



Water Technologies: A Global Opportunity Scan for US Companies

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Water: A Global Opportunity Scan for US Companies

Water Industry Overview

The U.S. water export industry provides the globe with services that cater to wastewater treatment and water purification for industrial or municipal use.

Sub-sectors of Water Industry

Chart 1

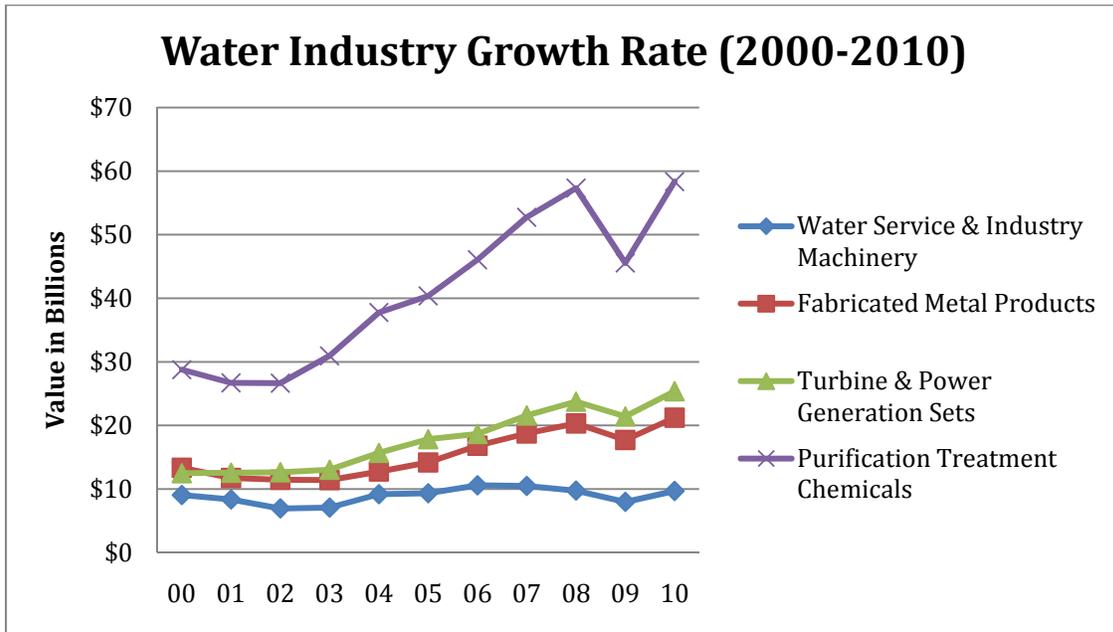
Water Sub-Sectors	NAICS Code
Hydroelectric Power Generation	221111
Water Supply Systems, Irrigation, Distribution, Treatment, Filtration	221310
Water Plant Construction Management	237110
Treatment Chemicals Alkalis and Chlorine	325181
Treatment Chemicals Surface Active Agents	325613
Plastic Tubing, Pipes, Hoses, and Pipe Fittings Manufacturing	326122
Metal Containment Tanks Manufacturing	332420
Fluid Power Valves and Hose Fittings Manufacturing	332912
Waterworks & Municipal System Valves Manufacturing	333291
Water Purification Equipment Manufacturing	333319
Turbine and Turbine Generator Sets Manufacturing	333611
Pumps and Pumping Equipment Manufacturing	333911
Measuring and Dispensing Pumps Manufacturing	333913
Merchant Wholesaler Industrial Water Treatment Equipment	423830
Merchant Wholesaler Municipal Water Treatment Equipment	423850
Water Quality & Control Administration	924110

Source: US Census Bureau

Industry Growth Rates

Since 2000, the U.S. Water Export Industry has grown at a compound annual growth rate (CAGR) of 5.50%. The total size of the market in 2010 was \$115 billion. The fastest growing sector of the market was in the export of treatment chemicals for the purification of water, which grew at a CAGR of 6.66%. As can be seen in the Water Industry Growth Rate below, in 2010, the global market for purification chemicals outpaced water services and machinery 6 to 1 (see Figure 1). The water service and industry machinery export market looks to be saturated because of its low 0.62% CAGR. Fabricated metal products (CAGR 4.32%) as well as turbine & power generation sets (CAGR 6.60%) markets continue to grow. In 2009, the water industry growth rates declined because of the global recession that occurred in 2008 to 2009. Since the growth rates returned to pre-crisis levels in 2010, this serves as evidence of strong continuous growth in this market.

