



# Business action on Valuing Water

WBCSD webinar  
22<sup>nd</sup> March 2021



Part of the

**WE VALUE NATURE**  
10-DAY CHALLENGE



# Welcome and Introduction

Tom Williams, WBCSD

A photograph of a bright sun rising over a layer of white clouds, with the sun's rays fanning out across the sky.

# **Business leadership for a sustainable future .**

## **World Business Council for Sustainable Development (WBCSD)**

200 global companies united around a common vision  
creating a world in which over 9 billion people are all living well  
and within planetary boundaries by 2050

A photograph of a beach covered in plastic waste, including bottles, bags, and other debris, illustrating the problem of waste in the current economy.

## Circular economy

No waste

An aerial view of a city street with cars and white circular markings on the pavement, suggesting a focus on urban mobility and infrastructure.

## Cities & Mobility

Clean & connected

A photograph of several wind turbines on a grassy hill under a cloudy sky, representing renewable energy.

## Climate & Energy

Net zero

**WBCSD work program focused on 6 system transformations**

A photograph of a person in a plaid shirt working in a field of green plants, possibly a vegetable garden or farm.

## Food & Nature

Healthy people, healthy planet

A photograph of a busy city street with people walking and riding bicycles. A delivery person on a bicycle with a Deliveroo box is in the foreground.

## People

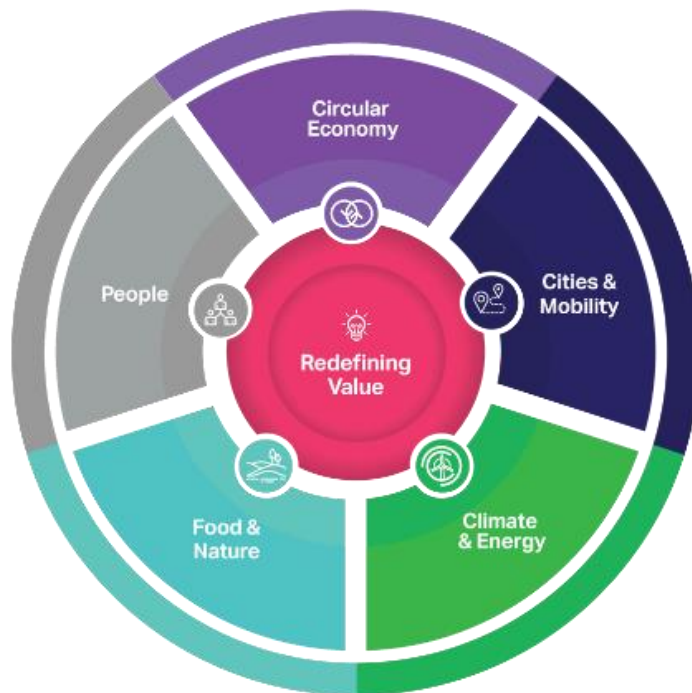
Meeting basic needs of all

A photograph of a city skyline at night with a digital overlay of data and numbers, representing sustainable capitalism and value.

## Redefining Value

Sustainable capitalism

# WBCSD Food and Nature Program



Program  
Areas

Projects &  
Work  
Streams

Sector  
Projects

Enabler  
Service  
Projects

Hosted  
Platforms

## Food & Agriculture

### Scaling Positive Agriculture

- Agriculture for 1.5
- Soft Commodity Forum
- Sustainable Rice Landscapes

### FReSH (Food Reform for Sustainability & Health)

- Positive Nutrition
- Positive Consumptions
- Plant Forward
- Sustainable Protein
- True Value of Food

### GAA Equitable Livelihoods (Global Agribusiness Alliance)

- Agri-SME Finance
- JRT Investment Partnership Network
- Human Rights
- Farm of the Future
- Post-harvest Loss

## Nature & Water

### Nature Action

- Science-based Targets for Nature
- Nature-based Solutions
- Policy Development & Business Leadership

### Water

- Water Stewardship
  - Delivering for SDG 6.3
  - WASH
- Targets & Circularity Metrics
- Valuing Water

## Forest Solutions Group

## Policy & Advocacy || Finance Mobilization



# Today's objectives

1. Learn from leading businesses how they approach valuing water
2. Discuss sector-specific issues and drivers to valuing water
3. Discuss how WBCSD can support further business action on the topic

# Agenda

1

## Background

Deepa Maggo, WBCSD

2

## Companies speak

Laurent Bellet, EDF  
James Chamberlayne, Natems

3

## Breakout groups & report-back

Willemijn-Bouland Oosterwijk,  
Dunea  
James Chamberlayne, Natems

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## Reflecting together: Valuing water showcases

Alexandra Freitas &  
Jacobiene Ritsema,  
Valuing Water Initiative

# Housekeeping

- This session is being recorded
- Please mute yourself when you are not speaking
- You can use the chat function to post your questions, comments
- Slides and recording will be made available
- To answer the poll, visit [www.menti.com](https://www.menti.com) and use code 41 50 67 12

# Anti-trust statement reminder

**Avoid any discussion in any conversation of competitively sensitive topics such as:**

- Pricing, costs
- Bid strategies
- Future capacity additions or reductions
- Customers
- Output decisions



# **Background: Business action on Valuing water**

Deepa Maggo, WBCSD

# Business case for valuing water

- Building the business case to act on water

*Alignment of internal stakeholders, building the case for water saving projects*

