



## **Water Footprint Assessment of Cotton Cultivation in India**

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This study aims at assessing the water footprint of cotton production in 700 farms located in Gujarat, Maharashtra and Madhya Pradesh states in India. These farms grow cotton using one of three different agricultural practices: organic farming; conventional farming; or a hybrid method. The main difference between these farming practices relates to chemical inputs: hybrid farms are stricter in the use of synthetic chemical pesticides and fertilisers than conventional farms, and organic farms are the most strict on chemical inputs and use more compost, urea, neem and organic seeds. First, we calculated the green, blue and grey water footprint of cotton cultivation using the data collected from the farms, then established the relationship between cotton agricultural practices and technologies and the green, blue and grey water footprint. At a final step, we analyzed the potential for water footprint reduction through the transition from one practice to another and developing water efficiency benchmarks and targets for reduction. The results showed an impressive reduction of water pollution levels from organic farming. The grey water footprint ranged from 330,000 cubic metres per tonne of cotton for conventional farming in Madhya Pradesh to 178 cubic metres per tonne of cotton for organic farming in Gujarat. If all farms in this study performed as well as the organic farms in Gujarat, the grey water footprint (pollution) would be reduced by over 99%.