



## 2010 Global Water Tool ©: Refreshed for Risk Assessment

### **Water scarcity and its business implications:**

- *Not knowing your water impact is a greater risk than knowing it.*
- *To manage water globally, you need to know the water situation locally.*
- *Water scarcity may mean that even the most efficient operation may seriously overburden local conditions.*
- *Companies may face their biggest water risks from their own suppliers or consumers of their products.*
- *Consumers and investors increasingly expect companies to account for and report upon their water impact.*
- *Higher quality information, more effectively distributed, will strengthen the awareness and management of water issues.*

First launched in 2007 by the World Business Council for Sustainable Development (WBCSD), the Global Water Tool (GWT) has now been upgraded for the second time with an improved user interface and an updated set of data, charts and maps. The GWT was initially developed in response to a growing call from companies needing to comprehensively evaluate and address water risks in their operations and supply chains relative to external factors. Companies also needed a tool to help them quickly develop performance metrics and map results, in order to effectively

communicate water issues to both internal and external stakeholders.

To tackle these challenges, a group of companies decided to develop a tool that would help them understand more clearly their interaction with water resources and lay foundations for the development of a corporate water strategy that would help manage water resources sustainably. Twenty two WBCSD members formed an advisory group, led by CH2MHILL, to develop and provide oversight and pilot testing of the Global Water Tool in order to address these concerns.



### **New features of the Upgraded Global Water Tool**

1. New datasets and maps which provide more projections on water resource availability, plus additional contextual information on water use in relation to physical, economic and demographic environments:
  - Projected total annual actual renewable water resources per inhabitant (2025, 2050).
  - Urban annual growth rate (%)
  - Environmental Water Scarcity Index by basin
  - Areas of physical and economic water scarcity
  - Desalinated water produced
2. New tool functionalities:
  - Charts are now generated for all sites and by operation types.
  - It provides users with the ability to create operation types, dynamically based on their own business needs.
3. Updated and new data, and maps from the most reliable and credible global sources.
  - FAO Aquastat, WHO/UNICEF Joint Monitoring Program
  - International Water Management Institute (IWMI)
  - UN Population Division of the Department of Economic and Social Affairs (UNDESA Population Division)



## What is the Global Water Tool?

The Global Water Tool is a free and easy-to-use tool for companies and organizations to map their water use and assess risks relative to their global operations and supply chains. It compares a company's sites with validated water and sanitation data on a country and watershed basis. The tool also helps companies to understand their own water needs in relation to local conditions, addressing such issues as water availability (current and projected), water scarcity, access to safe drinking water sources and sanitation, as well as population and industrial growth.

This online, Excel-based platform takes a company's water usage data and maps its operation sites with external water and sanitation datasets. Supplier site locations may also be mapped, looking beyond operational use.

The Global Water Tool enables companies to quickly answer the following questions, using the best data available:

- How many of our **sites** are in extremely water-scarce areas? Which sites are at greatest risk? What is the future prognosis?
- How many of our **employees** live in countries that lack access to improved water and sanitation?
- How many of our **suppliers** are in water scarce areas now? How might this change in 2025 and 2050?

## What does it do?

The tool:

- **Compares your company's water use (including staff presence, industrial use and supply chain) with validated water and sanitation availability information, both on a country and watershed basis** – A volumetric measurement of a company's water use does not accurately reflect water-related impacts or risks. A more realistic idea is obtained by comparing water consumption data with water availability and consumption information at the local level.
- **Calculates water consumption and efficiency** – Comparing water consumption data over a period of time can help a company assess improvements in water use efficiency and monitor progress against sustainable policies or goals.
- **Establishes relative water risks in a company's portfolio in order to prioritize action** – While an overall water reduction goal is simple, the ability to identify sites with the

highest water risks can allow for optimal use of funds to generate the biggest impact. The tool allows companies to focus upon the sites requiring the implementation of water management plans and on the suppliers that need support in order to achieve this.

- **Creates key water Global Reporting Initiative (GRI) indicators, inventories, risk and performance metrics** – One cannot manage what one does not measure. The Global Water Tool generates output which can be used for internal water management strategies and goal-setting, as well as for external reporting.
- **Enables effective communications between internal and external stakeholders on water issues** – Companies are increasingly expected to report their sustainability performance and commitments. The Global Water Tool generates key water data and easy-to-understand visual information for effective communication to all stakeholders.

## How it works

The tool consists of two parts: the input sheet and the online map. The input sheet contains the company's site location (lat/long) and water use information. After entering the company's water use figures, the sheet automatically provides output, including GRI water indicators and downloadable metrics charts that demonstrate the company's data combined with both country and watershed figures. The external datasets employed in the tool were obtained from the UN FAO, WHO and UNICEF, WRI and the University of New Hampshire.