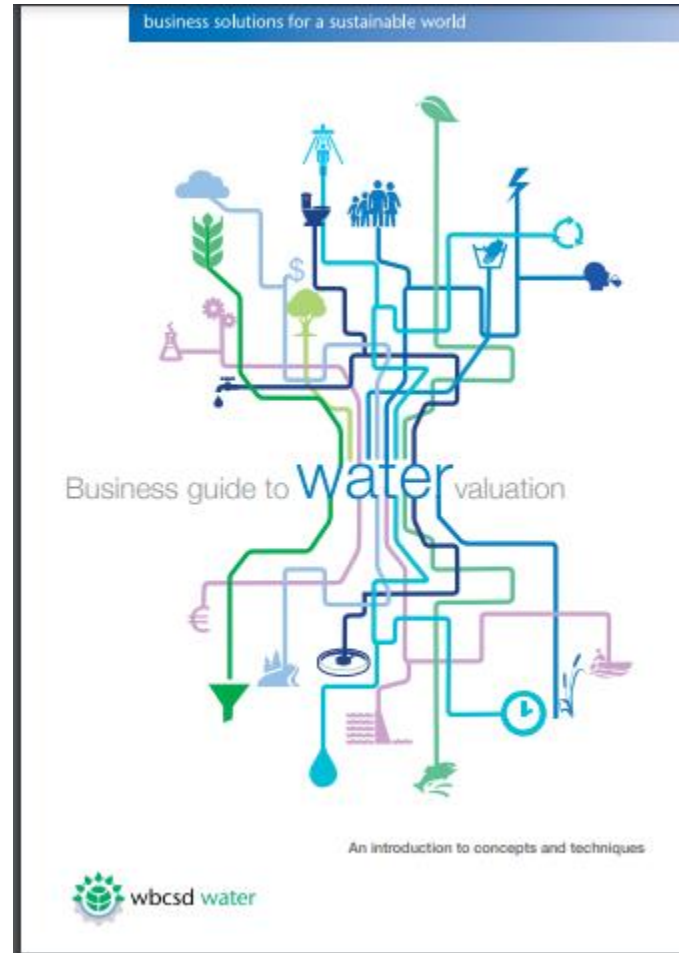
- Ensuring business continuity, or exploring new business opportunities

*Ensuring water security, and exploring new business models*

- Dealing with external stakeholder and delivering shared value

*Water as a shared resource; better management by all stakeholders delivers value to all*

# Business Guide to Water Valuation



- Business-specific guidance on the main concepts and techniques
- 25 valuation-related business cases from 10 sectors


[illegible]

A person wearing a light-colored shirt is kneeling in a field of tall green grass. They are holding a handheld electronic device (PDA) and using a stylus to interact with it. The device is connected to a small sensor or probe that is inserted into the soil near a plant. The background shows more of the field and some trees in the distance.



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# Water value – Water Impact Pathway



## Valuing the impact of food:

Towards practical and comparable monetary valuation of food system impacts

A report of the Food System Impact Valuation Initiative (FoodSIVI)  
May 2020





~2 pp

### FS Impact Protocol: Water

Why to measure, the FS problem and the Science Target

Why to measure, the opportunity/incentives

What to measure, e.g. footprint

Target, e.g. Eat Lancet, FABLE

What to measure, e.g. footprint

Calculation of Impact, e.g. pathway

Impact, measure of value of footprint reduction (SDG, abatement cost)

~10 pp

References



## Companies speak



Source : Médiathèque EDF

# Valuing Water

## Durance Valley

WBCSD – World Water Day 2021

03/22/2021

Laurent BELLET - Water & Energy Advisor  
EDF - Sustainable Development Division



# DURANCE VALLEY

2 seasonal reservoirs

Serre-Ponçon : 1200 Mm<sup>3</sup>

Sainte Croix : 300 Mm<sup>3</sup>



13 dams

21 power plants

2000 MW (peak)

6500 GWh/yr



250 km channel

Watershed: 11 700 km<sup>2</sup>

Average flow: 180 m<sup>3</sup>/s  
(min. 30 m<sup>3</sup>/s)

Flash flood: 2700 to  
6000 m<sup>3</sup>/s (1994/1882)




# Identified Values around Durance-Verdon (1)

TOPICS	CATEGORY	VALUES
<b>Electricity</b> 	ELECTRICITY PRODUCTION	50% of the electricity of the PACA Region 2,000 MW can be mobilized in 10 minutes
	OPERATION AND MAINTENANCE	943 jobs directly and indirectly in the PACA Region 150 M€/year of financial contribution
	TAXES AND CHARGES	56 M€/year on average of total taxes/charges paid
<b>Economic values</b> 	DRINKING WATER	150 communities supplied with drinking water (3M people) 363 M€ in turnover and 1005 jobs Key driver of the regional economic development
	TOURISM AND LEISURE ACTIVITIES	395 M€/year in turnover; 4,070 direct jobs Serre-Ponçon : 18.5% of overnight stays in Hautes Alpes Verdon : 28% of overnight stays in Alpes-de-Haute-Provence
	INDUSTRY	Guaranteed water supply for nuclear power generation and research: -CEA Cadarache : 4,685 jobs (direct, indirect and induced) and 130 M€/year in economic benefits -ITER : 1,900 jobs and 100 M€/year in economic benefits 800 local companies relying on water
	IRRIGATION	Securing irrigation water supply : 94,100ha 1.03-1.9 billion €/year of turnover and more than 20,000 jobs

28/10/2015

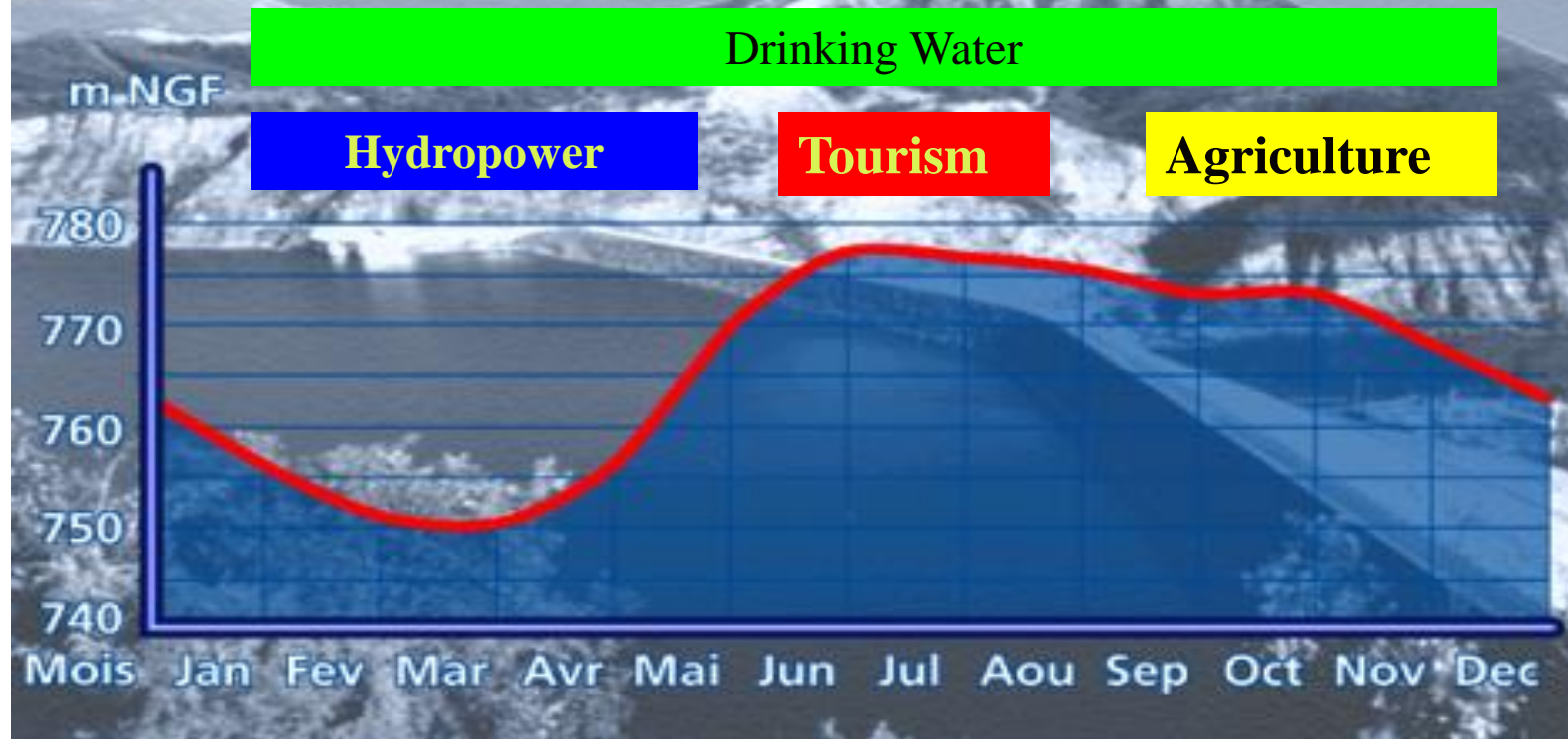
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# Identified Values around Durance-Verdon (2)