Figure 1



SOURCE: Trade Stats Express

U.S. Export trends

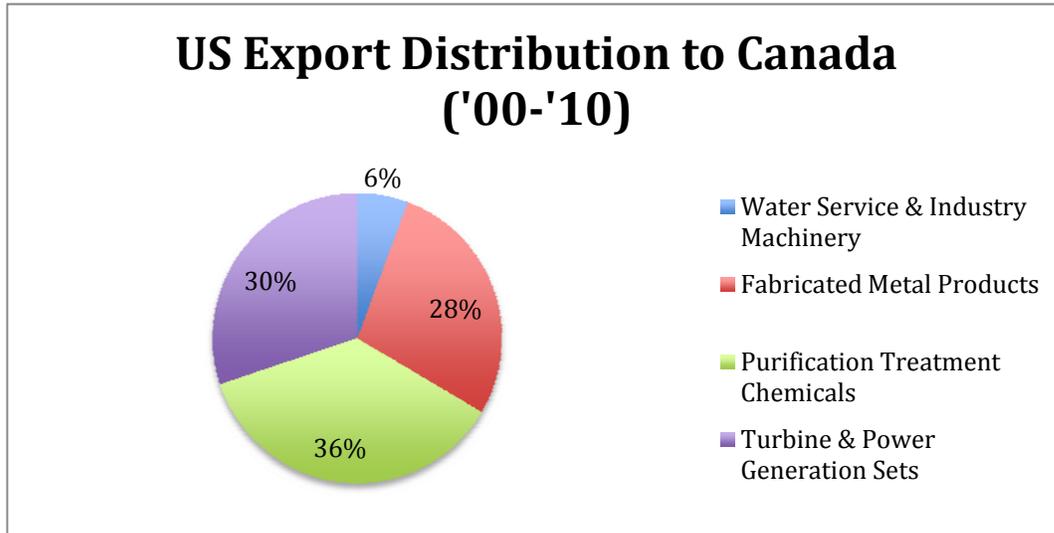
The biggest US export market is Canada as of 2010. Canada represents approximately 15% of total exports shipped out of the US. A breakdown of the sectors that comprise of US exports shipped to Canada is displayed below (see Figure 2).

By analyzing the pie chart below, Purification Treatment Chemicals represent the largest portion of US exports sent to Canada. Turbine and Power Generation Sets (30%) and Fabricated Metal Products (28%) are other sizable sectors of US exports shipped to Canada. The Water Service and Industry Machinery sector only represents 6% of US exports shipped to Canada. Despite Canada being the largest buyer of US exports, the CAGR for Canada over the last 10 years has been only 1%. Other significant buyers of US exports are Mexico (13%), China (6%), Japan (6%), and Belgium (6%).

The US is becoming more reliant on China for its exports. China's CAGR has been at a staggering 20%. Other countries with significant US exports growth are South Korea (9%), Venezuela (12%), India (14%), Columbia (9%), and Saudi Arabia (11%).

The biggest markets that receive the most US exports in terms of USD dollars are Canada and Mexico. As of 2010, Canada has received \$17.5 billion in US exports, and Mexico has received \$15 billion in US exports. It is important to keep in mind that no other country exceeds \$10 billion in US exports except Canada and Mexico.