The 2010 version will now include new data source owners such as the UNDESA Population Division and the IWMI. It will also highlight other indicators and indices that a company can use, which have not been directly integrated in the tool, as they are not yet sufficiently established. The external datasets used in the GWT indeed represent only the most reliable available data from the most credible global sources.

The online mapping feature enables companies to plot their sites with external water datasets and download those locations in a map. Such datasets provide several key metrics, including renewable water resource per capita, mean annual relative water stress index, and access to improved sanitation. The tool is connected with Google Earth, which provides spatial viewing of a company's site location in relation to detailed geographic information, including surface water.





### Scope of the Global Water Tool

The process of understanding and quantifying a company's water footprint, its water risks, and water-related impact is complex. The Global Water Tool, like numerous other sustainable water management guides, tools and standards, has its own purpose, scope, and limitations. At the very start, however, understanding where a company is using water might be more important than knowing the exact quantity. "The Global Water Tool is the first step for any company to make water-informed decisions", says Björn Stigson, WBCSD President.

The GWT does not, however, provide specific guidance on local watershed situations, which require more in-depth systematic analysis. It also does not support a company in making a thorough impact assessment, as impacts are influenced by the local context of a company's water use and discharge—this includes volume, the type of water used, its quality, and also when water is withdrawn and returned back into a water body. As the ITT Corporation explains, "The tool is not an end in itself, but rather the beginning of a much deeper understanding of the water situation in local business communities." Nevertheless, the new version of the tool provides clearer explanations of what the results mean, and we hope it will encourage more companies around the world to use it.

Moreover, additional guidance on developing a more comprehensive assessment of water use impact and risk mitigation strategies can be obtained by using the GWT in combination with other tools. The WBCSD and IUCN have jointly developed a guide called Water for Business: Initiatives guiding sustainable water management in the private sector, which provides an overview of major tools and approaches for helping businesses respond to the water challenge. You can find this report on

[www.wbcd.org/web/water4business.pdf](http://www.wbcd.org/web/water4business.pdf)

### Next Steps

The WBCSD Water Working Group is committed to the continuous improvement of the tool and its functionalities.

- 1. There is an urgent need for improved data at local levels.** Currently, it is very challenging to find robust local data assessing and monitoring freshwater resources which are comparable across countries and regions. More relevant data will be incorporated in the tool as the world water community progresses towards the development of water metrics at the local scale. At the present time, current datasets represent the best available water data from credible global sources.
- 2. Addressing sectoral needs.** Although applicable across all industrial sectors, the GWT can be customized to fit the specific needs and challenges of different industries. Recognizing the importance of water risk management in energy generation – including clean energy technologies – the electricity utilities industry will pioneer the adaptation of the tool to their own issues.
- 3. On the road to a Global Water and Energy Tool?** Ideally, decision-making tools will must be designed to help identify and manage trade-offs and synergies in the future. For example, water and energy use are tightly interconnected and business decision-making often involves difficult trade-offs between the two footprints. By reducing a company's water footprint, for example, by switching to dry cooling in a power plant, it may actually be increasing its carbon emissions. These linkages will need to be clearly expressed in future measurement tools.



## Experiences from Leading Companies

More than 300 companies have used the Global Water Tool since its launch in 2007. Its widespread applicability has enabled companies from very diverse sectors – i.e. from mining to consumer goods – to find value in its utilization. The tool has increasingly been recognized as the best available approach for companies to assess corporate water-related risks, improve decision-making, shape water management plans, and strengthen communications with internal and external stakeholders on water issues. Here are the key benefits, as expressed by the companies that have already taken advantage of the GWT.

### **It quickly screens and prioritizes corporate water-related risk, and provides future outlook up to the year 2025 (and to 2050 in the upgraded version):**

- The tool gave us an indication of site locations that may experience potential water scarcity in the future. Sites located within these areas have been asked to undertake an initial site assessment. [Novartis](#)
- The tool provided a global perspective and identified specific areas where we should focus conservation efforts. [United Technologies Corporation](#)
- Using the GWT helped us generate data for the development of water risks and prioritize action for water stressed plants. [Eni](#)
- My advice to the new user is to “jump in” regardless of the amount of company data currently available for the locations being studied. Even with no water use data, the tool will immediately open the user’s eyes to key water issues at those locations. [DuPont](#)
- The Global Water Tool provided a practical way for Rio Tinto to analyze how many of our sites face the risk of water scarcity as an input to strategic planning and for communicating on water risk. [Rio Tinto](#)

### **The Global Water Tool can be customized or used in combination with other tools to aid in decision-making:**

- We used the GWT in conjunction with our internal environmental data tracking tool. The information retrieved from the tool was used as backup to review the water risk in our operations and put emphasis on areas and sites in the “Extreme Scarcity” and “Scarcity” locations. [United Technologies Corporation](#)