TOPICS	CATEGORY	VALUES
<b>Society</b> 	EMPLOYMENT	More than 30,000 jobs secured in the PACA region 1.7 % of regional employment (direct, indirect, induced)
	TERRITORIAL COHESION	Roads and bridges facilitating transport Contribution to participatory water management Land development around lakes
	HERITAGE VALUE	55 000 visitors per year at hydropower sites 4.2 M tourists/year at the lakes
<b>Environment</b> 	GREENHOUSE GAS EMISSIONS	2,1 Mt/year of CO2 emission avoided
	BIODIVERSITY	Discontinuity, reduction of natural flows, pollutant concentration, less varied fish fauna EDF measures for management and environmental preservation and has several environmental programmes
	KNOWLEDGE ACQUISITION	Data collection and knowledge on aquatic ecosystems in the region (biodiversity, hydrology, ...)
<b>Risk</b>  28/10/2015	FLOOD RISK	Reducing flood risk for small and medium floods 113 measurement points allowing timely flood warning
	DROUGHT MANAGEMENT	Reduction and prevention of crisis situations due to integrated water management between conflicting multiple uses

# WATER SAVINGS EXAMPLE

Typical filling curve of the Serre-Ponçon reservoir



# Water savings example: a 3-wins situation

## ► Context of irrigation rights :

- Irrigation : total annual withdrawal of about 1800 Mm<sup>3</sup> (which among 450 Mm<sup>3</sup> are stored in the 2 reservoirs and guaranteed) – 150 000 ha of irrigated lands

## ► Key drivers

- To optimize the water use for EDF operations thus resulting in improved net financial returns, with respect to competing multipurpose uses of water.
- To manage the allocation of regional water resources in this case and address inefficient water use in irrigation.

## ► Approach used

- Water Saving Convention : between EDF and 2 main irrigators / 6-yrs period
- Results of the Economic Study (EDF Parsifal Tool - 64 hydrological years from 1942 to 2004) : **better use of water in time** from an agriculture purpose to an energy purpose (peak periods of electricity demand) is the key driver, **not the volume saved**
- Valuing Water: financial cost of energy (€/KWh) based on current and future prices in France and linked to the energy productivity (m<sup>3</sup>/KWh) and the volume of water used (m<sup>3</sup>) by the hydropower plant



## ► Main Outcomes

- 2000: first Convention – Water saving target : 44 Mm<sup>3</sup> / 2003: first additional agreement – Water saving target : 65 Mm<sup>3</sup> / 2006: second additional agreement – Water saving target : 90 Mm<sup>3</sup> -> remuneration by EDF for the saved water with incentives to outreach the targets
- Agricultural annual water consumption decreased from 323 Mm<sup>3</sup> in 1997 to 223 Mm<sup>3</sup> in 2006
- New convention signed in 2014 for 9 years until 2021 : 10 Mm<sup>3</sup> of additional annual water saving.
- The Water Agency is now involved and support the **increase (water) solidarity between upstream and downstream**
- >50% of the saving water can not be turbined due to flow release constraints in the Etang de Berre: **the third winner is ecosystems**

# Water savings example: a 3-wins situation

## ► Key lessons learned :

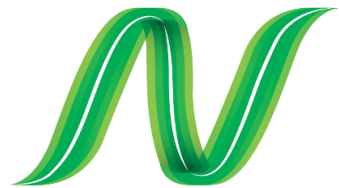
- Dialogue is essential to understand the benefit for both parties and create a win-win situation
- Adapt to the local changing context and give perspective to the stakeholders on the long-term
- Use robust and relevant data and tools to bring objective information to the negotiation table
- Accompany them on the financing of the investments to be realized to generate savings of water
- Monitor that these operations generate a real and fast profit to the different stakeholders
- Start initially with a moderate ambition, i.e. a limited number of stakeholders and a reasonable target for water savings
- Expand the approach to a larger number of stakeholders once positive results are achieved
- Set up a local governance for savings and a global governance (basin) for the allocation of these savings

## ► 3 take aways from water valuation:

- Valuing water is a useful tool to objectify the debate and motivate the stakeholders to change their water use
- Valuing water should focus on one topic (irrigation in this case) in case of multiple uses of water to avoid complexity and no-deal
- Dialogue is essential to explain and convince of the value and interest of the approach

