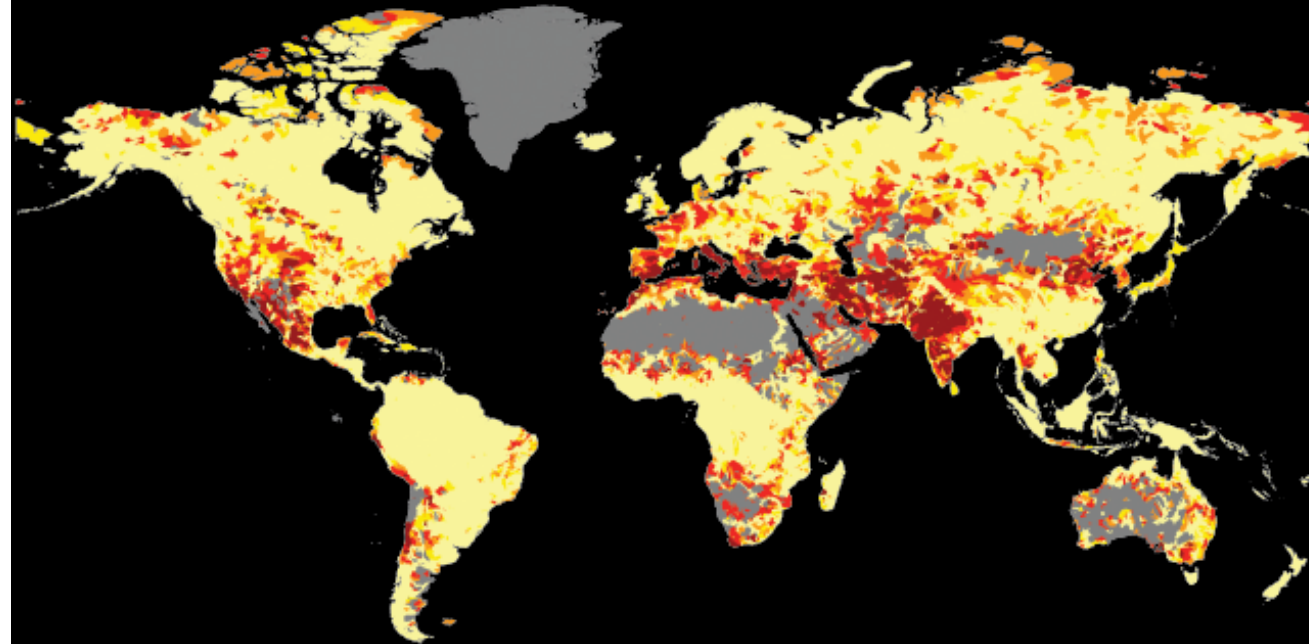
# The stress

India ranks 13<sup>th</sup> for overall water stress

India population = 3 X of the other 17 extremely high water stressed countries combined.

