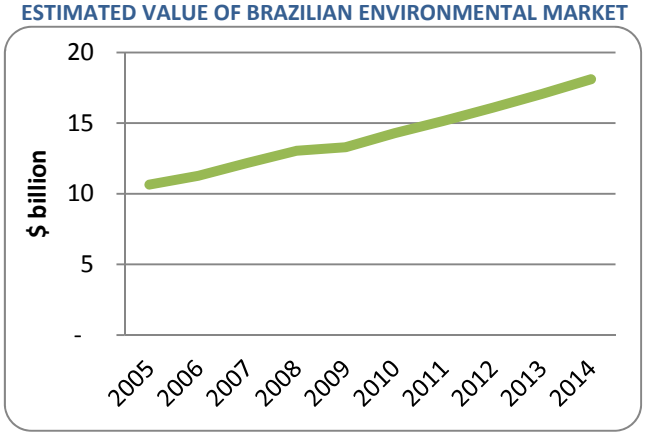
Brazil

Environmental Technologies Export Market Plan

MARKET OVERVIEW

ESTIMATED VALUE OF BRAZILIAN ENVIRONMENTAL MARKET



Source: Environmental Business International and U.S. EPA market review.

STATE OF ENVIRONMENTAL REGULATORY REGIME

Environmental laws increasingly exist but enforcement and compliance remain a challenge. Environmental authority is shared among federal, state, and municipal entities.

CAPACITY TO ADOPT ADVANCED ENVIRONMENTAL SOLUTIONS

Varies greatly between states, with generally higher capacity in the southeast of the country (e.g. Rio, Sao Paulo, and Minas Gerais.)

OBJECTIVE

The Environmental Trade Working Group (ETWG) of the Trade Promotion Coordinating Committee (TPCC) identified a number of foreign markets in which enhanced U.S. government programs and services could support increased deployment of U.S. environmental solutions[1]. Based on extensive examination of global markets for environmental goods and services, trade flows, and current policy initiatives, this report represents one in a series of ***Environmental Technologies Export Market Plans***. These documents outline the environmental needs of key foreign markets and the U.S. government programs that are utilized to support U.S. industry in addressing those needs.

BACKGROUND

On May 14, 2012, four cabinet-level U.S. government officials, Commerce Secretary Bryson, Environmental Protection Agency Administrator Jackson, U.S. Trade Representative Kirk, and Agriculture Secretary Vilsack, outlined a renewed U.S. government approach to fostering environmental exports. This ***Environmental Export Initiative*** leverages the expertise and resources of U.S. government agencies to support U.S. companies capable of exporting goods and services relevant to air pollution control, solid/hazardous waste management, and water/wastewater treatment. This project supports the goals of President Obama's National Export Initiative (NEI) and advances U.S. environmental protection, diplomatic, and international development objectives.

[1] APPENDICES A-C.

The TPCC is composed of senior officials representing 20 U.S. government agencies, chaired by the Secretary of Commerce. Its purpose is to coordinate the export promotion and export financing activities of the U.S. government and to develop government-wide strategic plans for carrying out such programs. Agencies represented within the TPCC's ETWG developed and will implement the ***Environmental Export Initiative***.

AIR POLLUTION CONTROL

Air Quality Monitoring

Given Brazil's significant reliance on hydroelectric power and relatively low use of conventional combustion in its electricity sector, levels of air pollution in Brazilian cities primarily result from industrial and mobile sources.[2] Addressing air pollution has become a priority for Brazilian national and local governments and has generated demand for gas emission monitoring technologies, gas analyzers, and air pollution control technologies. Additionally, several climate change initiatives, including the September 2011 Climate Decree issued by the Rio de Janeiro State Environmental Secretary, will require improved capabilities to measure and control greenhouse gases.

In the United States, the *Clean Air Act* has provided the principal framework for national, state, and local efforts to protect air quality since 1970, including setting national ambient air quality standards for pollutants. The United States pioneered many approaches in this area and has an extensive network of air quality monitoring stations across the country. The U.S.'s extensive experience in measuring airborne pollutants has fostered an innovative U.S. air monitoring industry capable of providing solutions abroad.

Technologies and Services in Demand:

- Continuous emissions monitoring systems
- Ambient air quality monitoring equipment
- Source emissions measurement technologies
- Analytical and laboratory testing goods and services
- Air pollution control equipment
- Fuel vapor control systems

[2] U.S. Energy Information Administration, *International Energy Statistic 2010.*

WASTE MANAGEMENT AND RECYCLING

Municipal Solid Waste

In 2010, Brazil finalized its *National Solid Waste Policy (Law 12,305)*, a measure intended to reduce national waste production and improve Brazilian solid waste management practices. It also mandates municipalities to build sanitary landfills and supports the development of a formal recycling sector. Investments in solid waste treatment technologies and waste-to-energy projects in sanitary and hazardous landfills are expanding significantly. The Brazilian government plans to invest R$ 1.5 billion (US$ 870 million) in solid waste treatment projects, replacement of landfills, introduction of selective waste collection services, and financing of cooperatives of waste collectors. The Brazilian government expects that income from recycling activities will increase from R$ 2 billion (US$ 1.1 billion) to R$ 8 billion (US$ 4.7 billion). Some municipalities in Brazil are also adopting waste incineration with energy generation.