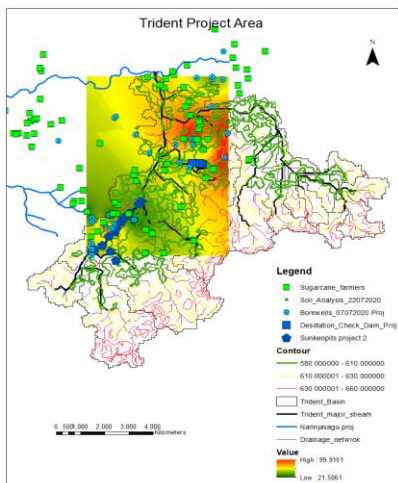


## Questions



# Natems Sugar Limited

James Chamberlayne  
Chief Sustainability Officer



# Our Approach



India: 4% of global freshwater supply. 18% of global population



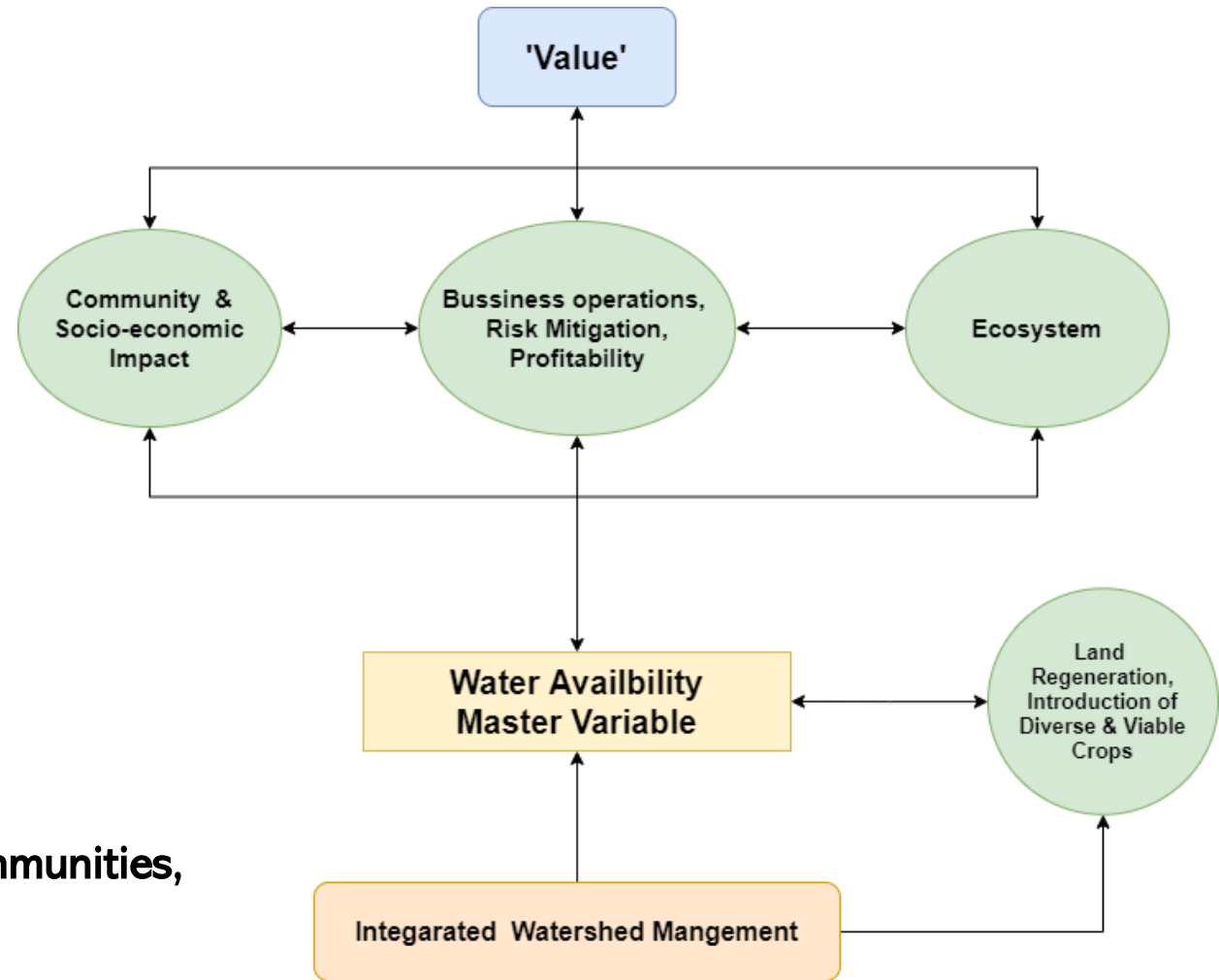
Agriculture uses 91% of freshwater supply



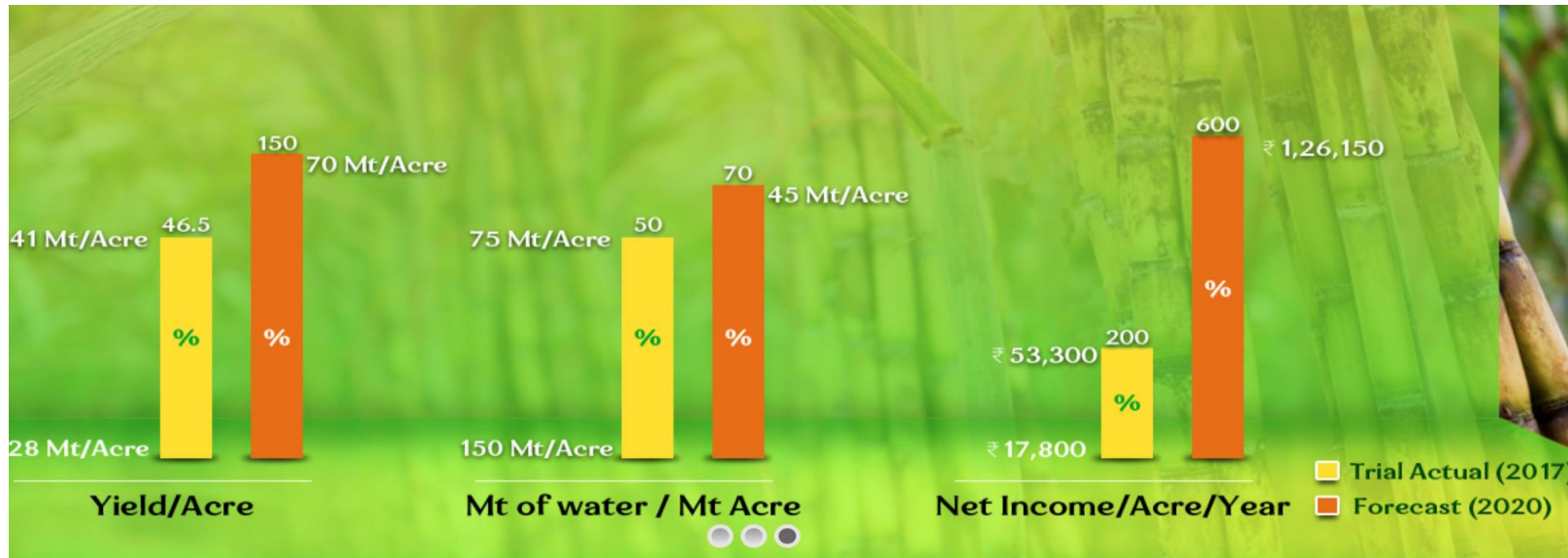
India's sugar sector

- 1% of GDP
- Over 6 million farmers
- Over 500 mills

Water – central to ecosystems, farmers and communities, and company operations = shared value.



