

Water footprint:

A framework to assess water dependencies and sustainability

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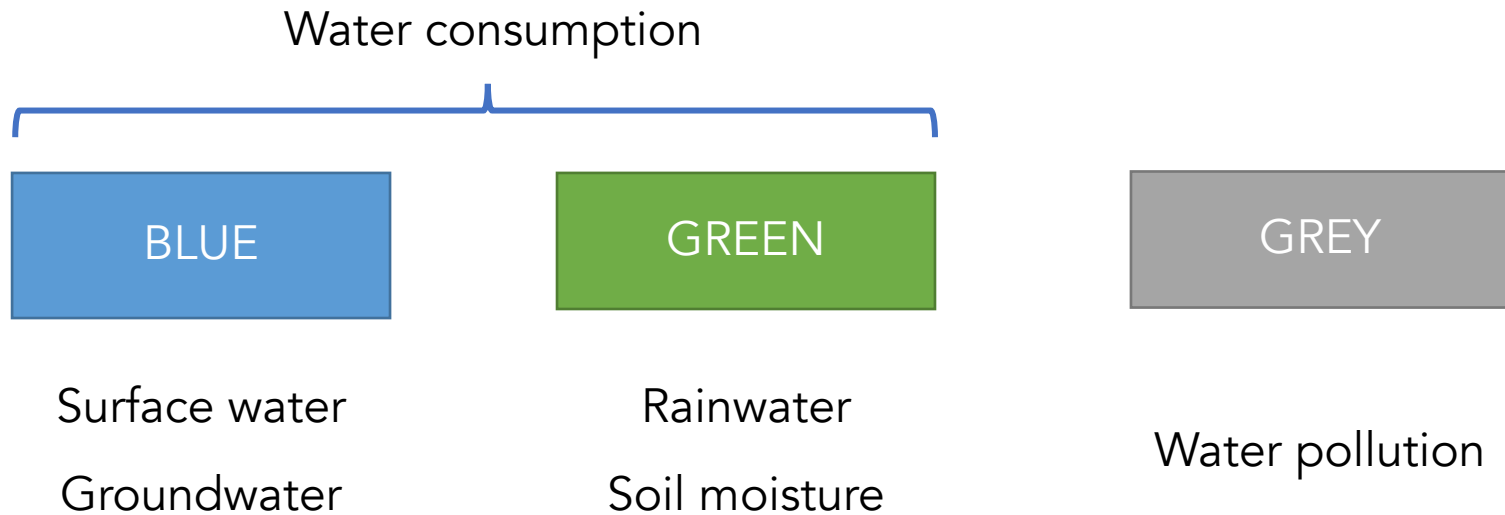
R2Water

1- What is water footprint?

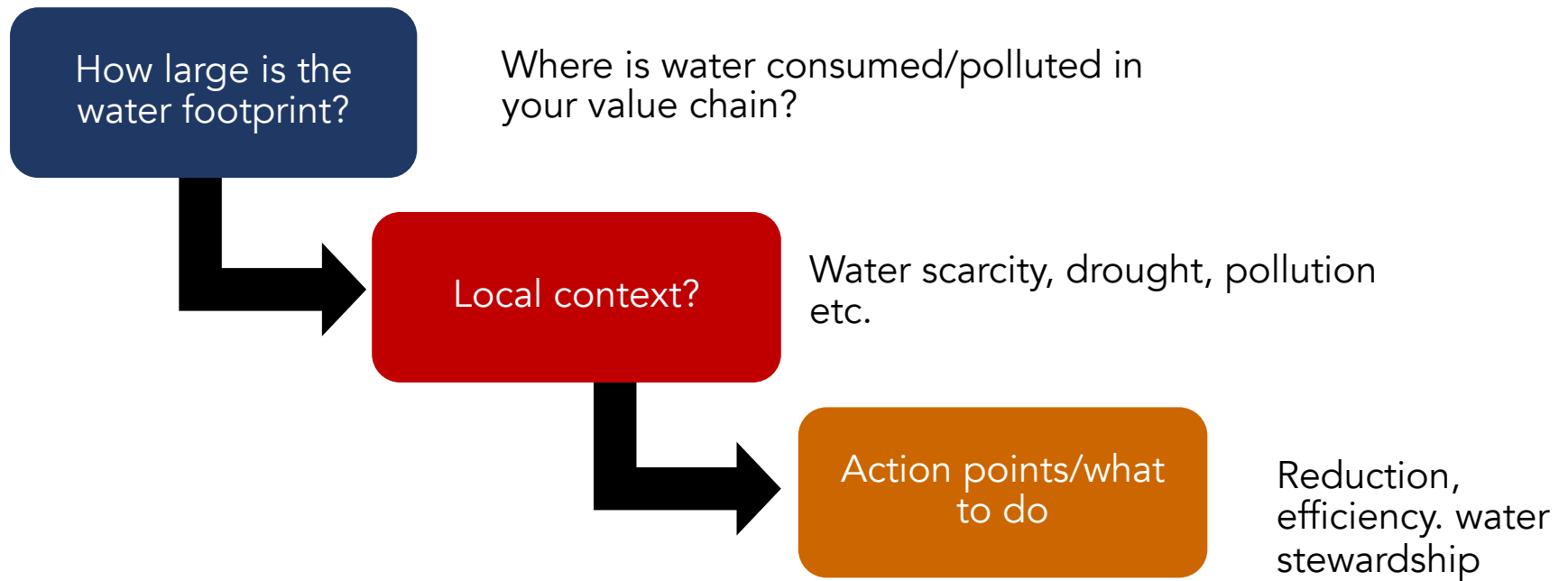
2- What does it tell? dependencies and sustainability