Massive amounts of waste expected to be generated during a number of large upcoming sporting events, including the World Cup in 2014 and the Olympics in 2016, will also require investment in management strategies and technologies.

The United States has a history of addressing solid waste management and landfill issues, dating back to the passage of the *Resource Conservation and Recovery Act* of 1976, which established a framework for the management of non-hazardous solid wastes. This includes criteria for municipal solid waste landfills and other solid waste disposal facilities, while prohibiting the open dumping of solid waste. While the United States has few national regulations directly relevant to recycling, many U.S. states, the federal government, original equipment manufacturers, and retailers are active in promoting it. High commodity prices and increased efficiency in recycling approaches have increased profitability and fostered a large and sophisticated U.S. recycling industry. U.S. industry is well positioned to export related expertise, technologies, and best practices to address similar Brazilian initiatives.

Technologies and Services in Demand:

- Waste collection technologies
- Environmental monitoring and analytical equipment
- Sorting machines
- Crushing and grinding machines
- Materials handling equipment
- Collection services, containers, and vehicles
- Recycling process expertise
- Waste incinerators

Hazardous and Medical Waste Management

Brazil's *National Solid Waste Policy* outlines the development of a system that compels companies that operate with hazardous waste to register in the "National Registry of Hazardous Waste Operators" and prove their technical capability.[3] This enhanced focus on the management of hazardous waste in Brazil will result in possible opportunities for U.S. companies capable of providing relevant hazardous waste management. Additionally, increased Brazilian access to medical treatment will induce a need to address hazardous healthcare waste. According to the Brazilian Association of Urban Cleaning and Waste Treatment Companies, only 32 percent of the 1,059 MT of healthcare waste generated per day is treated.

The United States has a history of addressing hazardous waste issues and the remediation of contaminated sites, dating back to the 1976 *Resource Conservation and Recovery Act* and 1980 *Comprehensive Environmental Response, Compensation, and Liability Act* (*CERCLA*). An innovative and world-leading U.S. hazardous waste management and environmental remediation industry emerged from CERCLA that has much to offer Brazilian entities interested in effectively addressing hazardous waste concerns.

Key Technologies in Demand:

- Waste handling equipment
- Waste treatment technologies
- Brownfield site remediation design and equipment
- Soil contamination testing and monitoring equipment

WATER AND WASTEWATER TREATMENT

Municipal Water and Wastewater Treatment

The Brazilian sanitation law and implementation plan, *Plansab*, sets a formal target of universal sanitation services by 2030. Much remains to be achieved in sewage treatment; currently 70 percent of sewage in Brazil remains untreated.[4] *Plansab* has forecasted that investments of $57.5 billion in drinking water and $86 billion in wastewater transmission and treatment technologies and services are needed to meet the goal of universal access.[5] These investments will include design and construction of wastewater collection systems and treatment facilities as well as upgrades to existing equipment, pumps, and asbestos contaminated pipes. Growth in this area is expected to be aggressive, with an

[3] U.S. Commercial Service, *Brazil Country Commercial Guide 2012.*

[4] Hatia, Mohseen. "Brazilian Market Water and Wastewater Technology - Xylem." *Brazil - U.S. Business Council.* April 12, 2012. http://www.brazilcouncil.org/sites/default/files/Xylem.pdf (accessed November 20, 2012).

[5] Global Water Intelligence. "The Bid to Maximise Brazil's PPP Potential." *Global Water Intelligence*, April 2012: Vol. 13, Issue 4, Page 30 - 31.

estimated Combined Annual Growth Rate (CAGR) 2010 – 2015 of 12.3 percent with revenues estimated to reach $167.8 million in 2015 from a base of $94 million in 2010[6].

Technologies and Services in Demand:

- Engineering, procurement, and construction services
- Advanced filtration
- Membrane filtration
- Waste to energy technology
- Anaerobic digestion
- Nitrification
- Biological denitrification
- Monitoring equipment
- Testing equipment

Process Water, Industrial Wastewater Treatment, and Water Reuse

As Brazil's industrial base continues to grow and sophisticate, there is increasing demand for water treated to quality levels specific to the industrial process. Key client industries include aerospace, electronics, oil and gas, petrochemicals, mining, and pulp and paper. Process water has an expected CAGR of 6.2 percent 2010 – 2015 with estimated revenue of $287.8 million in 2015 from 2010 base of $213.4 million.[7] Industrial effluent laws in Brazil impose high tariffs on companies for effluent disposal in water bodies making on-site tertiary treatment cost effective for many industrial facilities. Water scarcity and adduction costs make water reuse attractive, particularly in water intense extractive sectors. Top end-user segments include oil and gas, petrochemicals, mining, and pulp and paper. The industrial waste water market has an estimated CAGR of 9.4 % for 2010 – 2014 reaching annual revenues of $497.3 million in 2015 from a base of 317.4 million in 2010. [8]

Technologies and Services in Demand:

- Engineering and construction services
- Water reuse equipment and services (process specific)
- Advanced filtration
- Membrane filtration
- Reverse osmosis
- UV disinfection
- Anaerobic digestion

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[6] Hatia, Mohseen. "Brazilian Market Water and Wastewater Technology - Xylem." *Brazil - U.S. Business Council.* April 12, 2012. http://www.brazilcouncil.org/sites/default/files/Xylem.pdf (accessed November 20, 2012).

