A Corporate Water Footprint - Deckers Outdoor Corporation

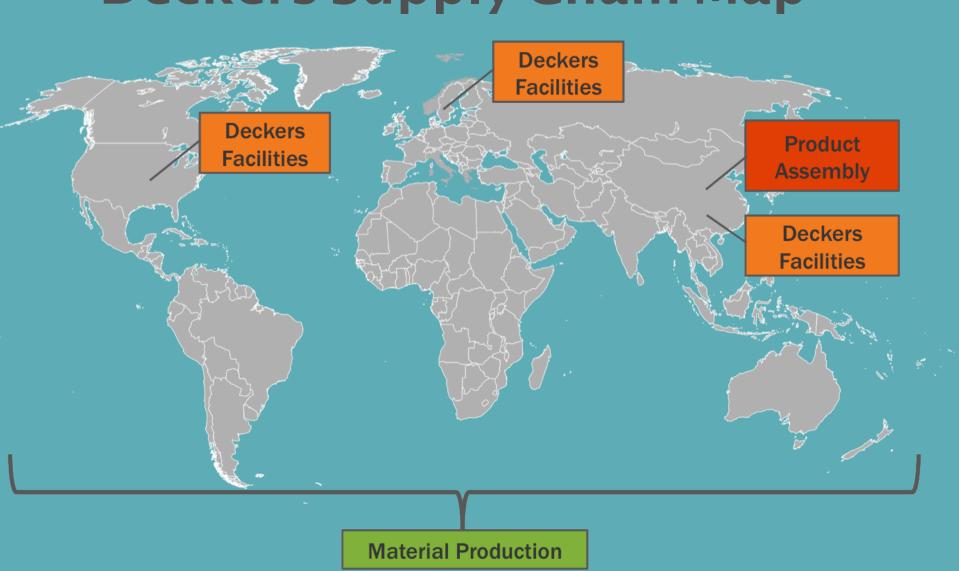
Introduction

Deckers Outdoor Corporation, a billion dollar global footwear and clothing manufacturing company, requested a measurement methodology and baseline estimate of their company-wide water footprint. Deckers brands include UGG Australia, Teva, Sanuk, Mozo, Ahnu, & Tsubo.

Defining "Water Footprint"

Blue water consumption and water consumed through electricity production was measured throughout the Deckers supply chain which consists of the Deckers Facilities, Product Assembly, and Material Production stages.

Deckers Supply Chain Map



Electricity Water

System Boundaries

Inclusions:

- Direct blue water consumption
- Electricity water consumption
- Supply chain stages 1, 2, 3

Exclusions:

- Gray water (waste water)
- Green water (rain water)
- Consumer use, transportation, & packaging
- Pollutant load measurements

Methods

Major Assumptions

- Ugg and Teva allocation based on market share
- Chosen brands representative of the company
- Chosen shoes representative of their brands

Chosen Representative Brands



Material Production



Australia ~185

Direct Water Australia ~780,000 TOTAL ~1,000,000 Electricity

Water

Product Assembly

- Surveyed 6 Product Assembly factories for direct water and electricity water
- Extrapolated our sample to the total 21 Product Assembly factories

Deckers Facilities

- Used electricity-utility bills and direct literature values
- Calculated direct water consumption of landscaping and HVAC systems for each of Deckers facilities



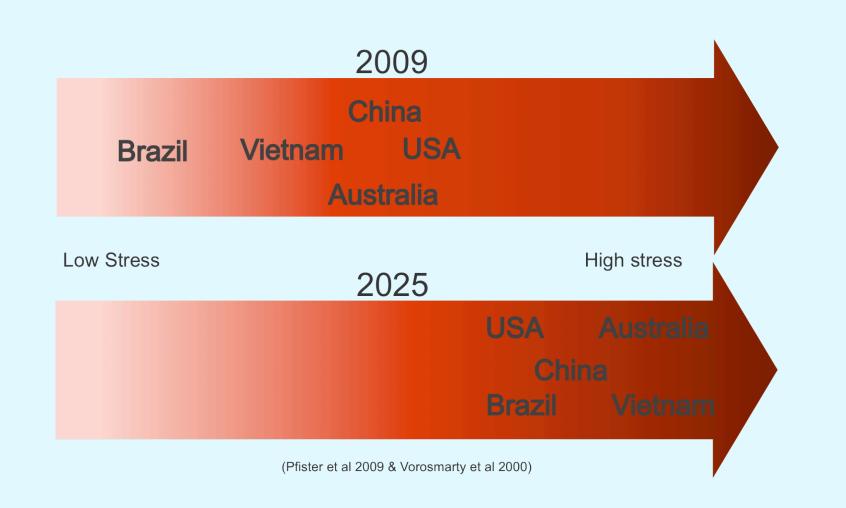
DeckersWater Team: (class of 2012) Byron Thayer, Jessica Heyman, Kristin Van Abel, Kimberlyn Way, Ryan Kintz