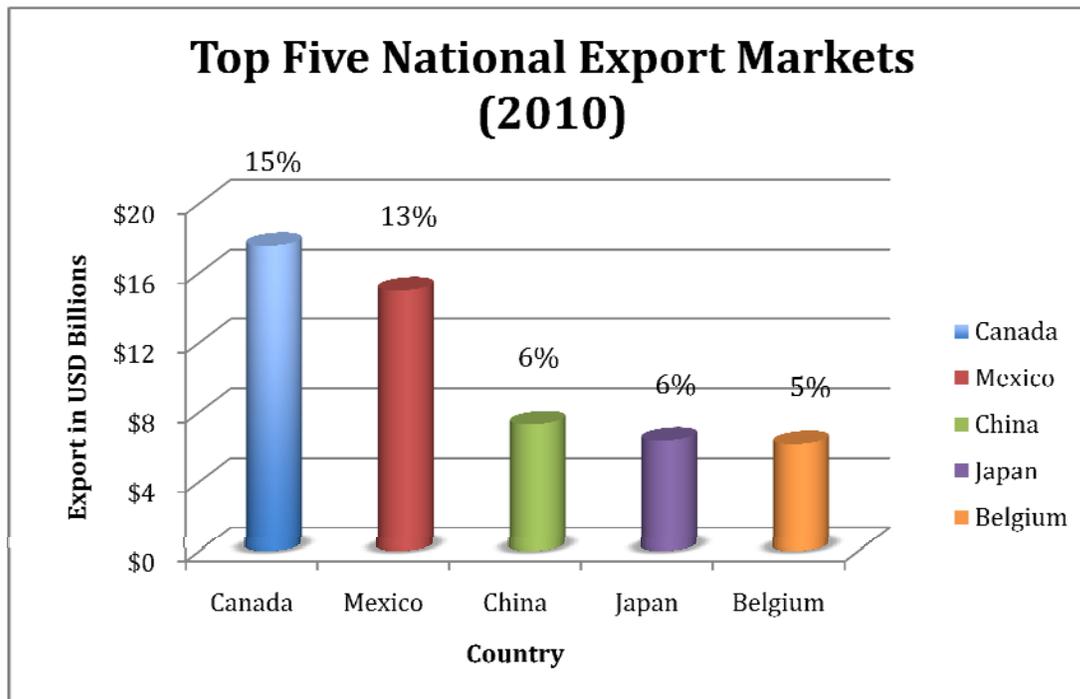
Figure 2



SOURCE: Trade Stats Express

Top Global Markets

Figure 3

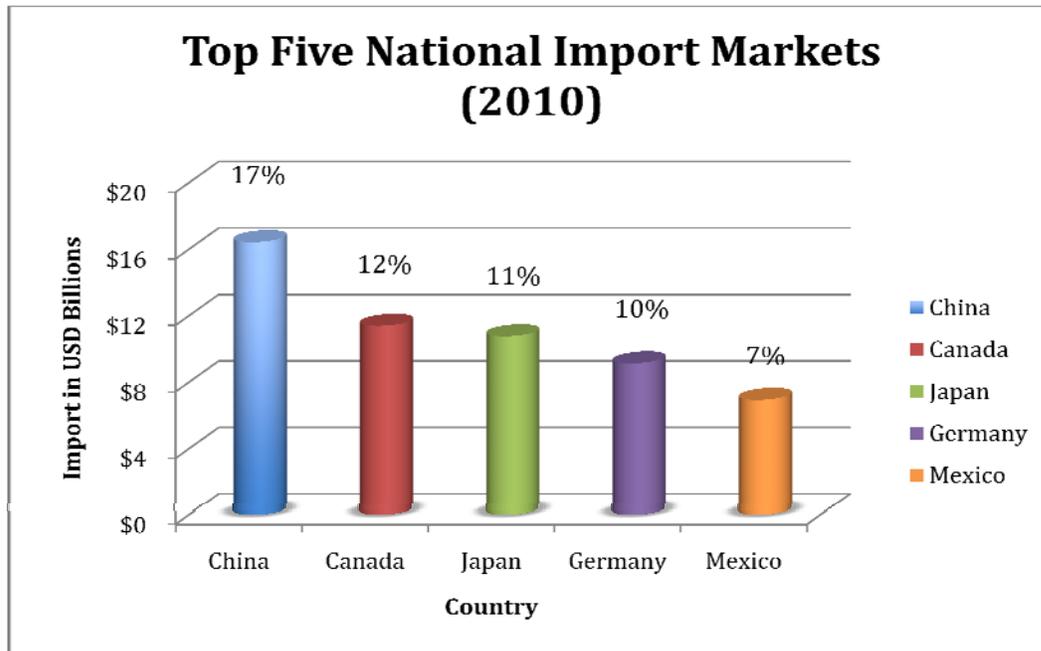


SOURCE: Trade Stats Express

Total 2010 National Exports = \$114 billion

Note: Data for Figure 3 is provided in Chart 2

Figure 4



SOURCE: Trade Stats Express

Total 2010 National Imports = \$94 billion

Top 25 Global Markets for Water (NAICS 332912, 325181, 333319, 333611)