[7] Hatia, Mohseen. "Brazilian Market Water and Wastewater Technology - Xylem." *Brazil - U.S. Business Council.* April 12, 2012. http://www.brazilcouncil.org/sites/default/files/Xylem.pdf (accessed November 20, 2012).

[8] Hatia, Mohseen. "Brazilian Market Water and Wastewater Technology - Xylem." *Brazil - U.S. Business Council.* April 12, 2012. http://www.brazilcouncil.org/sites/default/files/Xylem.pdf (accessed November 20, 2012).

- Nitrification
- Biological denitrification

Municipal Water Efficiency and Smart Water

Water loss issues are compounded by water scarcity problems in arid regions and increased demand for affordable potable water sources in urban areas. Non-revenue water is a serious issue for Brazilian municipalities with non-revenue water in urban areas estimated at 40 percent.[9] These issues have converged to grow demand among Brazil's 27 state water companies for systems and technologies that address non-revenue water and those that enhance water efficiency such as smart water software and monitoring equipment.

Technologies and Services in Demand:

- Smart water systems and software
- Loss reduction equipment
- Rainwater collection systems
- Monitoring equipment
- Testing equipment

[9] U.S. and Foreign Commercial Services. *Doing Business in Brazil: 2011 Country Commercial Guide for U.S. Companies.* Washington, DC: U.S. Department of Commerce, 2011.

2013 ETWG AGENCY ACTIVITIES

U.S.-Brazil Engagement in Air Quality Monitoring

In 2012, the U.S. EPA and Brazil Ministry of Environment entered into a Memorandum of Understanding that included technical exchanges to improve air quality monitoring capacities as possible areas for cooperation. Efforts to facilitate Brazilian access to U.S. approaches to air quality measurement and assessment were achieved by integrating the activities of the ETWG with private sector work stemming from earlier bilateral dialogues. In particular, the follow-up projects of U.S. environmental monitoring companies who participated in the U.S.-Brazil Joint Initiative on Urban Sustainability (JIUS) were leveraged to include both regulatory, technical, and trade promotion aspects. Additionally, exchange of air quality and other relevant standards were integrated into the U.S.-Brazil Commercial Dialogue to facilitate access to relevant technologies. These efforts supported the March 2011 agreement between President Obama and President Rousseff to enhance cooperation in trade and environmental protection and cooperation.[10]

WasteExpo International Buyers Program

WasteExpo, one of the leading U.S. waste management trade shows, has partnered with the U.S. Department of Commerce's International Buyer Program to encourage foreign participation in the show. This platform was leveraged to exchange relevant technical information Brazilian participants and to advance U.S.-Brazilian waste management cooperation in ongoing bi- and multi-lateral forums. Foreign delegations were introduced to U.S. waste management providers.

U.S. Environmental Solutions Toolkit

The toolkit compiles documentation regarding EPA's environmental regulations, their underlying research, and U.S. companies that provide technologies necessary to implement similar environmental regulatory actions abroad. It is used as a reference tool in bilateral engagements that focus on increasing Brazilian capacity to address environmental concerns, including follow up to the U.S.-Brazil Joint Initiative on Urban Sustainability (JIUS), the U.S.-Brazil Commercial Dialogue, and others.

International Electronics Recycling Summit

The 5th Electronics Recycling Summit brought U.S. and Brazilian government and industry representatives together to discuss evolving policies related to electronics recycling and introduced Brazilian entities to U.S. recyclers and equipment manufacturers. This event series is organized and hosted by the U.S. federal government and the Institute for Scrap Recycling Industries.

[10] Agreement on Trade and Economic Cooperation, March 19, 2011.

APPENDIX A

Export Market Plan and Environmental Technologies Top Prospects Study Methodology

Purpose

The *Environmental Technologies Top Prospects Study* was developed to facilitate the identification of a series of export markets where coordinated U.S. government policy and technical assistance interventions could yield the greatest outcome for U.S. businesses in terms of increased goods and services export sales. The resulting *Export Market Plans (EMPs)* were developed to engender coordinated U.S. government programs and activities that address critical policy barriers in the environmental and commercial space for markets identified through the *Top Prospects Study*. While the EMPs provide an in-depth look at key market segments as well as the U.S. technologies in demand, their functional role is to delineate a series of coordinated projects designed by the agencies of the Environmental Trade Working Group (ETWG) of the Trade Promotion Coordinating Committee (TPCC).