# Rural credit and irrigation



Water usage (% of current average consumption)	60%	50%	45%	50% plus intercrop
% increase in income	60	168	506	527
Impact within year 1 (Return on every rupee for farmer)	1.5	4.22	12.72	13.25
Impact over 5 years (Return on every rupee invested for farmer)	7.5	21.1	63.6	66

## Phase 1

- USD 500,000
- 1,000 farmers
- Enabled access to drip-irrigation.
- Immediate return on investment for farmers and company.
- But, need more holistic approach moving forward.

## Scale-up

- 2021- apply learnings.
- Integrate with wider Integrated Watershed Management.



# ICRISAT and Integrated Watershed Management

- Phase 1 (12 months).
- Indigenous solutions and modern innovations in science.
- Farmer training.
- Intercropping and facilitation of climate-smart high-nutrition crops.
- Innovative farmers and rural entrepreneurs for outreach.



2000  
Farmers



Drought Prone  
Area



19000 m<sup>3</sup>  
Groundwater Recharged



4525 m<sup>3</sup>  
Total Storage Capacity



**Solidaridad**  
Network Asia



Netherlands Enterprise Agency

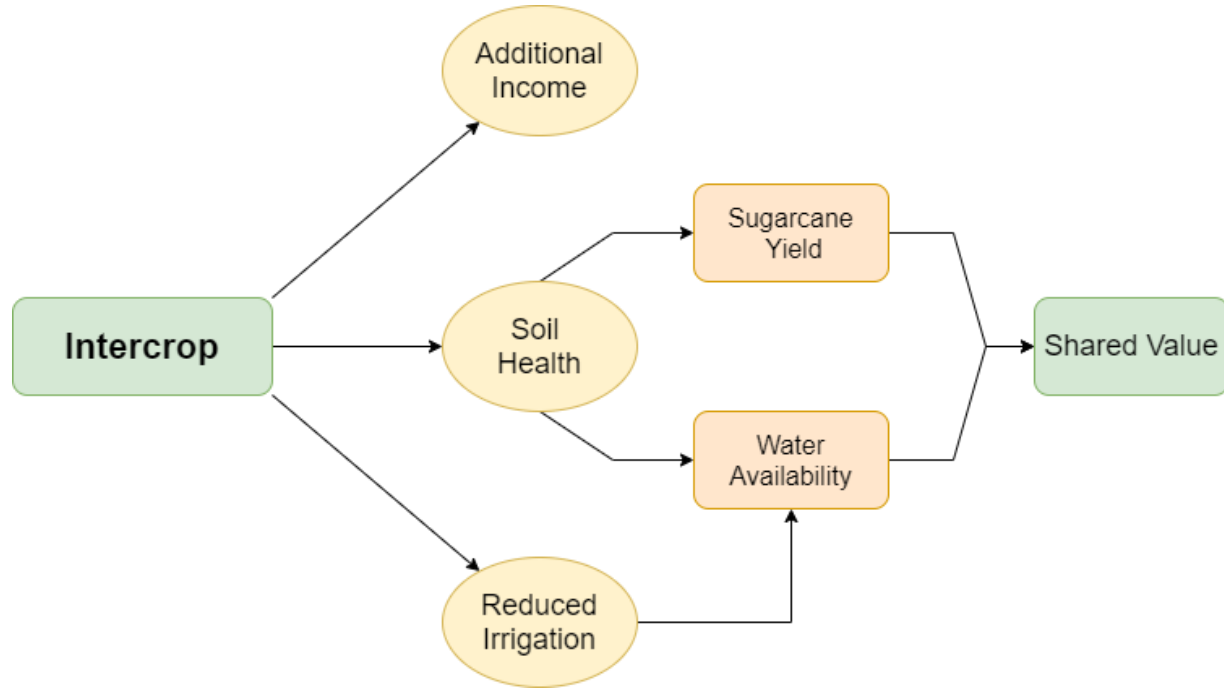
**ICRISAT**  
INTERNATIONAL CROPS RESEARCH  
INSTITUTE FOR THE SEMI-ARID TROPICS



Neta Analytics



# Intercrop's impact on water and productivity



“ I was not expecting the difference in yield. But at the end of season the yield of intercrop sugarcane is **30% more than** the solo crop. Now, this season I am going to take intercrop for whole area

**-Jaipal Reddy**



**96% reduction in irrigation time during intercropping period**

Top Left: Jaipal Reddy with ICRISAT and Natems researchers.



Bottom left: Innovative farmers sharing with the community.



