



Tata – IFC – Water Footprint Network Partnership for Corporate Water Sustainability

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Tata Steel / Water Footprint Network

CEO Water Mandate Meeting

Mumbai, 5 March 2013



Water Footprint
NETWORK



Water Stewardship Maturity Progression

**Improve
operational
water
performance**

**Understand how
the company
intersects with
river basins**

**Develop
comprehensive
water strategy**

**Leverage
improved
performance in
value chain**

**Advance
sustainable
water
management and
collective action**

performance
water

river basins
intersects with

water strategy
comprehensive

value chain
performance in

collective action
management and



Water Footprint
NETWORK



IFC International
Finance Corporation
World Bank Group



Water Footprint

The '**water footprint**' is a measure of human's appropriation of freshwater resources.

- ▶ Water use is measured in terms of water **volumes consumed** (evaporated or otherwise not returned) or **polluted** per unit of time.
- ▶ The water footprint is a **geographically** & **temporally** explicit indicator.
- ▶ The WF is an indicator of water use that looks at **both direct** & **indirect** water use of a consumer or producer.
- ▶ A water footprint can be calculated for a **process**, a **product**, a **consumer**, **group of consumers** (e.g. municipality, province, state or nation) or a **producer** (e.g. a public organization, private enterprise).

[Hoekstra et al., 2011]



Water Footprint
NETWORK



Water Footprint Components

Green water footprint

- ▶ volume of rainwater evaporated or incorporated into product



Blue water footprint

- ▶ volume of surface or groundwater evaporated or incorporated into product, lost return flow



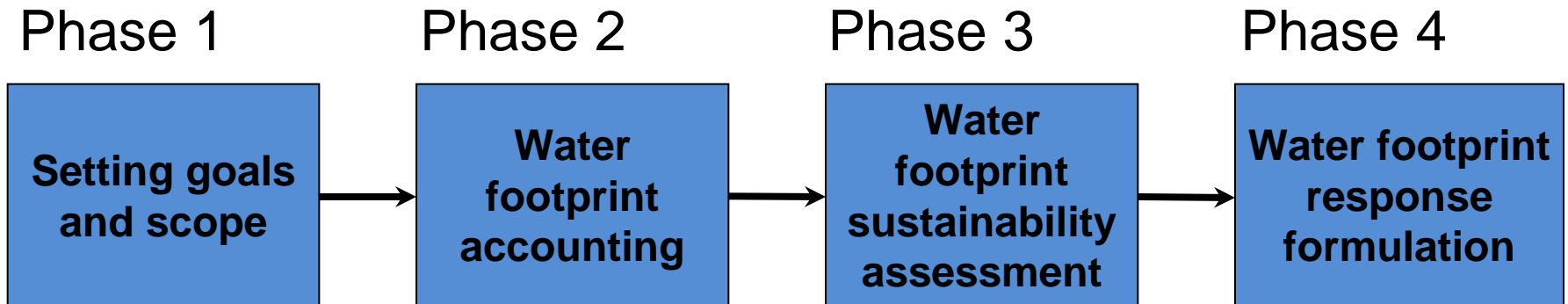
Grey water footprint

- ▶ volume of water needed to assimilate pollutants

[Hoekstra et al., 2011]