Environmental Technologies Top Prospects Study

Developing the list of key foreign markets began by commencing the *Environmental Technologies Top Prospects Study*. The Study used a three-part methodology that involved both quantitative and qualitative methods to filter for markets that satisfy three general criteria: first, dynamic and growing; second, where U.S. environmental technologies exports can be improved upon; third, where policy interventions in the commercial or environmental regime are likely to catalyze opportunities for the U.S. industry. Due to challenges inherent to this endeavor, the Department of Commerce's International Trade Administration (ITA) attempted to design a methodology that considered an array of trade, economic, policy, and environmental factors. While historical trade figures can convey some useful information about an environmental market's future potential, many other factors play a role. This methodology sought to account for these additional factors as best as possible.

Part I: Dynamic and Growing

The first part of the methodology forecasted the most significant U.S. environmental technology export markets in 2015 and the largest foreign country importers of environmental technologies in 2015, the year the Obama Administration aims to double exports from a 2010 benchmark. Because the Harmonized System (the most commonly used system to measure trade in goods) rarely designates product codes for specific environmental technologies, ITA staff selected "proxy codes" for each environmental subsector that it believed provided the best representation of trade in that subsector.[1] Using these proxy codes, ITA conducted a linear regression analysis of U.S. air pollution control, water/wastewater management, and solid waste management equipment exports over a ten-year

[1] For example, the code designated to water filtration and purifying machinery (8421.21), equipment that is used in most water treatment projects around the world, was used as the proxy for the water/wastewater treatment sector as a whole.

period (2000-2010) and used the results to project disaggregated 2015 U.S. exports in these three sectors to all U.S. trading partners. The same exercise was then conducted for foreign country importers of environmental technologies using disaggregated global import data. The resulting projections were used to predict U.S. annual export growth rates from 2011 to 2015 and annual foreign country import growth rates from 2010-2015.[2] This analysis provided ITA staff with a sense of the relative size and attractiveness from a growth perspective of specific markets in 2015, thus satisfying the identification of 'dynamic and growing' markets for the study's purposes.

The charts below provide a sample of the initial results of these analyses for the air pollution control, water, and waste management sectors:

Air Pollution Control - U.S. Exports Analysis (2011-2015)

	Country	Average Annual Growth	Average Annual Growth Rate
1	Germany	$ 10,579,218	14.1%
2	China	$ 10,037,209	4.4%
3	Saudi Arabia	$ 7,523,320	42.5%
4	Qatar	$ 5,742,727	72.4%
5	Japan	$ 4,704,221	6.2%
6	Brazil	$ 4,036,335	4.6%
7	Singapore	$ 3,692,040	7.4%
8	Venezuela	$ 2,061,410	11.0%
9	Australia	$ 1,912,048	5.6%
10	Netherlands	$ 1,777,215	5.6%
11	Russia	$ 1,772,237	14.1%
12	Egypt	$ 1,723,850	25.0%
13	Peru	$ 1,602,952	15.4%
14	Thailand	$ 1,596,379	3.3%
15	Turkey	$ 1,426,413	16.5%
16	Spain	$ 1,403,119	14.1%
17	Libya	$ 1,348,136	266.1%
18	India	$ 1,262,112	3.4%
19	Norway	$ 1,102,380	11.9%
20	South Africa	$ 1,067,705	4.9%

Air Pollution Control - World Imports Analysis (2010-2014)

	Country	Average Annual Growth	Average Annual Growth Rate
1	United States	$ 221,024,766	9.1%
2	Germany	$ 151,782,544	8.3%
3	China	$ 78,971,979	6.8%
4	Spain	$ 74,436,131	19.2%
5	United Kingdom	$ 47,904,264	8.6%
6	Czech Republic	$ 45,466,580	16.0%
7	Netherlands	$ 39,823,617	19.0%
8	Poland	$ 39,562,468	20.3%
9	Turkey	$ 38,240,260	13.6%
10	France	$ 35,325,231	6.8%
11	Korea	$ 32,485,448	12.7%
12	Italy	$ 29,063,627	8.4%
13	Japan	$ 28,308,980	5.4%
14	Canada	$ 25,514,555	3.3%
15	Portugal	$ 22,094,141	66.8%
16	Austria	$ 21,344,011	9.0%
17	Russia	$ 19,660,409	4.5%
18	Sweden	$ 19,173,587	10.1%
19	Thailand	$ 19,027,356	10.2%
20	Slovakia	$ 16,708,391	10.7%

[2] The difference in time series used for U.S. export growth rates and foreign country import growth rates was due to the lack of 2011 trade data availability for many developing countries.