# Scale up plans: Backed by science

## Bill Gates Highlights Impact of CGIAR: Feeding our Future

From  
CGIAR

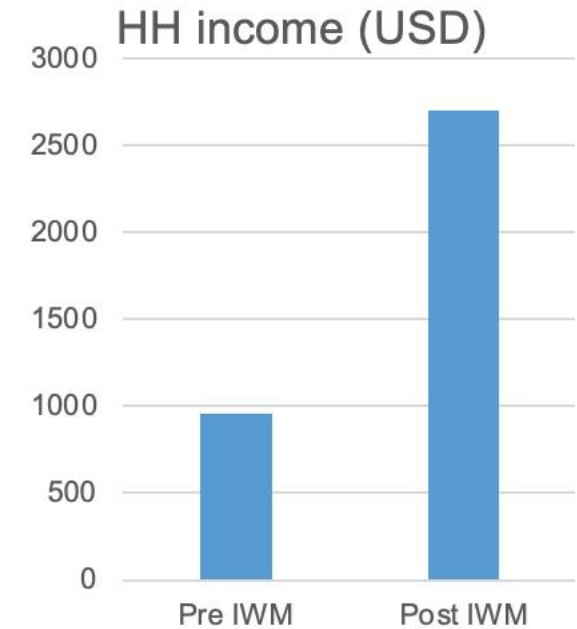
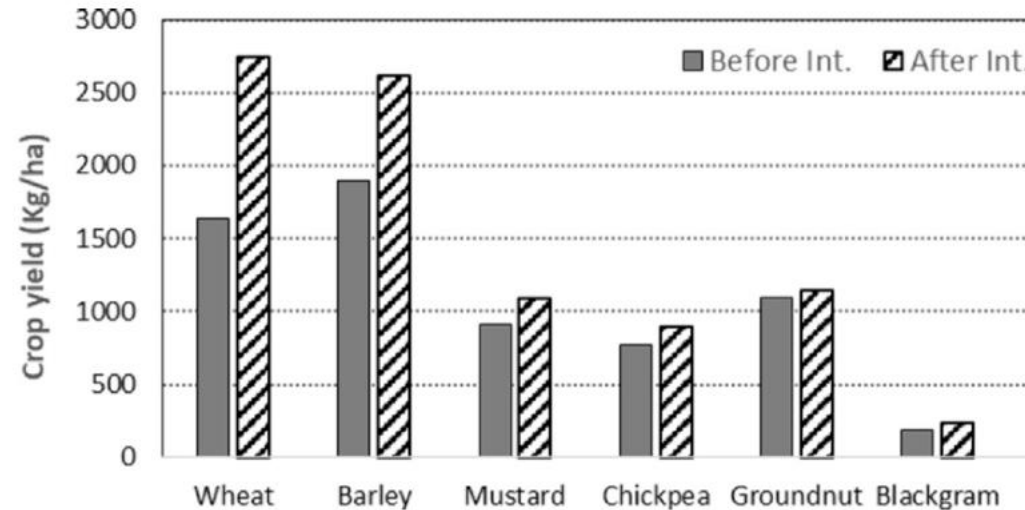
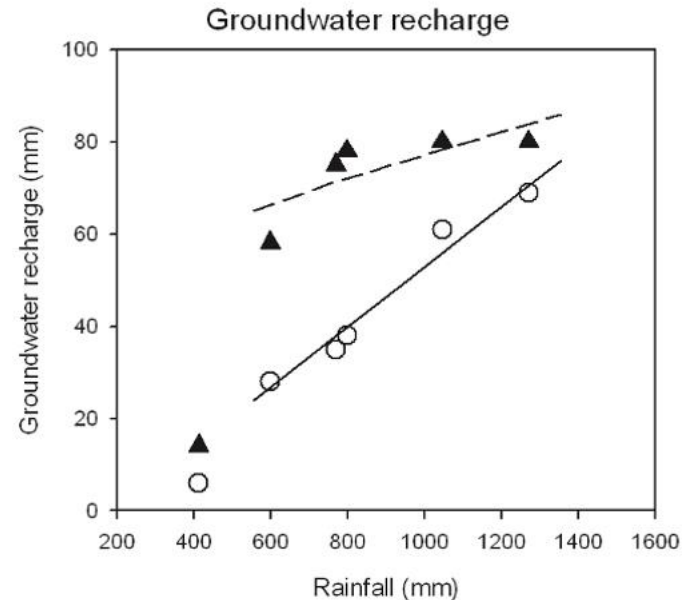
Published on  
10.07.19

Challenges  
Climate, Nutrition, Sustaining  
FOOD AVAILABILITY

Share this to :



## REJUVENATION IN BUNDELKHAND: HOW AN UPLAND WATERSHED GOT ITS GROUNDWATER BACK



Garg et al., (2020). Building climate resilience in degraded agriculture landscapes through water management: A case study of Bundelkhand region, Central India.

# In summary

- Invest in tools
  - Digital innovations.
  - Indigenous solutions.
  - Underlying theories and methodologies.
- Invest in science and R&D
- Invest in farmers and communities



For more information and enquiries:

James Chamberlayne [james@natems.com](mailto:james@natems.com)



## Questions



## Breakout discussions

Moderators:

Willemijn Bouland-  
Oosterwijk, Dunea (Industry)

James Chamberlayne,  
Natems (Agriculture &  
Forestry)

# Key issues and perspectives on valuing water

2 sector-groups:

- (1) Industry
- (2) Agriculture and forestry

Answer from the perspective of your sector:

- 1. What are the business drivers to valuing water?
- 2. What methodologies/approaches (if any) have you used for valuing water?
- 3. What are the key issues in the way of businesses valuing water?
- 4. How can WBCSD support the scale-up of business valuation of water?



## Reporting back

Willemijn Bouland-  
Oosterwijk (Industry)

James Chamberlayne  
(Agriculture & Forestry)



# Summary and next steps

Tom Williams, WBCSD



Government of the Netherlands

# Valuing Water Showcases

Jacobiene Ritsema – Witteveen+Bos  
Alexandra Freitas - VWI



**Valuing  
Water**  
Initiative



**ECORYS**  Answering tomorrow's challenges today

**Witteveen + Bos**

 **TwynstraGudde**

# HOW DO WE ADD VALUE TO ONGOING EFFORTS?



Creating a **value proposition** to mobilize atypical and mainstream actors towards better decisions



Seeking **collaboration** to build on the work of others like partners rather than compete



Focusing on **realistic and pragmatic** areas of work

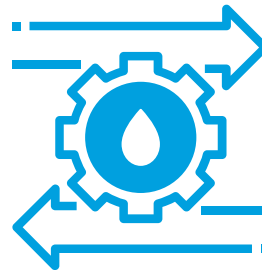


Looking at old things with a systemic change and values lens to gain **lessons learned** on bringing transformation