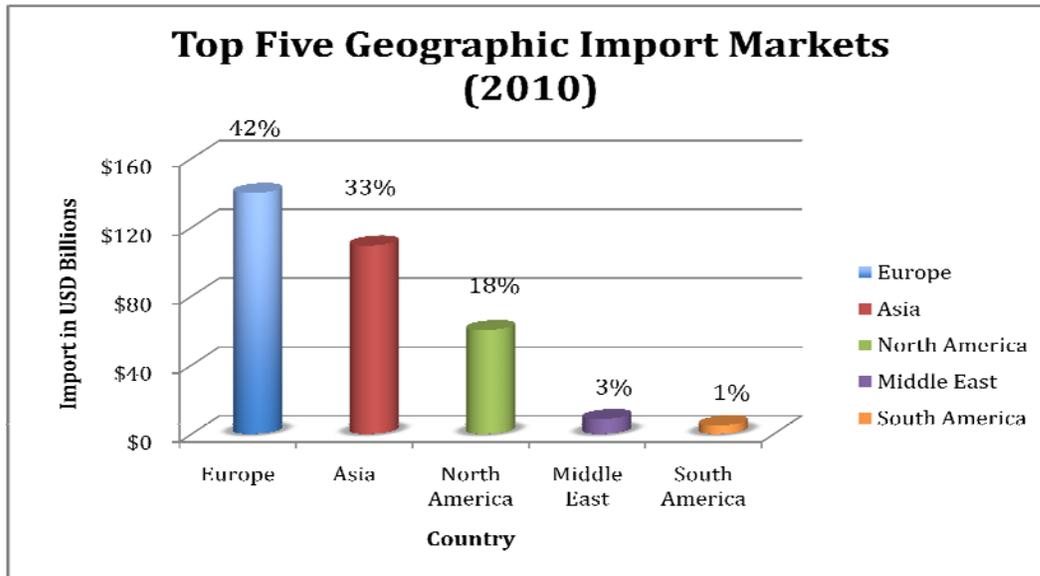
Chart 2

National Market	2008	2009	2010	CAGR ('00-'10)
Canada	\$18,041,947,017	\$14,620,423,671	\$17,567,345,040	1%
Mexico	\$14,978,670,880	\$12,844,636,008	\$15,002,515,464	4%
Japan	\$6,199,477,442	\$4,411,652,385	\$6,368,623,965	0%
Belgium	\$5,818,794,575	\$4,780,692,684	\$6,171,316,133	5%
China	\$5,629,714,014	\$5,818,276,284	\$7,303,054,275	20%
South Korea	\$4,455,863,171	\$3,809,386,986	\$5,802,692,605	9%
United Kingdom	\$4,468,908,451	\$3,915,543,085	\$4,183,337,159	1%
Netherlands	\$5,567,330,277	\$2,553,536,292	\$3,123,470,406	3%
Germany	\$3,849,849,226	\$2,835,920,161	\$4,077,478,678	5%
Brazil	\$4,545,383,150	\$3,281,722,710	\$4,507,820,354	8%
Taiwan	\$2,870,171,238	\$2,249,956,324	\$3,360,306,649	1%
Singapore	\$2,701,035,478	\$2,384,327,787	\$2,980,411,700	8%
France	\$2,383,891,601	\$2,270,917,575	\$2,270,132,214	2%
Australia	\$1,775,829,330	\$1,726,913,086	\$1,944,781,652	5%
Venezuela	\$2,056,069,843	\$1,500,396,089	\$2,485,354,970	12%

Italy	\$1,373,199,210	\$1,192,694,564	\$1,270,533,166	0%
India	\$1,463,242,742	\$1,763,932,997	\$2,310,261,582	14%
Colombia	\$1,559,418,634	\$1,128,487,801	\$1,483,096,997	9%
Saudi Arabia	\$1,588,351,667	\$1,771,943,526	\$1,078,229,802	11%
Hong Kong	\$998,593,287	\$939,311,498	\$1,115,231,383	5%