Water - U.S. Exports Analysis (2011-2015)			
	Country	Average Annual Growth	Average Annual Growth Rate
1	Canada	$ 20,530,900	9.3%
2	China	$ 14,153,666	7.0%
3	Australia	$ 6,671,075	11.2%
4	Belgium	$ 6,484,086	12.2%
5	Spain	$ 6,409,042	27.9%
6	United Arab Emirates	$ 5,511,443	11.9%
7	Mexico	$ 5,118,254	4.2%
8	Saudi Arabia	$ 4,697,716	12.4%
9	Singapore	$ 4,610,531	15.9%
10	India	$ 4,181,147	6.9%
11	Algeria	$ 4,149,121	93.9%
12	Iraq	$ 3,779,499	139.8%
13	Netherlands	$ 3,709,722	7.5%
14	Brazil	$ 3,589,208	12.6%
15	Egypt	$ 3,164,619	32.0%
16	Israel	$ 2,932,447	18.4%
17	Chile	$ 2,814,243	5.8%
18	Trinidad and Tobago	$ 2,277,765	69.8%
19	Qatar	$ 1,903,121	20.4%
20	Germany	$ 1,849,222	6.6%

Water - World Imports Analysis (2010-2014)			
	Country	Average Annual Growth	Average Annual Growth Rate
1	Australia	$ 124,326,418	16.6%
2	Germany	$ 84,596,464	8.8%
3	France	$ 76,078,278	10.7%
4	China	$ 56,917,697	5.5%
5	United States	$ 56,783,567	3.2%
6	Spain	$ 45,727,280	12.7%
7	Belgium	$ 40,208,871	9.7%
8	Russia	$ 39,859,705	11.3%
9	Austria	$ 36,249,681	15.5%
10	Poland	$ 36,220,359	13.7%
11	Canada	$ 34,143,932	6.3%
12	Italy	$ 32,965,072	8.3%
13	Netherlands	$ 31,360,571	11.6%
14	Japan	$ 27,410,922	5.1%
15	United Kingdom	$ 24,625,888	4.7%
16	Sweden	$ 21,249,707	12.6%
17	India	$ 20,903,984	8.3%
18	Korea	$ 18,402,105	4.7%
19	Singapore	$ 18,068,319	5.4%
20	Norway	$ 14,438,442	14.0%

Waste - U.S. Exports Analysis (2011-2015)			
	Country	Average Annual Growth	Average Annual Growth Rate
1	Canada	$ 1,168,069	2.9%
2	Mexico	$ 593,577	4.8%
3	Netherlands	$ 541,071	5.7%
4	Australia	$ 504,266	18.1%
5	Korea	$ 480,896	21.6%
6	Ireland	$ 472,936	73.5%
7	India	$ 378,683	7.8%
8	Saudi Arabia	$ 285,152	13.9%
9	United Kingdom	$ 284,403	10.5%
10	Egypt	$ 271,850	350.0%
11	Brazil	$ 261,111	5.4%
12	Costa Rica	$ 248,151	58.2%
13	Belgium	$ 230,656	15.0%
14	Venezuela	$ 198,626	14.9%
15	Turkey	$ 194,101	37.2%
16	Thailand	$ 176,130	23.6%
17	United Arab Emirates	$ 134,194	14.9%
18	Taiwan	$ 127,774	19.8%
19	Germany	$ 121,331	2.5%
20	Malaysia	$ 116,699	14.7%

Waste - World Imports Analysis (2010-2014)			
	Country	Average Annual Growth	Average Annual Growth Rate
1	China	$ 26,808,888	4.9%
2	Korea	$ 21,311,161	13.6%
3	Pakistan	$ 19,337,869	58.7%
4	United States	$ 18,962,816	6.8%
5	Germany	$ 14,846,097	6.9%
6	Greece	$ 10,269,427	173.2%
7	France	$ 8,725,994	6.2%
8	Spain	$ 8,370,937	18.4%
9	Belgium	$ 7,996,674	18.9%
10	Thailand	$ 7,930,290	8.1%
11	Vietnam	$ 6,964,865	13.2%
12	Turkey	$ 6,913,755	12.9%
13	Italy	$ 6,247,912	8.6%
14	United Kingdom	$ 5,800,063	8.2%
15	Mexico	$ 5,777,630	10.3%
16	Austria	$ 5,399,076	11.2%
17	Canada	$ 5,358,786	6.5%
18	Indonesia	$ 5,312,973	7.9%
19	Switzerland	$ 5,230,412	7.7%
20	Poland	$ 5,118,192	14.6%

Part II: Room for Improvement

The second part of ITA's methodology involved an "export gap" analysis, which was used to give staff a sense of unexploited export potential in each environmental technology sub-sector for each U.S. trading partner. Using a gravity model, a tool commonly used to predict bilateral trade flows based on the economic size and geographic distance between two countries, ITA calculated a U.S. "export gap" –the

difference between gravity model-predicted exports and actual exports—for each U.S. trading partner in 2010. The gravity model employs regression analysis, using variables such as economic size and geographic distance. While variables related to environmental quality and infrastructure were included in the initial analysis, most of these variables were found to be statistically insignificant in the model.

