The Coca-Cola Company: Global Water Resources Assessment and Mitigation Planning

As the essential ingredient in all its beverages, a reliable supply of water is fundamental to The Coca-Cola Company’s business success. At the same time, the company recognizes that water is a critical natural resource and community asset to be responsibly shared and utilized. In 2004, The Coca-Cola Company and its bottler system launched the Coca-Cola Global Water Initiative. Based on GEMI’s Water Sustainability approach, the Initiative establishes a roadmap for water resource management. A key element of this process is the systematic evaluation of water-related business issues. The results of this analysis are in turn used to develop targeted mitigation plans across global operations.

Recognizing that water resource issues are complex and multi-dimensional, The Coca-Cola Company pursued a number of related lines of analysis to ensure a working and comprehensive understanding of these issues. As a first step, the company initiated a detailed study of water issues at local, regional, and global levels, interviewing over 150 company associates in each of its geographic divisions, and reviewing the wealth of literature on water issues. The study produced a series of 20 regional "field guides" on water-related business issues. This analysis allowed the company’s Environment & Water Resources team, working with functional and bottler representatives, an opportunity to define the main dimensions of water issues potentially impacting production and other operations. It identified six basic categories of water-related challenges as defined in the accompanying graphic. By creating a taxonomy of water-related business issues, the company was able to employ a consistent language for the entire business system to further examine challenges and develop appropriate assessment and mitigation plans.

The Coca-Cola Company also produced a series of water availability maps showing the renewable water supply adjacent to its manufacturing facilities. Instead of relying on existing national water availability maps, the company developed global maps showing water availability for each 60 km by 60 km quadrant. Since water is a local resource that is difficult to transport over long distances, this detailed level of analysis more adequately captured each area’s real water situation - and the challenges facing local operations.

To further refine its water resource assessment approach, the company developed a quantitative model, resulting in a prioritization of water-related challenges for each plant and geographic division and for the company and bottling system globally. The model used data from a comprehensive 300-question survey distributed to nearly 900 bottling facilities in approximately 200 countries. An extraordinary 92 percent of facilities completed the survey, resulting in a rich database of local water conditions and issues, and their impact on operations.

To translate this wealth of data into meaningful findings, The Coca-Cola Company worked with a professional modeler to design a custom process and toolset. The quantitative model defined various scenarios where water-related events could result in higher costs, loss of operating license, or reputational damage, and then evaluated their likelihood and potential resulting costs. For example, the supply reliability pathway included a series of questions such as:

- In a typical annual production cycle, does your facility encounter low water quality?
- Is your water supply affected by deforestation in the catchment area around your facility?
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- Are there local laws governing use of water supplies?
- If the production facility does have a backup water supply, can it provide 100 percent of the required daily water demand?

One type of output is a bar chart depicting a geographic business division’s overall water resource challenge, with each bar representing the individual challenges for each plant in the division. In the sample below, two plants have significant issues around social context and around compliance with company water policies. It creates a practical snapshot of water-related challenges, and how those issues are distributed across facility sites.

![Division Risk Profile](image)

To review and refine these outputs and findings, 30 two-day workshops were conducted in all geographic regions over six months in 2005. These workshops allowed for focused, region-specific discussions, improvement of the data inputs, and development of specific mitigation plans. Because of the comprehensive nature of the Global Water Resources Assessment and Mitigation Planning process, the company can now define specific water challenges and implement appropriate local, regional, and global mitigation actions such as implementation of water efficiency programs, construction and renovation of wastewater treatment facilities, watershed and source water protection programs, and community-based water management partnerships. Throughout 2006, The Coca-Cola Company has continued to expand and refine its water resource assessment and mitigation process, and it plans to conduct a second water-related survey in 2008.