SOURCE: Trade Stats Express

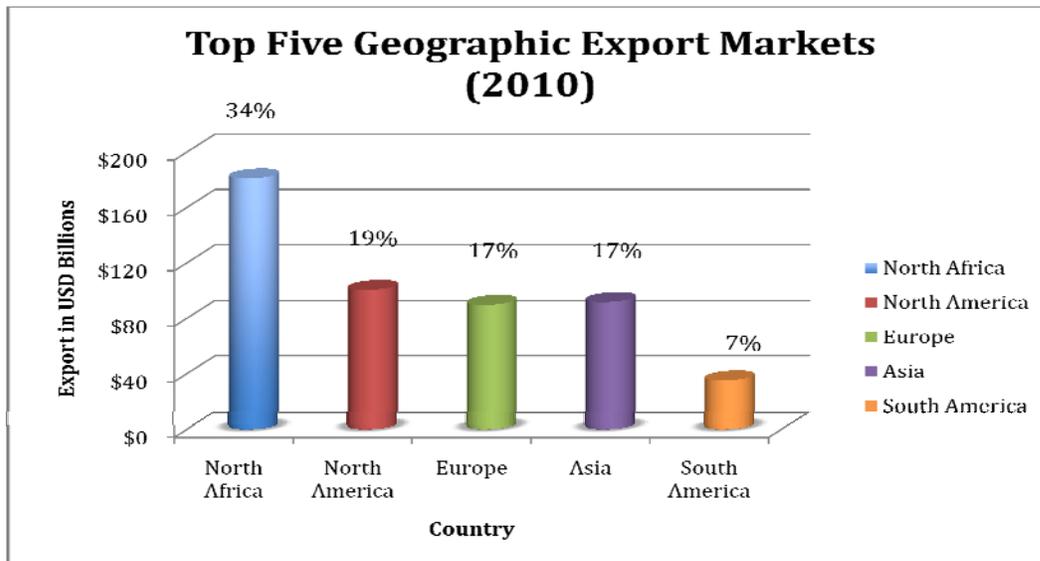
Figure 5



SOURCE: Trade Stats Express

Total 2010 Geographic Imports = \$331 billion

Figure 6



SOURCE: Trade Stats Express

Total 2010 Geographic Exports = \$533 billion

Note: Data for Figure 6 is provided in Chart 3

North Africa represents the number one market of US exports for water technologies. The region is considered to be one of the most arid, and recent reports suggest that the region is experiencing unsustainable groundwater demands. Due to poor mobilization and use of water resources, poor water management, increased population growth, and environmental degradation, the region has huge demand for US exports to reduce the sharpening increases in water crises. It is looking to technical solutions to more effectively use its water resource.

SOURCE: United Nations Economic Commissions for Africa Report on Water, Environment, and Sustainable Development in North Africa, April 2006

Chart 3

Geographic Market	2008	2009	2010	CAGR ('00-'10)
North Africa	\$154,060,454,510	\$173,800,337,498	\$180,996,269,999	4.65%
North America	\$85,990,394,902	\$101,797,339,934	\$100,515,863,955	3.37%
Europe	\$81,806,636,081	\$97,672,264,808	\$89,714,620,038	4.53%
Asia	\$68,273,437,690	\$79,081,626,328	\$91,807,188,770	6.77%
South America	\$26,598,972,822	\$33,940,647,468	\$35,138,548,273	9.42%
Middle East	\$11,097,677,144	\$13,400,266,969	\$11,094,451,025	11.13%
Oceania & Australia	\$8,129,268,920	\$9,616,674,408	\$9,333,941,204	6.78%
Africa	\$7,804,089,475	\$8,870,529,367	\$7,909,958,661	8.33%
Central America	\$3,110,310,829	\$4,141,811,883	\$3,889,944,262	6.76%
Caribbean	\$3,065,894,868	\$3,782,822,957	\$3,240,063,514	5.19%

SOURCE: Trade Stats Express

Industry Export factors

US water industries have a competitive advantage in the wastewater treatment industry. Given the rising demand of Emerging Market Economies for resource security, American companies have the opportunity to export to these markets. India, China, and other East Asian nations are facing shortages in crucial resources such as water.

However, developed countries continue to have growing needs for water technology. The financial crisis in 2008 did result in a drop of exports in 2009, but exports to foreign countries in 2010 have already exceeded the levels of 2008.