## VALUING WATER PRINCIPLES



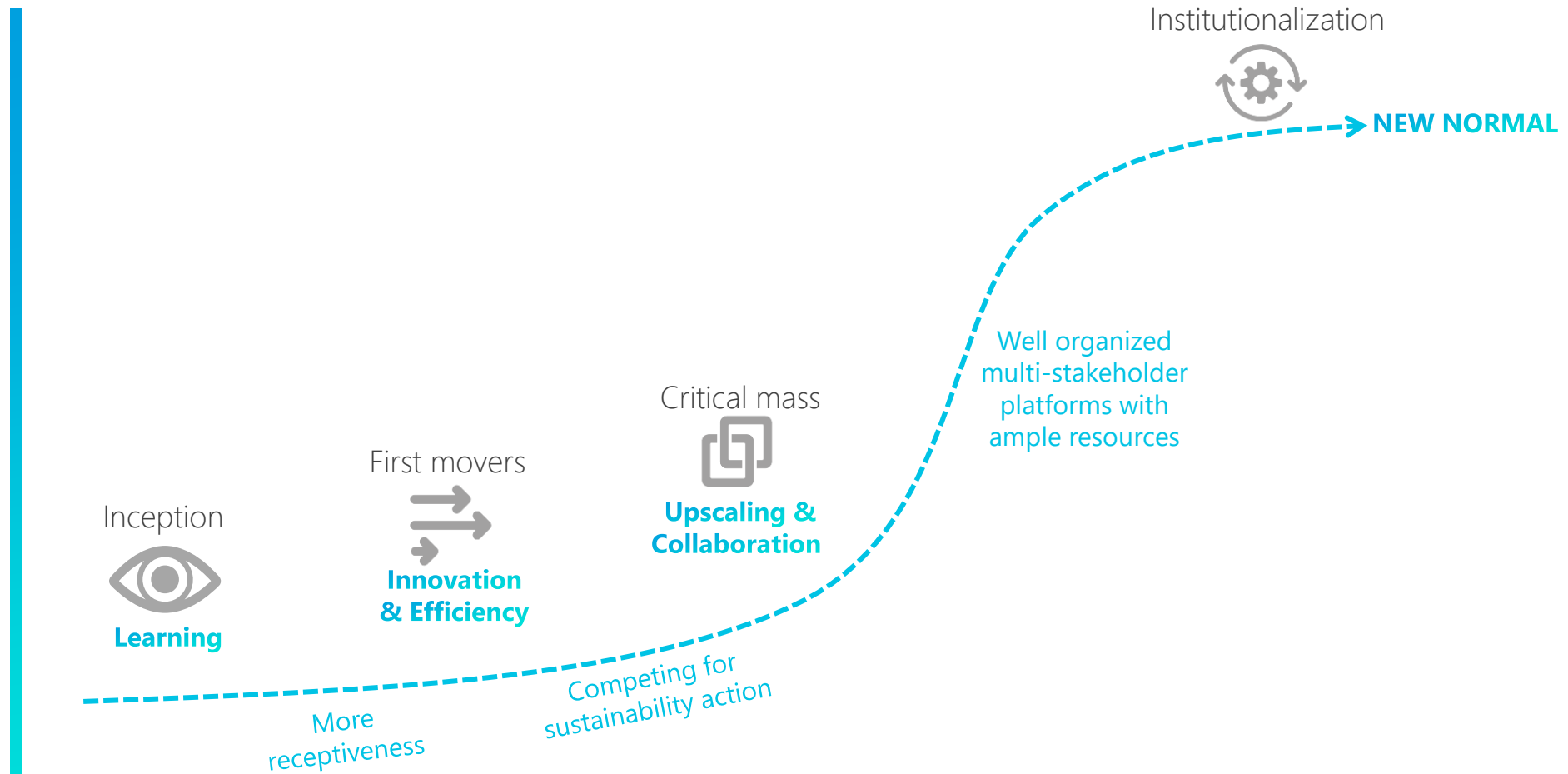
## SYSTEMIC CHANGE



## DEEPLY PERSONAL



# SYSTEMIC CHANGE



# SHOWCASES



Great Lakes Protection Fund



Roadmap to Zero



Manos al Agua



Katuma basin

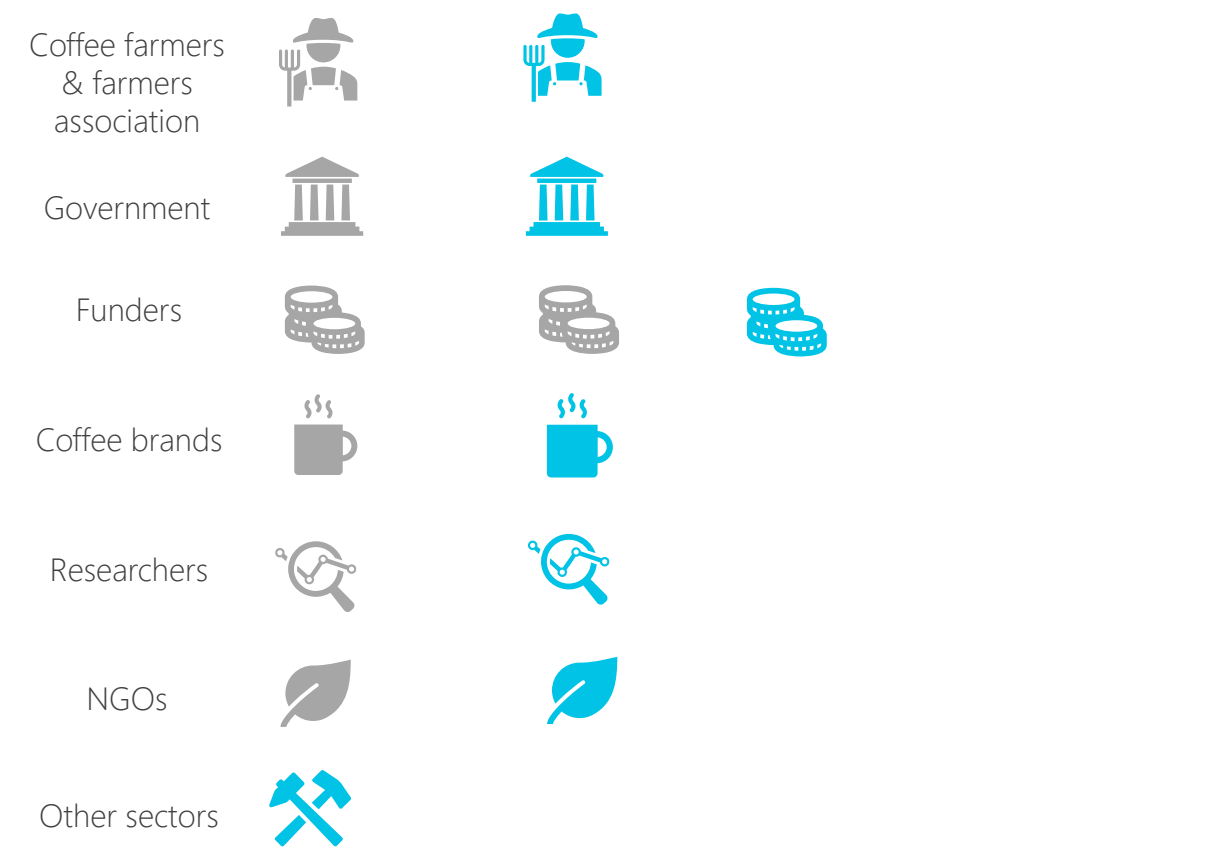
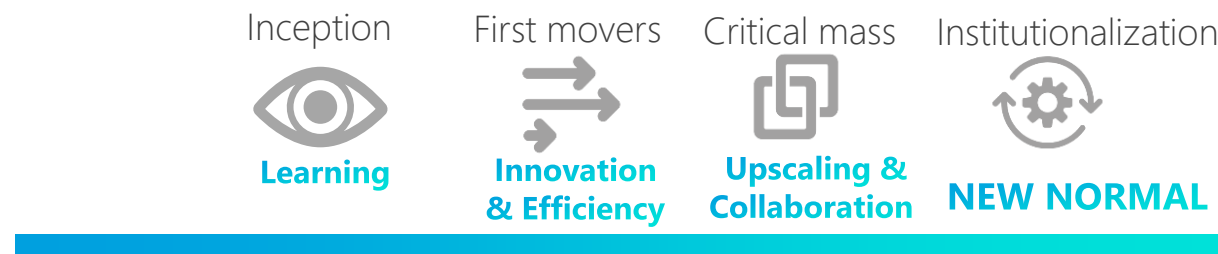