The charts below provide a sample of the initial results of the aforementioned analyses for the air pollution control, water, and waste management sectors:

Export Gap Analysis - Air Pollution Control

	Country	Export Gap	Actual Exports	Predicted Exports
1	Japan	$ 128,361,736	$ 69,213,435	$ 197,575,168
2	France	$ 84,321,200	$ 31,751,790	$ 116,072,992
3	Italy	$ 76,446,512	$ 15,305,226	$ 91,751,736
4	United Kingdom	$ 57,139,728	$ 57,944,242	$ 115,083,968
5	China	$ 56,977,816	$136,884,119	$ 193,861,936
6	Spain	$ 51,077,640	$ 15,254,052	$ 66,331,692
7	Germany	$ 50,242,408	$107,745,609	$ 157,988,016
8	India	$ 42,764,084	$ 17,112,621	$ 59,876,704
9	Russia	$ 38,761,656	$ 21,556,287	$ 60,317,944
10	Brazil	$ 28,073,732	$ 55,144,531	$ 83,218,264
11	Republic of South Africa	$ 23,440,748	$ 24,596,852	$ 48,037,600
12	Turkey	$ 23,007,324	$ 8,762,715	$ 31,770,040
13	Sweden	$ 20,916,028	$ 2,722,916	$ 23,638,944
14	Switzerland	$ 20,021,544	$ 5,615,894	$ 25,637,438
15	Netherlands	$ 16,673,897	$ 21,195,067	$ 37,868,964
16	Indonesia	$ 15,909,582	$ 7,416,518	$ 23,326,100
17	Poland	$ 15,337,534	$ 7,275,590	$ 22,613,124
18	Iran	$ 14,555,602	$ 96,426	$ 14,652,028
19	Greece	$ 12,673,346	$ 943,074	$ 13,616,420
20	Portugal	$ 12,234,037	$ 1,268,480	$ 13,502,517

Export Gap Analysis - Water

	Country	Export Gap	Actual Exports	Predicted Exports
1	Brazil	$ 24,654,190	$ 5,040,620	$ 29,694,810
2	China	$ 22,814,366	$ 26,201,710	$ 49,016,076
3	Germany	$ 18,336,116	$ 16,037,437	$ 34,373,552
4	Russia	$ 14,196,635	$ 9,344,669	$ 23,541,304
5	Italy	$ 13,444,540	$ 7,302,368	$ 20,746,908
6	United Kingdom	$ 9,273,843	$ 19,271,427	$ 28,545,270
7	Turkey	$ 9,216,542	$ 3,069,059	$ 12,285,601
8	Switzerland	$ 7,733,469	$ 1,545,342	$ 9,278,811
9	Iran	$ 7,350,014	$ 16,305	$ 7,366,319
10	Norway	$ 6,885,161	$ 2,081,664	$ 8,966,825
11	Argentina	$ 6,584,585	$ 987,842	$ 7,572,427
12	France	$ 6,120,103	$ 21,199,671	$ 27,319,774
13	Austria	$ 5,352,466	$ 1,201,317	$ 6,553,783
14	United Arab Emirates	$ 5,316,447	$ -	$ 5,316,447
15	Poland	$ 5,268,010	$ 3,842,293	$ 9,110,303
16	Ireland	$ 4,712,450	$ 1,183,225	$ 5,895,675
17	Portugal	$ 4,607,782	$ 1,391,418	$ 5,999,200
18	Sweden	$ 4,417,581	$ 2,179,474	$ 6,597,055
19	Indonesia	$ 4,407,520	$ 5,781,178	$ 10,188,698
20	Greece	$ 4,073,479	$ 2,063,729	$ 6,137,208

Export Gap Analysis - Waste

	Country	Export Gap	Actual Exports	Predicted Exports
1	India	$ 15,227,944	$ 4,161,218	$ 19,389,162
2	Russia	$ 10,292,024	$ 4,877,289	$ 15,169,313
3	Spain	$ 6,338,601	$ 716,930	$ 7,055,531
4	Italy	$ 5,782,719	$ 1,509,546	$ 7,292,265
5	France	$ 4,679,291	$ 3,748,448	$ 8,427,739
6	United Kingdom	$ 4,189,564	$ 5,205,152	$ 9,394,716
7	Poland	$ 3,449,782	$ 872,582	$ 4,322,364
8	Egypt	$ 2,456,295	$ 729,493	$ 3,185,788
9	Turkey	$ 2,215,549	$ 3,412,502	$ 5,628,051
10	Ukraine	$ 1,972,455	$ 253,738	$ 2,226,193
11	Algeria	$ 1,850,734	$ 258,237	$ 2,108,971
12	Romania	$ 1,831,802	$ 190,453	$ 2,022,255
13	Vietnam	$ 1,614,341	$ -	$ 1,614,341
14	Portugal	$ 1,554,282	$ 152,866	$ 1,707,148
15	Nigeria	$ 1,508,628	$ 754,690	$ 2,263,318
16	Bangladesh	$ 1,427,224	$ -	$ 1,427,224
17	United Arab Emirates	$ 1,402,201	$ -	$ 1,402,201
18	Greece	$ 1,371,579	$ 68,230	$ 1,439,809
19	Philippines	$ 1,366,236	$ 297,421	$ 1,663,657
20	Germany	$ 1,309,492	$ 10,630,681	$ 11,940,173