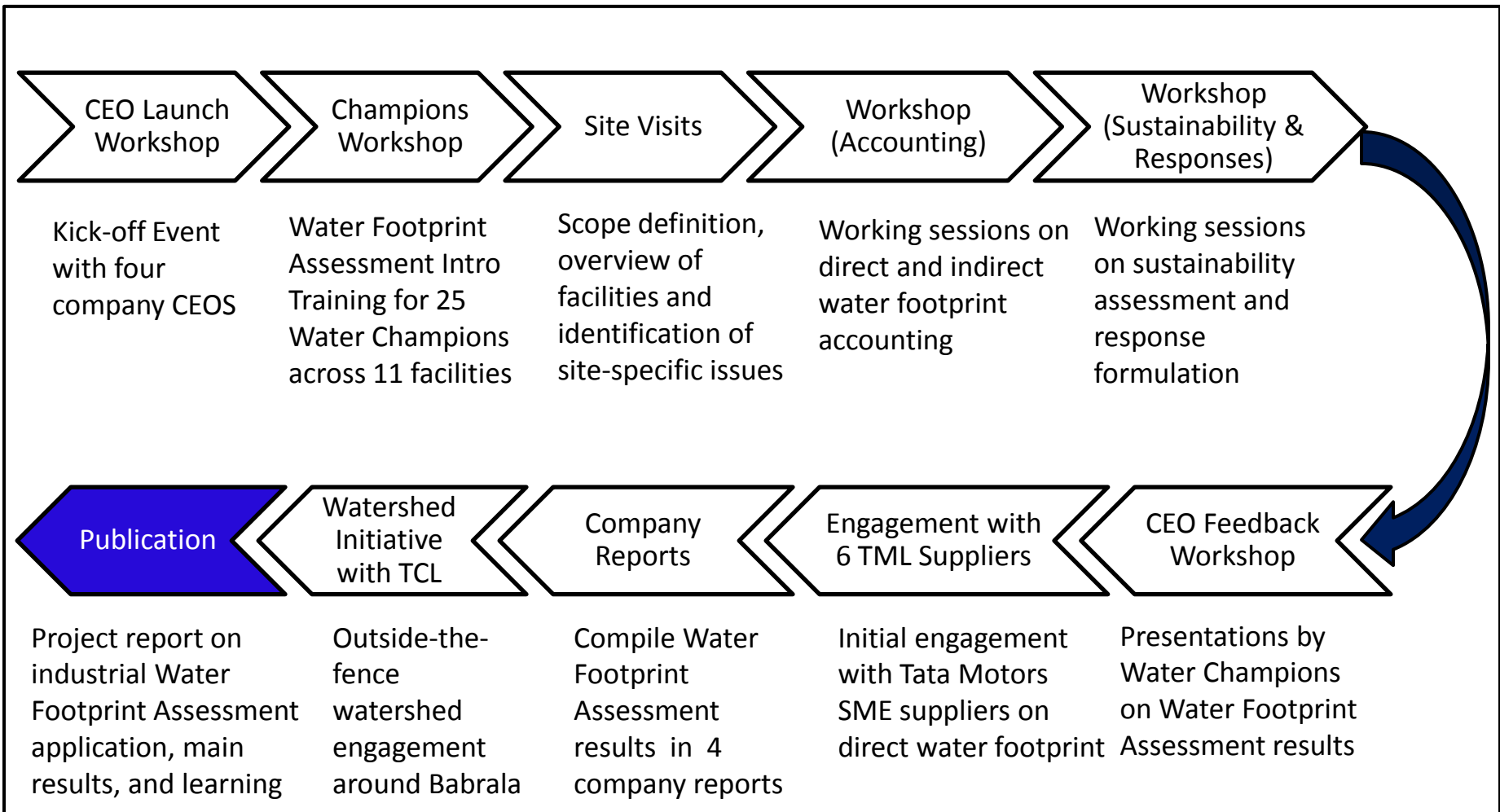
Water Footprint Assessment



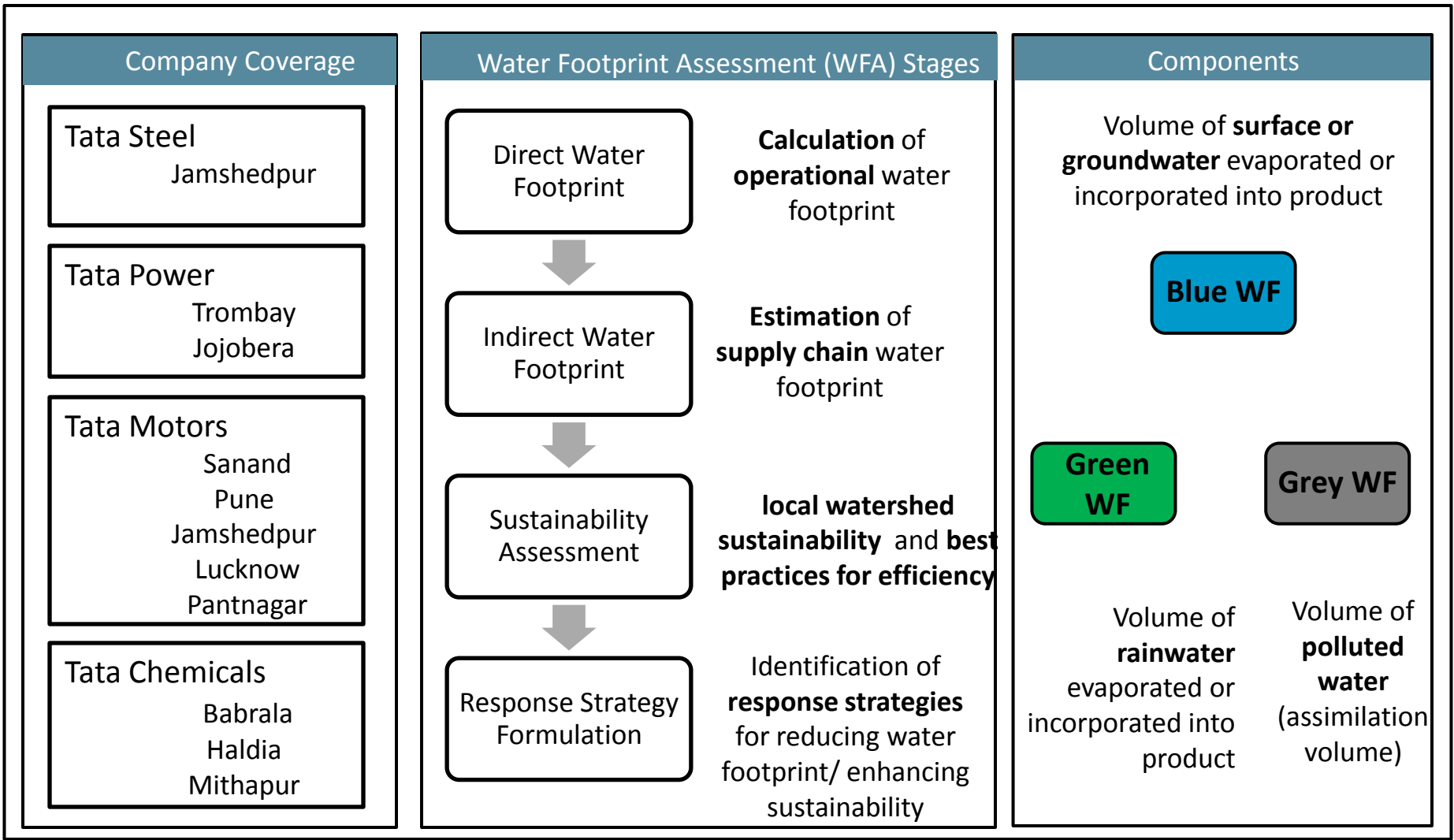
[Hoekstra et al., 2011]



Tata Water Footprint Assessment



Scope of Water Footprint Project



WF is a multi-dimensional indicator focused on **fresh water** consumption

Summary Results – Within Fence

Name of Company	Comparative water consumption (m ³ per unit)	Specific water consumption (m ³ per unit)	Abatement opportunity % of current consumption
Tata Power	1.8	3.0	15%
Tata Steel	3.0	5.84	33%
Tata Motors	1.7	4.7	50%
Tata Chemicals			
Soda Ash	2.5-3.6	0.15-0.5*	1.0%
Urea	4.0-4.5	4.85	10%
SPS	0.2-1	0.33	20%

Reduction of WF by 10 to 33 % is possible by closed loop configuration and efficient operation of cooling towers

Water Footprint Assessment: Highlights

Priority focus

Secondary focus

Other focus

	Tata Steel	Tata Motors	Tata Chemicals	Tata Power
Operational water footprint	Dominant water user in watershed	Low direct blue water footprint	Water-use efficient	Footprint highly dependent on fuel
Supply chain water footprint	Simple supply chain	Indirect blue water footprint 85% of total	Raw material and energy significant contributors	Variation across facilities on share of supplier water footprint
Sustainability Assessment	Sustainability of water use at risk due to new agricultural water canal	Need for water use efficiency due to competing claims across all stakeholders	Participatory watershed management	Risk to water availability due to Mumbai water requirements
Response Strategy Formulation	Investments for zero water discharge by 2013	Low-hanging fruits implemented; need for technology investments	Investments for zero discharge & promotion of sustainable practices by farmers	Desalination plant

