Researchers from the University of Twente have developed a ranking for the transparency of the use of water by the 75 largest listed companies in the Netherlands. The list is headed by Heineken. Such a list did not previously exist. Water professor Arjen Hoekstra indicates that transparency with respect to water consumption is still in its infancy. At the same time, he notices that large companies are increasingly paying attention to water problems.

Hoekstra and his fellow researchers produced the ranking just after the World Economic Forum placed the global water crisis firmly on the agenda earlier this year. In WEF's Global Risk Report, the CEOs of the world's largest companies, leading politicians and intellectuals, rank water crises as the largest risk in terms of potential global impact.

Hoekstra: All over the world you see that the risks of high water consumption are increasingly being recognized, also in the corporate sector. The growing world population, changing consumer behaviour and climate change have considerable effect on the scarcity and quality of water. With this ranking we bring water problems to the attention of companies and encourage them to use water as effectively as possible."

Hoekstra is participating this week in the World Water Forum in Korea and sees that the business community is heavily represented there and that water transparency is an important topic of discussion.

The ranking
The 'water ranking' is published in the scientific journal Sustainability. To produce the ranking, use was made of public information from the annual and other reports of the 75 companies. Hoekstra and lead author Marissa Linneman worked together with Royal HaskoningDHV and received advice from the World Wildlife Fund and the Water Footprint Network. Marissa Linneman is a masterstudent at the University of Twente. She performed her research during her masterprogramme Civil Engineering and the mastertrack Water Engineering and Management. Arjen Hoekstra is her supervisor.

The water transparency was derived from the degree of openness about direct and indirect water consumption and what companies do to reduce their consumption. The researchers examined both the operational arm of the companies as well as the production chain in which they are situated. In these two areas companies were evaluated in terms of water consumption and contamination, comparisons with previous years and competitors in the same sector and targets set for water consumption.

Results

The results show that there are considerable variations between different sectors and companies and that companies generally report more about their own operational activities than about their production chain. Heineken tops the list with a transparency score of 43%, followed by Royal DSM (23%), Akzo Nobel (21%), ASML Holding (20%) and Unilever (16%). The top 5 belong to three different sectors (consumer goods, basic materials and technology) and are all listed on the Amsterdam stock exchange. Furthermore, it is striking that 34 of the 75 companies achieve a score of 0%, and are thus not at all transparent in their water consumption.

"The top 5 is not surprising", says Hoekstra. "Companies like Heineken and Unilever have an enormous water footprint, especially in the chain."
For them it is important to be as open as possible." Hoekstra also emphasizes that the ranking does not indicate whether the water consumption of the companies is good or bad, but only concerns their openness about this.

**More information:** The article and ranking: [www.mdpi.com/2071-1050/7/4/4341](http://www.mdpi.com/2071-1050/7/4/4341)

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