Furthermore, clean, fresh water reserves are declining in arid regions. According to the Fraunhofer Society, Europe's largest application-oriented research organization, more than a billion people do not have access to clean drinking water. To address this concern, there has been and will be increasingly more emphasis on water pipelines, purification, desalination, and distribution in the imminent future.

Emerging Applications for Water Technologies

As global freshwater sources become scarcer, new technologies are being applied to areas in wastewater treatment and recycling the use of water in more cost-effective manners.

Presented below are a few of the upcoming areas of water technology innovation:

- **Nanotechnology in Water Treatment:** Nanotechnology is being used to remove harmful chemicals efficiently.
- **Ceramic Membranes:** Ceramic membranes are more resistant to chemical decay and are more durable.
- **Sunlight Photocatalysis:** Natural systems that incorporate sunlight can treat water quality issues instead of utilizing expensive UV light installations.
- **Mobile water purification systems:** Cheap and cost-effective products to filter water are growing. Examples include biodegradable water filtration ‘teabags’, water filtration straws, and water purification systems with solar power capability
- **Forward Osmosis (FO):** While reverse osmosis dominates in the desalination industry, there has been increasing growth in the application of forward osmosis, especially hybrid systems that incorporate FO technology.

SOURCE: Water-Technology.net

Key Resources to Expanding Your Global Business

The following set of links will redirect you to a series of standard considerations when developing your export markets.

Export Resources

- **Trade Information Center** – Comprehensive resource for information on all U.S. federal government export assistance programs
<http://trade.gov/>
- **Import Administration** – Works to protect U.S. firms against unfair trade practices
<http://www.trade.gov/ia/>
- **Market Access and Compliance** – Obtains market access for American firms that encounter foreign barriers to trade.
<http://trade.gov/mac/>
- **U.S. Commercial Service** – Promotes U.S. exports abroad.
<http://www.trade.gov/cs/>
- **BuyUSA** – Brings suppliers of U.S. products and services together with international companies outside the United States, and give both groups the advocacy and services they need to succeed
<http://www.buyusa.gov/home/>
- **Export.gov** – “How to” manual for understanding government regulations.
<http://export.gov/>
- **Bureau of the Census** – Maintains foreign trade statistics
<http://www.census.gov/econ/>

Key Trade Events

Like most industries, there are many key industry events where US companies gain leverage to accomplish their international expansion goals.

Key Global Trade Events in the Water Technology Industry

Minnesota Water Technology Export Round Table

May 25, 2011

Minneapolis, Minnesota

<http://www.wtcsd.org/Resources/WEMI/Events/Minnesota%20%20Trade%20Office.pdf>

American Water Works Association Annual Conference & Exposition

June 12-16, 2011

Washington, D.C.

<http://www.awwa.org/ACE11/index.cfm>

Associated Water Technologies 2011 Annual Convention and Exposition

September 14-17, 2011

Atlanta, Georgia

<http://www.awt.org/annualConvention/>

WEFTEC

Water Environment Federation

October 15-19, 2011

Los Angeles, CA

<http://www.weftec.org/>

WaterWorld Middle East

October 24-26, 2011

Qatar

<http://www.waterworldmiddleeast.com/index.html>

9th Everything About Water Expo 2012

February 25-27, 2012

New Delhi, India

<http://www.wtcsd.org/Resources/WEMI/Events/EXPO%202012%20-%20Brochure%5B1%5D.pdf>

Additional Events can be found at: <http://www.wtcsd.org/wemi/events>.

Key US Industry Associations and Industry Intelligence Sources

- Association of Water Technology: <http://awt.org/>
- World Trade Center San Diego: <http://www.wtcsd.org/wemi>
- Census Bureau: www.census.gov/econ

- National Trade Data Bank: www.stat-usa.gov
- Trade Stats Express: <http://tse.export.gov/TSE/TSEHome.aspx>
- Industry Statistics Sampler: <http://www.census.gov/cgi-bin/naics/index.cgi>
- Water and Wastewater Industry: <http://www.water-technology.net/>
- UN Water: http://www.unwater.org/statistics_use.html
- North American Industry Classification System (NAICS):
<http://www.census.gov/eos/www/naics/index.html>
- Water Environment Federation: <http://wef.org/>
- American Water Works Association: <http://www.awwa.org>