- To capture the regulatory, reputational and climate change risk factors, as well as the socio-demographic dimension in our water scarcity assessment, we used the output from the GWT as the main input into a multi-criteria analysis (MCA) tool. The final output of the MCA is an index score that enables sites to be ranked in terms of water scarcity risk so that these can be prioritized for further research. [Kimberly Clark](#)
- We evaluated the relative risk of water scarcity by assigning a value to each of the two country and four watershed output indices from the GWT. We then added a 7th index value to account for each facility’s annual water usage. After adding up the values, each site was assigned a relative water risk level. Sites with a relatively higher level of water risk based on our value criteria were investigated further by utilizing the GEMI Collecting the Drops survey to incorporate local and regional social, political, and economic concerns into the evaluation. [Caterpillar](#)

### **It assists with long-term water management strategy:**

- The global water tool provides a comprehensive and dynamic picture of our operations’ water footprint and is the basis for the strategic management of water risks. [Borealis](#)
- The GWT provided information to focus on water strategy and a practical long-term view on predicaments some sites would face.” [PricewaterhouseCoopers](#)
- The use of the GWT helped us evaluate water performance from a new point of view and enable the development of an approach to manage water resources. [Eni](#)
- The GWT can be used as a strategic tool during the evaluation of new project developments. [The Dow Chemical Company](#)
- Based in part on insights gained from the GWT, we plan to fine-tune our publicly stated water goals so that they better align with true regional concerns and risks. [DuPont](#)
- We are committed to the development of water management practices that conserve and protect fresh water resources and enhance the efficiency of water utilization at our facilities. The GWT was used in our corporate water risk assessment and helped us prioritize assets for action planning. [ConocoPhillips](#)

- The information obtained from the GWT was used to steer the direction of our long-term targets and drive for sustainable water management. [DSM NV](#)

**It enables effective communication with both internal and external stakeholders:**

- We used the information obtained from the GWT to educate our supply chain partners at our PepsiCo Supplier Sustainability Summit in Zurich, October 2009. [PepsiCo](#)
- We are planning to use the results from the GWT for internal reporting and to develop internal policy and guidelines. [Eni](#)
- The GWT provided us with a simple means to rapidly assess water-related risks to our sites globally and a compelling means to communicate our findings visually. [DuPont](#)
- As a signatory of the UN Global Compact’s “CEO Water Mandate”, Bayer started a group-wide in-depth analysis of water-related risks and opportunities. The GWT was instrumental in successfully implementing this process and assisting the company in fulfilling its commitment. Furthermore, the GWT results were used for reporting purposes, including the recently launched water survey of the Carbon Disclosure Project. [Bayer](#)

**Easy-to-use, free, and publically available:**

- The links existing in the tool provide additional help to better understand the issues and, if necessary, to find the contacts that will be helpful in the detailed analysis of the local situation prior to developing actions with local communities. [Lafarge](#)
- An excellent aspect of the tool is that it allows the user to provide as much or as little data as is available. If the user has detailed water use or consumption data for some sites, it can be inputted and some excellent metrics can be viewed. If such data is not available for some sites, the tool still delivers the functionality of identifying locations and various indicators of water stress, etc. [DuPont](#)
- The proactive assessment and management of water resource risks are so critically important, and yet, until the development of the GWT, there has never been a comprehensive tool available in the public domain for all sectors to use with which to conduct these assessments. [PepsiCo](#)
- The WBCSD Global Water Tool offered a very quick and easy-to-use analysis of potential water scarcity issues for our sites worldwide. This helped us to create transparency on potential water issues and supported a structured dialogue with our sites, which led to an in-depth assessment of water-related risks for us. [Bayer](#)



We acknowledge these companies who have provided valuable feedback on the use of the Global Water Tool: Bayer, Borealis, Caterpillar, ConocoPhillips, The Dow Chemical Company, DSM NV, DuPont, Eni, ITT Corporation, Kimberly Clark, Lafarge, Novartis, PepsiCo, PricewaterhouseCoopers, Rio Tinto, and United Technologies Corporation.



Download it FREE from:

[www.wbcSD.org/web/watertool.htm](http://www.wbcSD.org/web/watertool.htm)

For questions and feedback,  
please contact [GlobalWaterTool@wbcSD.org](mailto:GlobalWaterTool@wbcSD.org)

#### **About the WBCSD**

The World Business Council for Sustainable Development (WBCSD) brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Our members are drawn from more than 37 countries and 22 major industrial sectors. We also benefit from a global network of some 57 national and regional business councils and partner organizations.

Our mission is to provide business leadership as a catalyst for change toward sustainable development, and to support the business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

Our objectives include:

- Business Leadership – to be a leading business advocate on sustainable development;
- Policy Development – to help develop policies that create framework conditions for the business contribution to sustainable development;
- The Business Case – to develop and promote the business case for sustainable development;
- Best Practice – to demonstrate the business contribution to sustainable development and share best practices among members;
- Global Outreach – to contribute to a sustainable future for developing nations and nations in transition.