Discussion & Conclusion

Water Stress

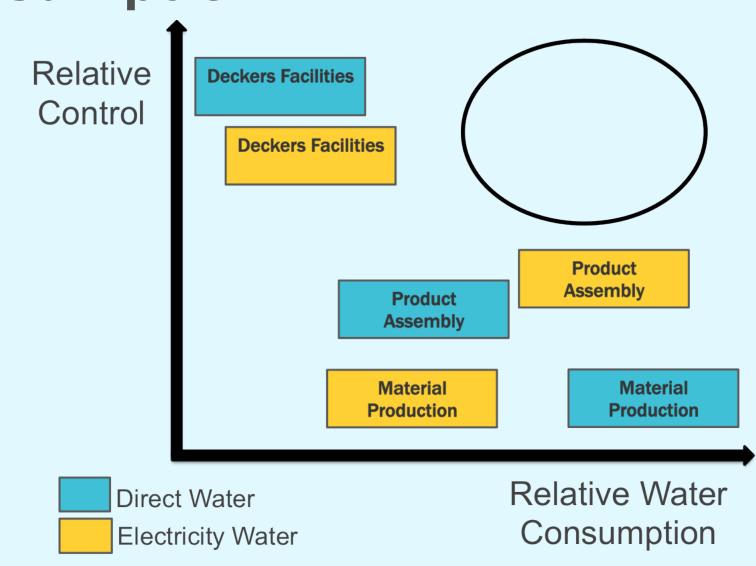
Country level Water stress index data from 2009 was overlaid with Deckers supply chain. About 97% of Deckers' estimated water consumption occurs in countries with medium water stress levels. By 2025, countries where Deckers operations currently occur are predicted to experience high stress.

Water Footprint by Water Stress Level



Corporate Control Over Water Consumption

Building relationships throughout the supply chain could increase Deckers influence and control over water consumption processes and practices. Supply chain stages with high water consumption could move towards the ideal location in terms of relative control over relative water consumption, represented by the circle on the graph to the right.



Water Footprint Reduction Scenarios

Focusing on reducing electricity usage throughout the supply chain yields several benefits including decreased costs, water consumption, and carbon emissions. A 15 to 20% reduction in electricity may result in a 5 to 6% reduction in overall water consumption. Additionally, changing where materials are sourced influences the water footprint greatly. Sourcing materials from countries with low water consumption per ton of material can decrease the overall water footprint by 7% for sheepskin and 6% for cowhide. Further, in certain scenarios there may be an inadvertent tradeoff between reducing the total water footprint number and shifting material sourcing or company operations to countries with low water stress.

Environmental Impacts

Water consumption impacts are inherently localized whereas a water footprint yields one global number; therefore, it is difficult to attribute specific impacts to water consumed throughout Deckers supply chain. Some direct and indirect impacts associated with water consumption include:

- ecological, commercial, and domestic resource competition
- freshwater habitat destruction

Month Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec. Total
Amount

Month Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec. Total
Amount

Improved survey tool for collecting data at the

product assembly level. May be amended for other

levels of the supply chain.

altered streamflow

Deckers Guidoer Corporation Water Postprinting Data Collection 5 Manufacturing Factory Data

temperature changes

Spawning Atlantic Salmon, dependent on freshwater resources.

Next Steps for Deckers

- Build relationships throughout the supply chain
- Continue to measure water
- Collect data from suppliers
- Measure pollutant loads
- Prioritize energy efficiency
- Evaluate the tradeoffs of water consumption from material sourcing vs. water stressed regions