## 17 COUNTRIES FACE EXTREMELY HIGH WATER STRESS

### BASELINE WATER STRESS

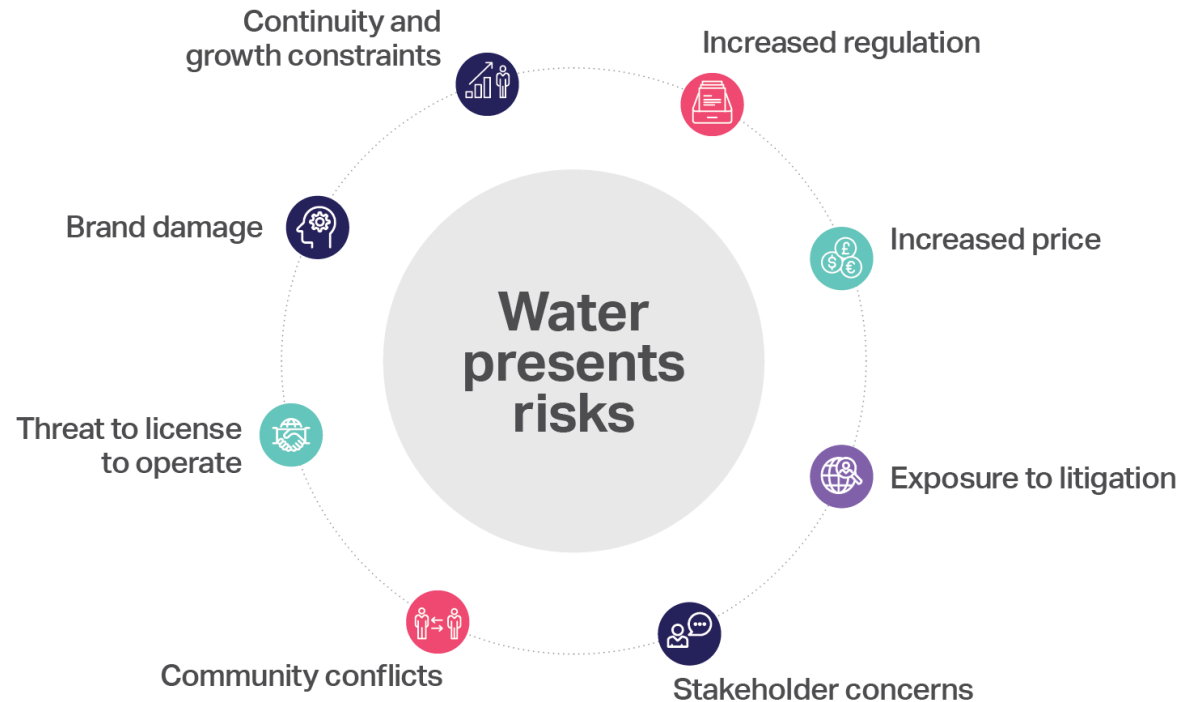


Source: [wri.org/aqueduct](http://wri.org/aqueduct)

 AQUEDUCT™

 WORLD RESOURCES INSTITUTE

# BUSINESSES FACE RISKS FROM WATER STRESS...



...AND HAVE OPPORTUNITIES TO GRASP

Efficient conveyance and irrigation systems represent a USD 31 billion per year in India by 2030 \*.