Part III: Ripe for Policy Interventions

Following completion of the export market forecasting and export gap analysis, ITA staff developed a shortlist of "high potential" export markets by looking at the estimated size of an export market in 2015, how quickly U.S. exports are expected to grow for that market leading up to 2015, and how much "untapped" U.S. export potential exists in a given market. The lists were further filtered to exclude markets with highly developed environmental regimes that also host mature environmental technology markets and possess highly developed environmental technology industries of their own. The rationale informing this decision suggests that well-developed markets, while prime candidates for traditional “export promotion” activities, are not ideal recipients for targeted technical assistance for market development or similar emerging market policy development efforts. Consensus among U.S. environmental technology companies and associations that ITA staff consulted suggests that federal government services are most needed in quickly growing emerging markets, which feature nascent environmental regimes and fierce global competition for market share. Countries that the U.S. has officially sanctioned were also struck from the list.

The "high potential" market shortlists consisted of countries that ranked highly across the board in this analysis. For instance, in the water/wastewater treatment technology sector, China ranked in the top five for largest projected U.S. export markets in 2015, largest projected importers in 2015 and most

unexploited U.S. export markets (using the gravity model). Such a consistent showing in these various rankings provided a strong argument for including China as a top U.S. export prospect in this subsector.

Upon completion of "high potential" market shortlists for each of the three environmental technology subsectors, ITA began the third and final stage of analysis, which involved a qualitative assessment of each shortlist by leveraging the sector-specific expertise of ITA industry analysts. Items considered in this analysis included new policy announcements in foreign markets that could impact U.S. exports (e.g. new public sector investments in water infrastructure), perceived ease of doing business (based on experience working with U.S. exporters in a given market), knowledge of "in the pipeline" projects where demand for U.S. goods was anticipated, and political risk assessment of the market. The “high potential” market shortlists were then revised based on this qualitative analysis. The study team also benefitted from input from the Environmental Technology Trade Advisory Committee (ETTAC), whose members represent an array of environmental technology companies serving each of the three subsectors covered by this study. Countries deemed attractive destinations for both trade promotion and trade policy missions were given greater consideration, as were markets that would help the U.S. to strategically diversify its environmental technology export portfolio.

The results by sector are provided here:

Proposed Top Markets		
Air Pollution Control	**Water**	**Waste**
China	**China**	**China**
India	**Saudi Arabia**	**India**
Russia	**India**	**Brazil**
Brazil	**Brazil**	Vietnam
Turkey	**Indonesia**	Turkey
South Africa	Pakistan	South Africa
Vietnam	Morocco	**Indonesia**
Indonesia	Kuwait	Thailand
Saudi Arabia	Vietnam	Russia
Thailand	Peru	UAE

Environmental Technologies Export Market Plans

After the top five collective markets for air pollution control, water and wastewater, and waste management were identified through the *Top Prospects Study*, an *Export Market Plan (EMP)* was developed for each. EMPs are comprised of three main components: first, an analysis of the key market segments that provide export opportunities to U.S. firms; second, an assessment of the key technologies in demand for which the United States holds a competitive advantage; third, a list of coordinated government activities and programs that support development of environmental technologies’ export markets through targeted technical assistance, policy development, demonstration programs, and traditional trade policy and export promotion activities.

The market analysis was developed by conducting a literature review of key EMP government sources, such as published national plans and reports on environmental rule making. The literature review also included analysis of market reports from key industry journals and media sources, and where relevant, technical reports from donor and non-profit organizations. The literature review was supplemented by consultations with relevant Foreign Commercial Service and Environment, Science, Technology and Health (ESTH) officers at U.S. Embassies to get a sense of the 'ground reality' that desk research alone cannot provide. After the literature review was complete, Environmental Technology Specialists at the U.S. Environmental Protection Agency (EPA) conducted a review of the key U.S. technologies in demand for each market segment. Based on this research, the agencies of the ETWG, led by the U.S. Department of Commerce and EPA, developed a series of coordinated activities to address the identified opportunities and challenges in market.