3- Examples and looking forward

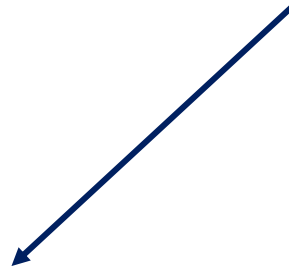
The 'water footprint' refers the total amount of water consumed and polluted:



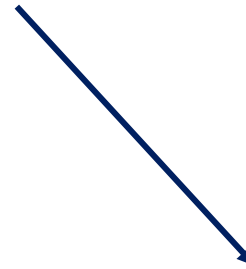
Water Footprint Assessment



Water Footprint Assessment

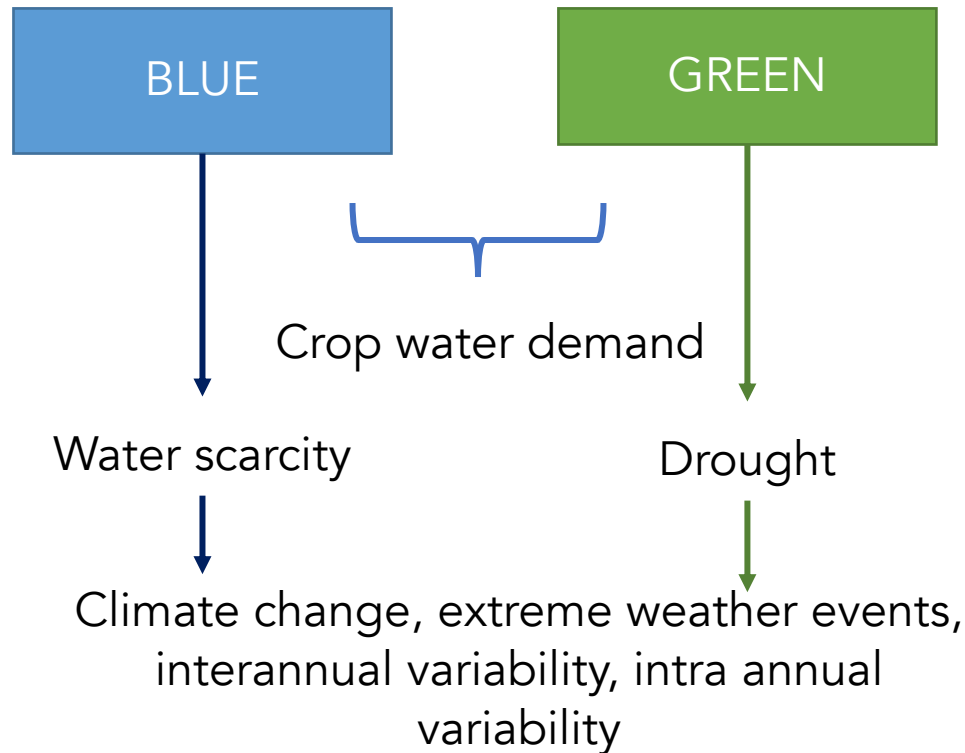


Dependencies,
vulnerabilities
and risk

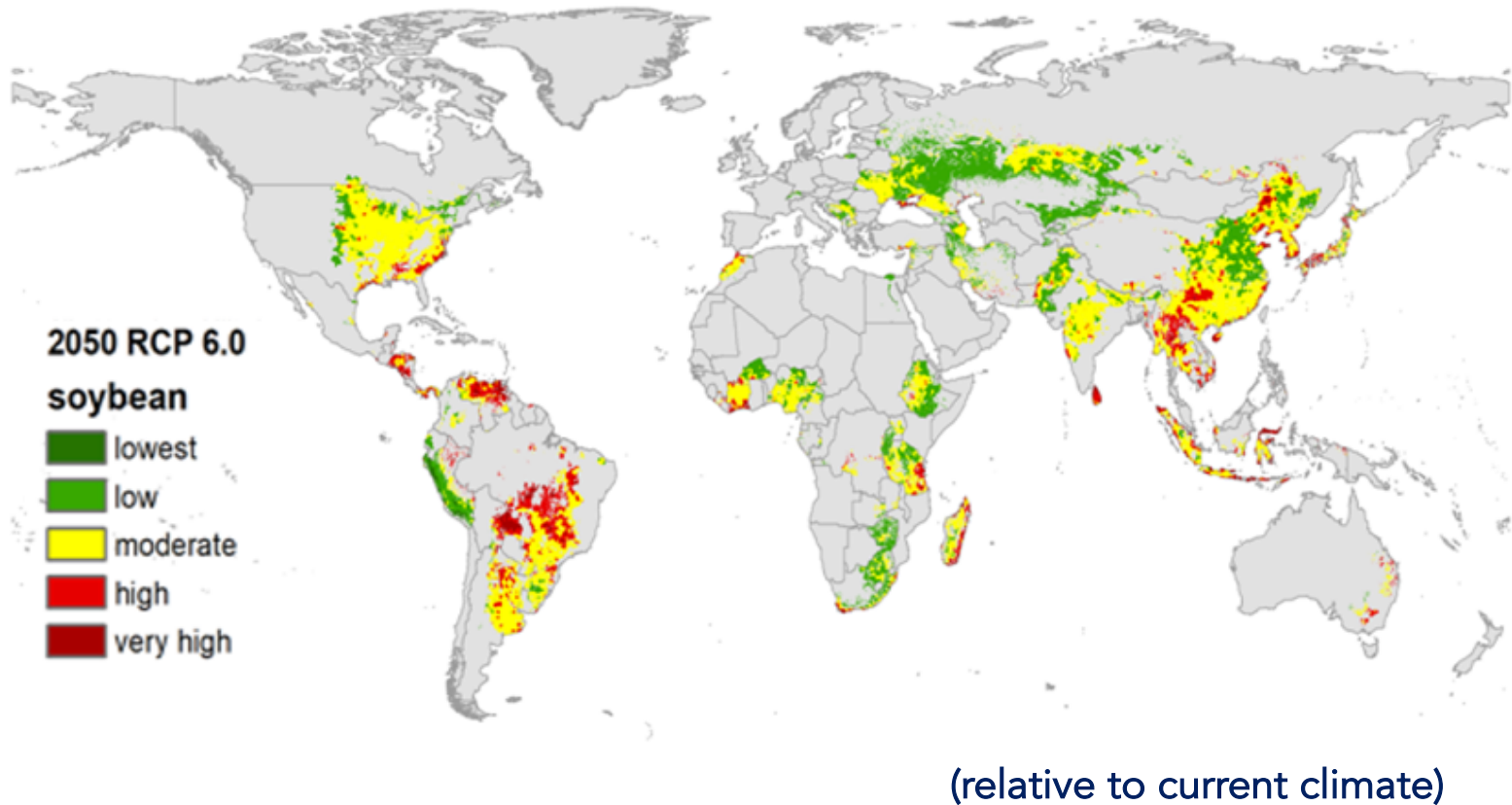


Sustainability

Dependencies, vulnerabilities and risk

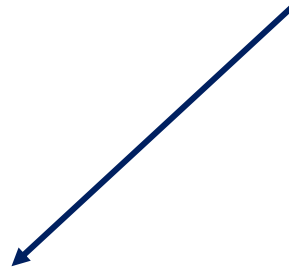


EU's soybean import – vulnerability to climate change

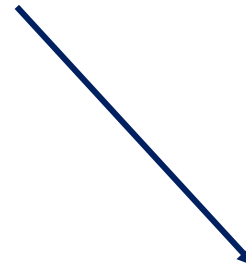


Ercin et al. (2021). *Nature Communications*. "Cross-border climate vulnerabilities of the EU".

Water Footprint Sustainability



Product level (m³/tonne)
Water efficiency/productivity



Geographical (m³)
Water scarcity, pollution

Water Footprint Sustainability – Product level

- Benchmarks, water productivity and efficiency
- Water footprint reduction
- Green water footprint – blue water footprint
- Grey water footprint

Water Footprint Reduction

Agriculture

- rainwater more productive: lower green water footprint
 - restoration of degraded pasture
 - mulching
 - manure
- Towards supplementary or deficit irrigation & application of precision irrigation techniques: lower blue water footprint
- Towards organic farming: zero grey water footprint

Water Footprint Sustainability – Geographical level

- Annual, total water footprint (per product X production)
- Water scarcity level
- Water pollution level
- River basin management

Is the water footprint in a hotspot?