# Water offers opportunities

Cost savings



Competitive advantage



Sale of new  
products & services



Increased resilience



Enhanced reputation



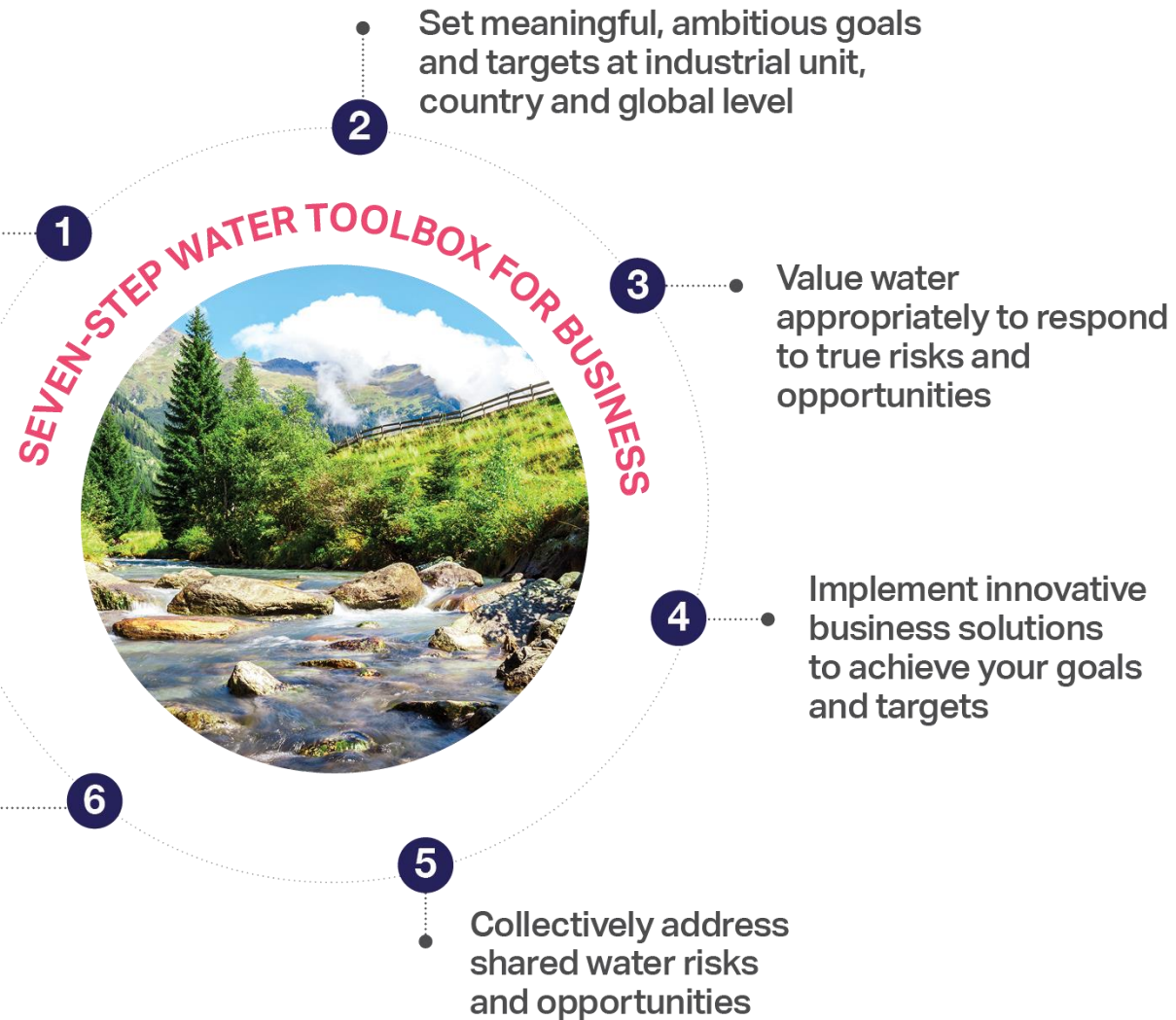
## CEO Guide to **Water**

Building resilient business

Ensure board level oversight  
to integrate water into  
business strategy  
and planning

Advocate for policy and  
finance enablers by calling for  
policies that support business  
investment in water-smart  
solutions

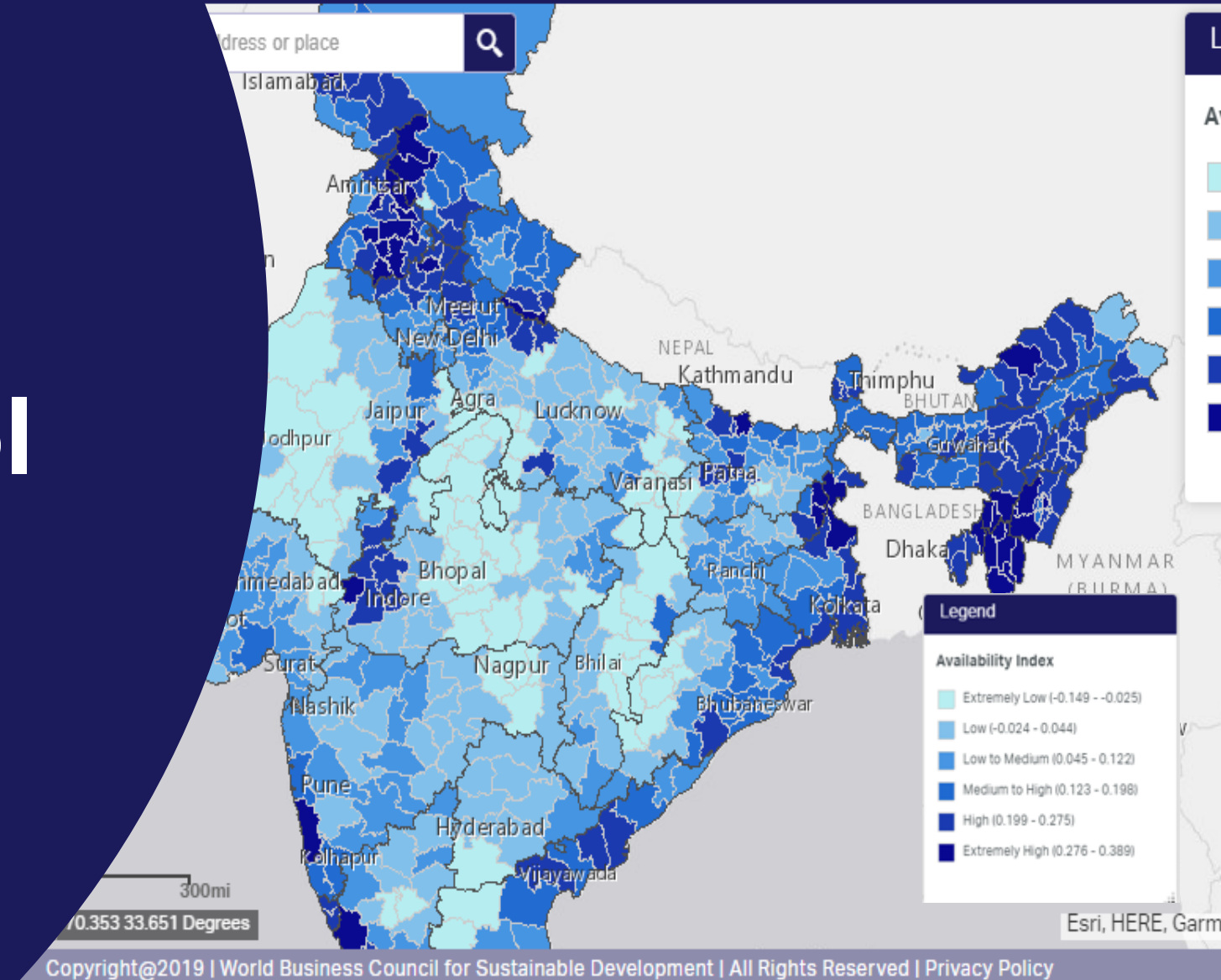
Raise awareness and create  
engagement among your  
employees, suppliers,  
and consumers





