VEOLIA WATER

Water Impact Index

Water resources are facing many challenges as global demand is forecast to exceed future supply. Major corporations are increasing their focus on water management as the business and humanitarian case for developing a proactive approach becomes more compelling. Many companies also face substantial business risks related to water.

Veolia has sought a comprehensive water footprint indicator that will integrate all the complexities of the water cycle, including water quality and availability in the local environment. None such indicator was previously available, compelling Veolia Environnement develop a new indicator that is best in class for water footprinting, the Water Impact Index.

The Water Impact Index provides a means of measuring the improvement that industrial investments in treatment infrastructure provide to the local region and community.

The Water Impact Index expands on existing volume-based water measurement tools by incorporating multiple factors such as volume, resource stress and water quality. It provides additional parameters needed to make informed choices about effective water management.

The Equation

$$\mathrm{WII} = WSI \times \left(\sum_j \left(W_j \times \min_l \left(1; \frac{Cref_l}{C_{j,l}} \right) \right) - \sum_k \left(R_k \times \min_l \left(1; \frac{Cref_l}{C_{k,l}} \right) \right) \right)$$

WSI is the Water Stress Index calculated according to Pfister[1].

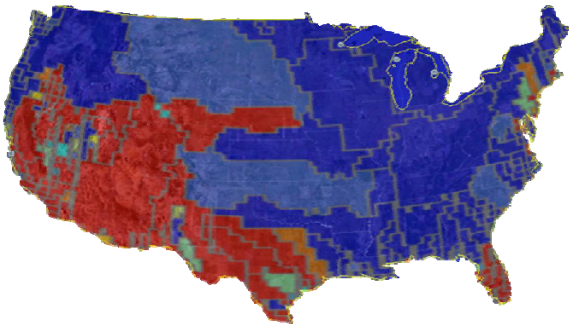
W is the annual volume of water withdrawn for each water intake j of the unit process.

Cref is a reference concentration for pollutant l in water resource type j. This reference concentration is the concentration that should be reached in water resource type j to ensure compatibility with the local environment.

C is the concentration of pollutant type l within the water intake l, or the concentration of pollutant l within water discharge k.

R is the volume of water released for each water discharge k of the unit process.

1: Water Stress Index, USA



Characteristics of the Water Impact Index

An increase in the ***volume of water withdrawn*** increases the Water Impact Index
An increase in the ***volume of water released*** decreases the Water Impact Index
An increase in the ***quality of the water withdrawn*** increases the Water Impact Index
An increase in the ***quality of the water released*** decreases the Water Impact Index
An increase in the ***scarcity of water*** increases the Water Impact Index

Read more about the water impact index on our website:
www.veoliawaterna.com/sustainable/water-impact-index/

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