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fair & smart use of the world's fresh water

## Driving Sustainable Development through Water Footprint Assessment

#### Implementing SDG's in the Post-2015 Development Agenda

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## Water footprint: an indicator of the pressure people put on water resources

- Water footprint is a measurement of *water quantity*: **volume of water consumed** or *water quality*: **assimilation capacity used**.
- The water footprint occurs in a specific location and at a specific time.
- The water footprint can be measured for both **both direct** & **indirect** water use, linking producers and consumers throughout the value chain.
- A water footprint can be calculated for productive processes such as for agriculture, industry or domestic uses, or a geographic area such as a river basin, nation or the whole world.









#### Virtual water flow through the supply chain





# Water footprint of cotton farming: three states, three practices

## High yield was possible with a moderate water footprint

Grey water footprint – **pollution from pesticides** – was as much as **50 times** larger on some conventional farms than those in Gujarat and **1900 times** larger than organic farms per ton of cotton

Less than 10% of the consumptive water footprint was blue water; optimizing the use of green water will further reduce pressure on water resources



Safaya et al., 2015





Annual average of monthly blue water scarcity in India (Hoekstra and Mekonnen, 2015)







Water Footprint Assessment in sustainable development

Environmental Sustainability

#### Maximum Sustainable Limits

Water footprint allocation amongst all users What is the cumulative impact of water use?

### Social Sustainability

## **Equitable Allocation**

Water footprint allocation between users/ consumers Who is using water/ consuming products?

Economic Sustainability Resource Efficient Benchmarks Water footprint allocation for specific users *How efficiently is water being used?* 

## Thank you



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