Project Significance

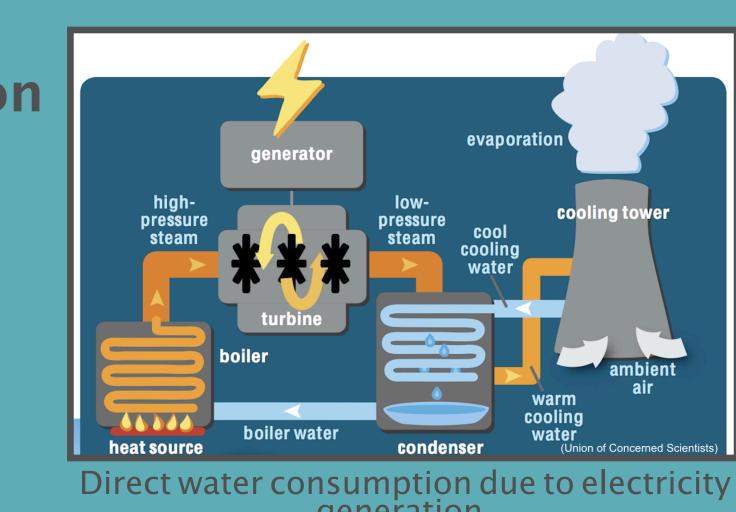
Company-Wide Footprint



Previous water footprints have focused on individual products or whole countries. This water footprint is unique because it includes water consumption throughout the entire supply chain, from the production of materials to shoes being sold in

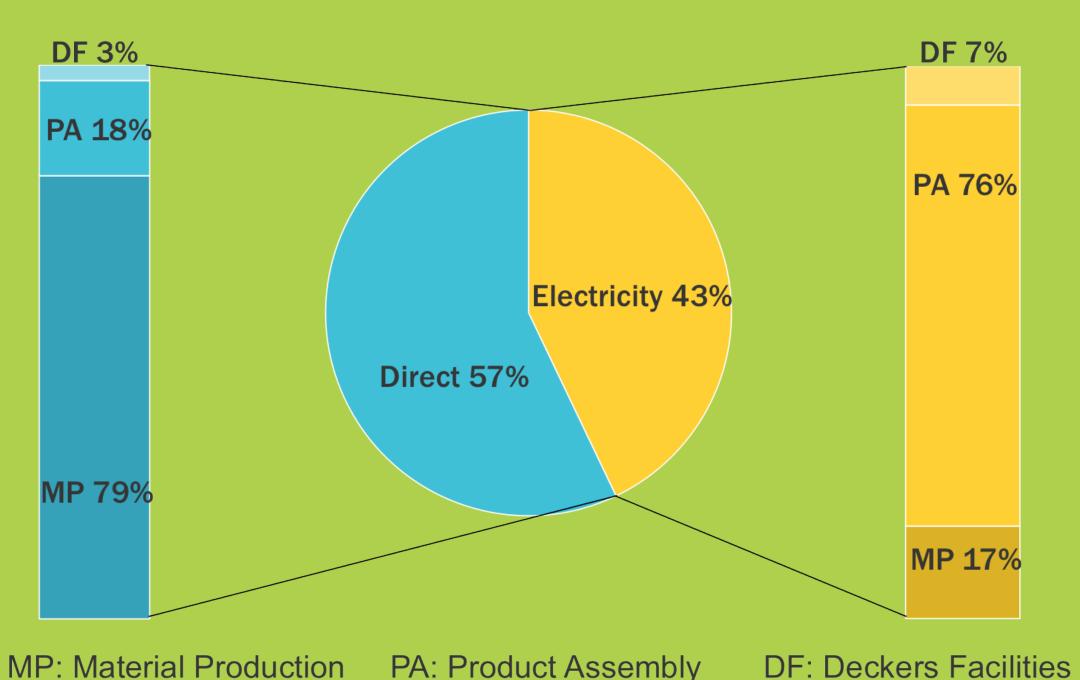
Including Water Consumed by Electricity Generation

There is a clear connection between electricity generation and high levels of water consumption. Our inclusion of electricity water is an important and innovative expansion to water footprinting system boundaries.



Findings

Deckers 2010 estimated water footprint ranges from 3.7 to 4. 1 million m³. This volume is approximately equal to 22% of Santa Barbara's annual water usage.



The majority of direct water consumption (blue) is within the material production stage, while the majority of electricity water consumption (yellow) is within the product assembly stage.

1 Ugg classic short boot = 200 to 230 liters of water 1 Teva Riva boot = 260 to 300 liters of water Cowhide consumes between 10 - 50% more water than sheepskin.

Acknowledgements & References

Group Project Advisor:

Professor Tom Dunne

Additional Advisors:

Professors Robert Wilkinson, Sangwon Suh, Brandon Kuczenski, & Stephan Pfister

Funding Support:

The James S. Bower Foundation

Group Project Client:

Deckers Outdoor Corporation, Ariana Arcenas-Utley & Mark Heintz

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