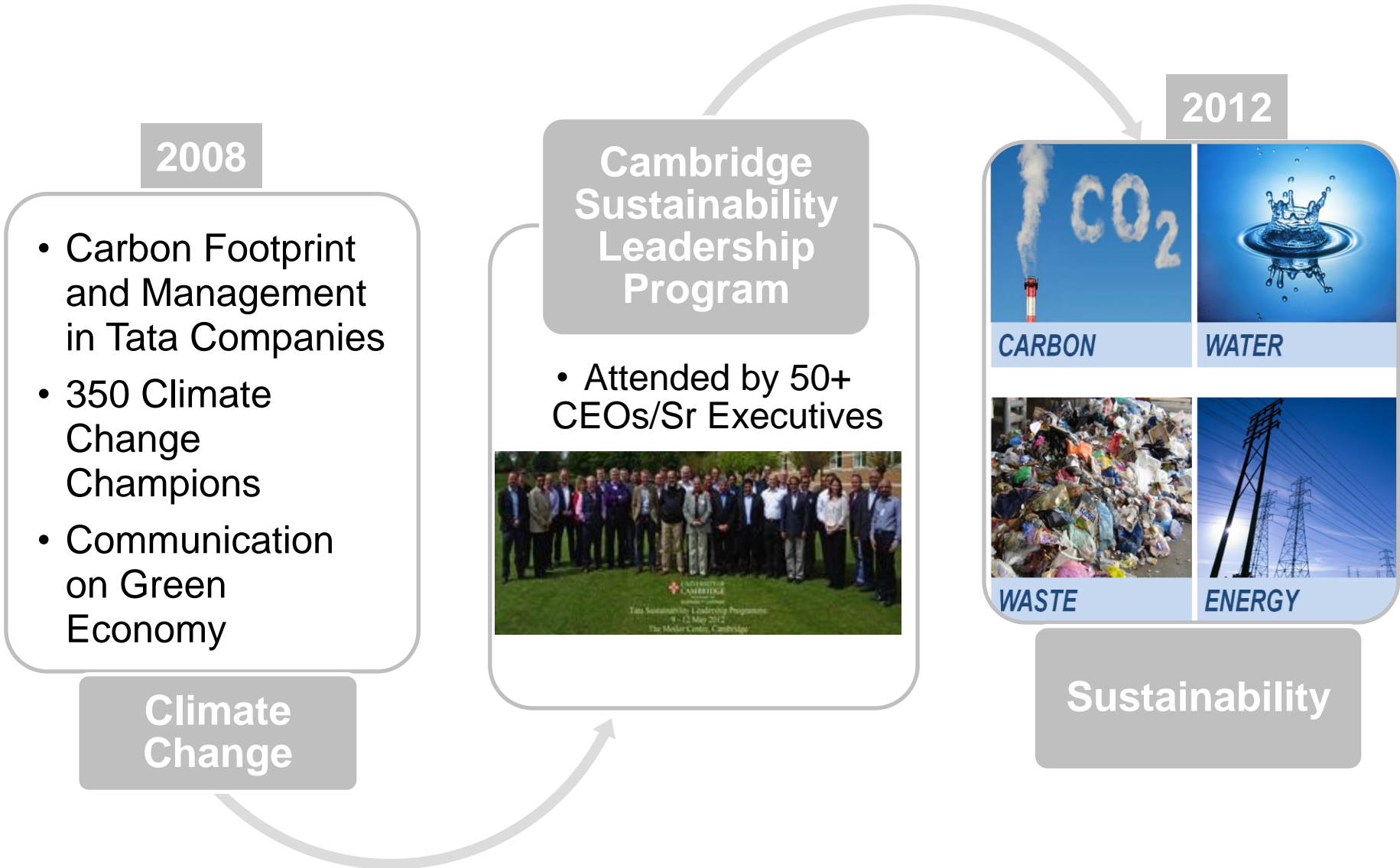
Water Sustainability – Way Forward

PHASE 1 <i>Completed</i>	PHASE 2 <i>In Progress</i>
1. Chemicals	1. TGB
2. Steel	2. Coffee
3. Motors	3. IHCL
4. Power	4. Rallis
	5. Sponge
	6. Trent
	7. TRL K
	8. Titan
	9. Voltas
	10. TRF
	11. Housing
	12. Realty

Water Footprint Assessment

- *60 Water Champions*
- *CEOs Water Stewardship Program*

Comprehensive Environmental Sustainability



Thank You!