Murray Darling River Basin

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**#1 ALL ACTORS NEED TO PLAY  
THEIR ROLE AT THE RIGHT  
MOMENT IN ORDER TO  
ACHIEVE TRANSFORMATION**





-  Costs higher than the additional coffee revenues
-  Government focus on other priorities
-  Funders supporting at critical mass stage
-  Coffee companies did not take responsibility for water issues in supply chain
-  Living wage aspects need to be addressed first
-  Other sectors businesses not acting on shared water issues



Inception



Learning

First movers



Innovation  
& Efficiency

Critical mass



Upscaling &  
Collaboration

Institutionalization



NEW NORMAL



Great Lakes Protection Fund

Protection Fund



Community  
groups  
&  
Funds  
applicants



Researchers



Governments



Industries



The New Normal- independent money to invest in innovations for the environment



Expert advisors identify opportunities to match key problems with ready-for-testing strategies



The fastest way to bring about change is to use market mechanisms (incentives and disincentives) to solve environmental issues



Governments can use the results in policy development and to introduce legislation



A diverse group of stakeholders to identify the priority of basin problems.



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## **#2 TOP-DOWN INTERVENTIONS CAN BLOCK TRANSITION AT A CERTAIN POINT**



Inception



**Learning**

First movers



**Innovation  
& Efficiency**

Critical mass



**Upscaling &  
Collaboration**

Institutionalization



**NEW NORMAL**

Farmers/  
Businesses



Indigenous  
people  
&  
Communities



Researchers



Local  
governments



Central  
government



Murray Darling River Basin



Despite the involvement of key stakeholders in developing the Basin Plan, resistance will remain when (socio-economic) interests are at stake.



Water availability and reliability for communities remain uncertain, public support is lacking; cultural and heritage values are also important



Water can become a significant risk if all not stakeholders and their interests are represented.



Finding solutions for conflicting interests is key for long term success.



Inception



Learning

First movers



Innovation  
& Efficiency

Critical mass



Upscaling &  
Collaboration

Institutionalization



NEW NORMAL

Farmers  
&  
Agribusiness



Water Users  
Associations



Funder



State  
government



Katuma basin



Empowered farmers through  
strengthened Agricultural  
Market Cooperative Societies



All water values are at the table,  
climate smart agriculture  
practices are successfully  
implemented



Better management has been  
achieved, but businesses need to  
keep on investing, otherwise the  
risks of overexploitation of water  
resources are still there



Dependency on donor money  
can negatively affect  
achievement of long-term goals



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## **#3 CRISIS TRIGGERS CHANGE**



Inception



**Learning**

First movers



**Innovation  
& Efficiency**

Critical mass



**Upscaling &  
Collaboration**

Institutionalization



**NEW NORMAL**



ZDHC  
Foundation



Greenpeace



Industry



Research



Importing  
governments



Exporting  
governments



A crisis can trigger transformation in a sector



Adhering brands and suppliers becomes less dependent of separate countries' regulations



Collaborative sectorial platforms could be promoted by businesses before "the bomb explodes"



Industry guidelines that are based on scientific research can act as a lever of change





# Thank you

Please answer the same  
questions in mentimeter



# Our contact

**Tom Williams**, Director Nature Action &  
Water, WBCSD

[tom.williams@wbcsd.org](mailto:tom.williams@wbcsd.org)

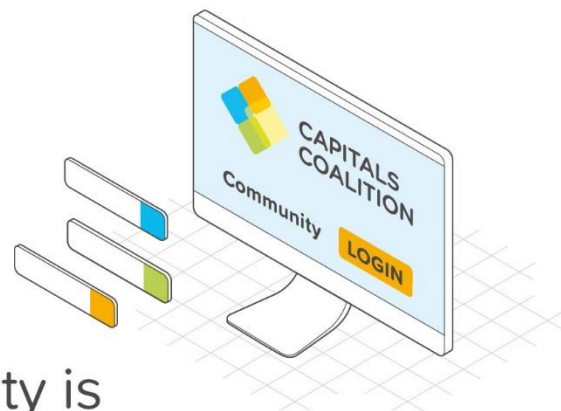
**Deepa Maggo**, Manager Water, WBCSD

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**Alexandra Freitas**, Senior Advisor,  
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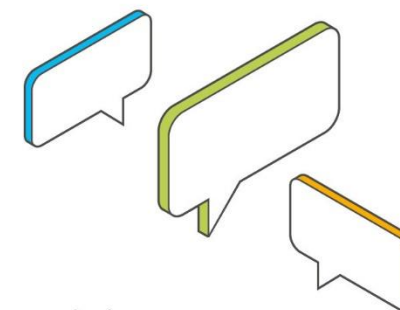




The Capitals Community is the networking space for the We Value Nature 10-Day Challenge.

Sign up and join the We Value Nature group to take part in the conversations:

<https://community.capitalscoalition.org>



We want your feedback!

Please share your thoughts on this session and the overall 10-Day Challenge event at:

<https://wevaluenature.eu/Feedback>