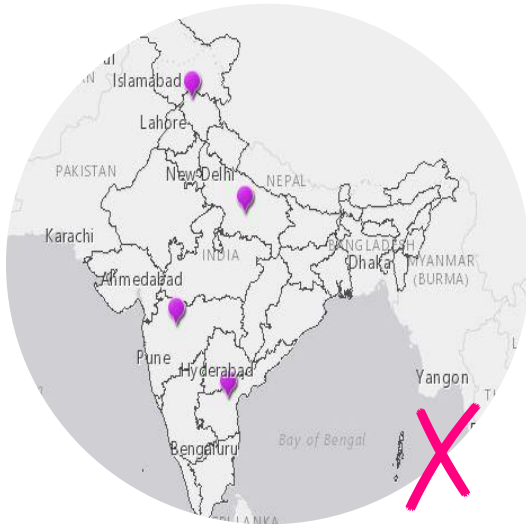
# India Water Tool

[www.indiawatertool.in](http://www.indiawatertool.in)



# INDIA 2012

NO TOOL THAT CAN MEET THE NEEDS OF THE INDUSTRY



Support company-wide water risk assessment across the country?



Using data accepted by the Indian government?



At a level of granularity that is useful?



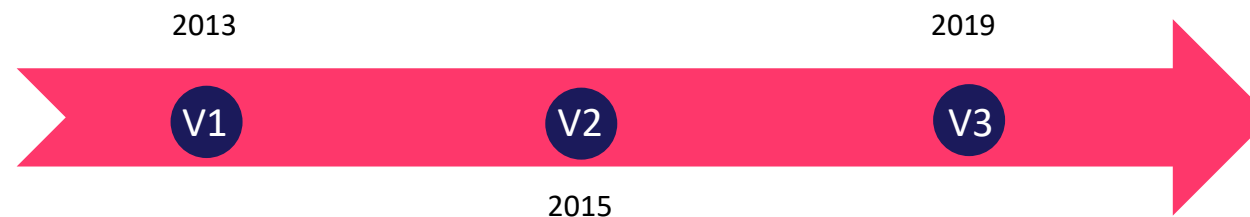
# INDIA WATER TOOL



An open-access web application developed by businesses and key partners in India to assess water risks and plan solutions for better water management

[www.indiawatertool.in](http://www.indiawatertool.in)

- Brings data from Government of India, and other global/national organizations
- Data on water availability, quality and stress indicators
- Helps businesses analyze water risks and plan interventions for water management
- **Supports corporate level decision making!**



*Improving data access, granularity, and decision-support capability.*

# THE COLLABORATION

Coordination by



Working Group members  
(Involved in one or more phases)