Water Pollution Level

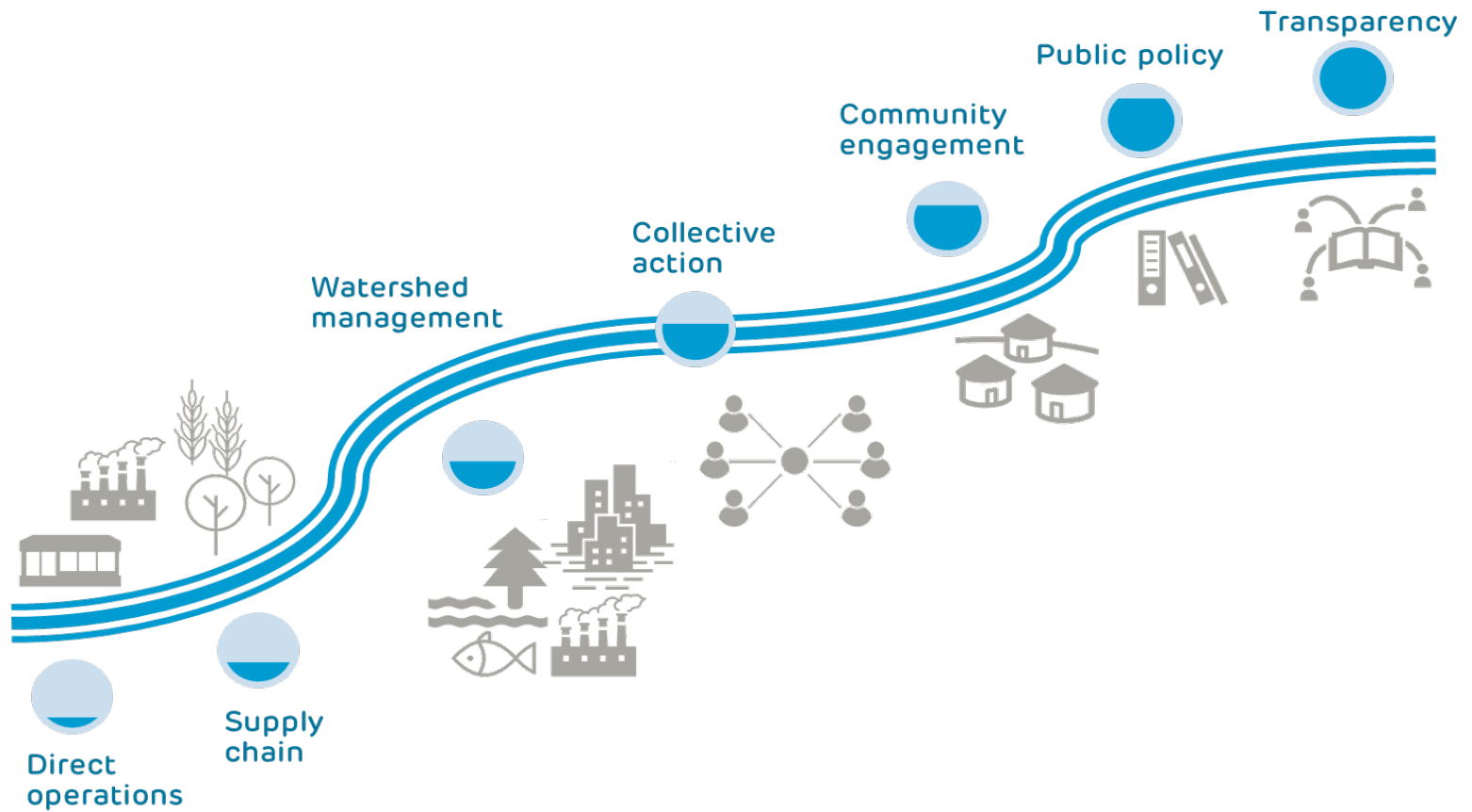
	< 0.25 (low)
	≥ 0.25 (low)
	≥ 0.5 (low)
	≥ 1 (moderate)
	≥ 1.5 (significant)
	≥ 2 (severe)
	≥ 4 (severe)

Blue Water Scarcity

	< 0.25 (low)
	≥ 0.25 (low)
	≥ 0.5 (low)
	≥ 1 (moderate)
	≥ 1.5 (significant)
	≥ 2 (severe)
	≥ 4 (severe)

Is the water footprint above the benchmark?

Water footprint – sustainability



LOOKING FORWARD...

- awareness raising campaigns about sustainable water practices
- studies about water footprint: dependencies, risks, sustainability
- minimizing production losses and waste: minimize water lost
- minimizing waste of agri-food products in consumption stage
- spread of weather-based information tools and apps (technology)