Knowledge and additional funding partners



Data providers



Application developers  
(Involved in one or more phases)





# INDIA WATER TOOL

## KEY FEATURES

### 1. Brings Government/widely accepted data on an open-access platform.

Open access data will be key to driving coordinated action by various stakeholders

### 2. Easy to use and business-friendly, keeps data confidential

Provides data-led approach for planning corporate water-stewardship strategies, keeps business-critical data confidential

### 3. Version 3 brings a solutions interface

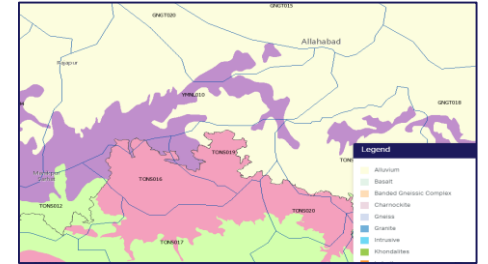
Data on type of geology, aquifer information, localized solutions' data for better water management

### 4. Aids in analysis and reporting of water-performance metrics

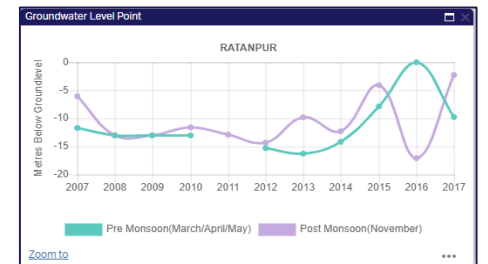
Summarizes user-information on water (withdrawal, consumption etc.) into key efficiency metrics for review of performance across locations and internal/external reporting.

**The India Water Tool is a unique example of responsible data-use and demonstrates industry-leadership in the critical area of Water.**

**The tool has been serving as a platform for dialogue between industry and government – the intent is to co-develop solutions for improved water management in India.**



Watershed boundaries with aquifer features



Analytical features that aid business decision-making





# INDIA WATER TOOL

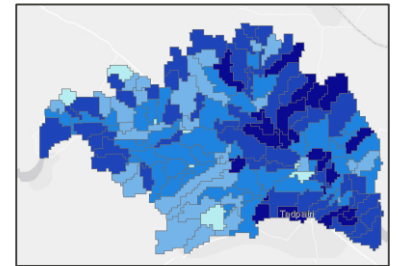
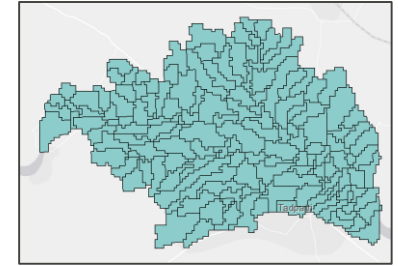
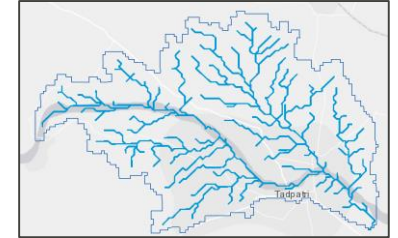
## AND HOW IT IS ADVANCING BUSINESS ACTION

**Over 38,000 unique users of Version 2 (Feb 2015-2019).**

- Several companies are using the tool for corporate water-risk assessment.
- Consulting organisations use it to analyse water risks for their clients
- Indian Railways – operating the fourth largest railway network in the world – use it to analyse their A1 and A2 category railway stations for water risk and prioritization.
- District administration authority is using it to get site specific information against corporate applications for setting-up/ expansion in parts of the district

### **Working Group members conducted detailed modelling exercises at the high-risk sites**

- Results from these primary studies incorporated on India Water Tool 3.0
- Localised data helps build a further granular interface for the tool
- Studies provide a complete picture of the watershed and recommendations for recharge and improvement of water-use efficiency – of use to all stakeholders
- Implementation initiated at 2 of the 4 sites that conducted studies



Watershed data and outputs derived from modelling studies

# QUESTIONS

# Swapna Patil

Manager – Water

[patil@wbcsd.org](mailto:patil@wbcsd.org)

A large, artistic photograph of a water splash, showing the surface of the water and the bubbles rising from it, serving as a background for the lower half of the slide.

# THANK YOU