APPENDIX B

Environmental Technologies Top Prospects Study Results – Values not for quotation*

AIR POLLUTION CONTROL

Proposed Top Markets	Export Gap Analysis				U.S. Exports Analysis (2011-2015)			World Imports Analysis (2010-2014)		
Country	**Country**	**Export Gap**	**Actual Exports**	**Predicted Exports**	**Country**	**Average Annual Growth**	**Average Annual Growth Rate**	**Country**	**Average Annual Growth**	**Average Annual Growth Rate**
China	Japan	$128,361,736	$69,213,435	$197,575,168	Germany	$10,579,218	14.1%	United States	$221,024,766	9.1%
India	France	$84,321,200	$31,751,790	$116,072,992	China	$10,037,209	4.4%	Germany	$151,782,544	8.3%
Russia	Italy	$76,446,512	$15,305,226	$91,751,736	Saudi Arabia	$7,523,320	42.5%	China	$78,971,979	6.8%
Brazil	United Kingdom	$57,139,728	$57,944,242	$115,083,968	Qatar	$5,742,727	72.4%	Spain	$74,436,131	19.2%
Turkey	China	$56,977,816	$136,884,119	$193,861,936	Japan	$4,704,221	6.2%	United Kingdom	$47,904,264	8.6%
South Africa	Spain	$51,077,640	$15,254,052	$66,331,692	Brazil	$4,036,335	4.6%	Czech Republic	$45,466,580	16.0%
Vietnam	Germany	$50,242,408	$107,745,609	$157,988,016	Singapore	$3,692,040	7.4%	Netherlands	$39,823,617	19.0%
Indonesia	India	$42,764,084	$17,112,621	$59,876,704	Venezuela	$2,061,410	11.0%	Poland	$39,562,468	20.3%
Saudi Arabia	Russia	$38,761,656	$21,556,287	$60,317,944	Australia	$1,912,048	5.6%	Turkey	$38,240,260	13.6%
Thailand	Brazil	$28,073,732	$55,144,531	$83,218,264	Netherlands	$1,777,215	5.6%	France	$35,325,231	6.8%
	Republic of South Africa	$23,440,748	$24,596,852	$48,037,600	Russia	$1,772,237	14.1%	Korea	$32,485,448	12.7%
	Turkey	$23,007,324	$8,762,715	$31,770,040	Egypt	$1,723,850	25.0%	Italy	$29,063,627	8.4%
	Sweden	$20,916,028	$2,722,916	$23,638,944	Peru	$1,602,952	15.4%	Japan	$28,308,980	5.4%
	Switzerland	$20,021,544	$5,615,894	$25,637,438	Thailand	$1,596,379	3.3%	Canada	$25,514,555	3.3%
	Netherlands	$16,673,897	$21,195,067	$37,868,964	Turkey	$1,426,413	16.5%	Portugal	$22,094,141	66.8%
	Indonesia	$15,909,582	$7,416,518	$23,326,100	Spain	$1,403,119	14.1%	Austria	$21,344,011	9.0%
	Poland	$15,337,534	$7,275,590	$22,613,124	Libya	$1,348,136	266.1%	Russia	$19,660,409	4.5%
	Iran	$14,555,602	$96,426	$14,652,028	India	$1,262,112	3.4%	Sweden	$19,173,587	10.1%
	Greece	$12,673,346	$943,074	$13,616,420	Norway	$1,102,380	11.9%	Thailand	$19,027,356	10.2%
	Portugal	$12,234,037	$1,268,480	$13,502,517	South Africa	$1,067,705	4.9%	Slovakia	$16,708,391	10.7%
	United Arab Emirates	$11,964,588	NA	$11,964,588	Chile	$1,067,481	5.9%	Kazakhstan	$16,119,876	6.1%
	Norway	$11,816,375	$8,883,811	$20,700,186	Kuwait	$1,063,102	26.4%	Australia	$14,537,584	8.6%
	Denmark	$10,732,325	$6,098,455	$16,830,780	Hong Kong	$957,854	4.8%	Belgium	$13,778,648	4.3%
	Belgium	$9,128,069	$14,572,381	$23,700,450	United Arab Em	$893,946	3.9%	India	$13,533,392	6.7%
	Finland	$8,912,540	$3,512,434	$12,424,974	France	$876,321	3.1%	Switzerland	$13,243,017	8.0%
	Philippines	$6,965,578	$699,954	$7,665,532	Denmark	$845,119	29.5%	Algeria	$9,904,771	9.1%
	Hungary	$6,755,978	NA	$6,755,978	Poland	$822,343	18.0%	Romania	$9,007,983	16.7%
	Romania	$6,533,669	$1,579,901	$8,113,570	Trin and Tobago	$724,502	17.1%	Croatia	$8,898,902	45.8%
	Kazakhstan	$6,406,969	NA	$6,406,969	Bangladesh	$706,379	52.3%	Malaysia	$8,709,065	9.4%
	Kuwait	$6,236,508	NA	$6,236,508	Colombia	$604,561	2.2%	Chile	$8,176,949	18.1%
	Czech Republic	$6,014,317	$4,695,673	$10,709,990	Tunisia	$530,405	58.0%	Nigeria	$7,669,739	31.6%
	Cuba	$5,740,450	NA	$5,740,450	Portugal	$521,506	70.3%	Finland	$7,250,612	14.3%
	Vietnam	$4,333,546	NA	$4,333,546	Iraq	$519,479	13.3%	Ukraine	$7,104,706	18.2%
	Morocco	$4,256,496	$781,640	$5,038,136	Croatia	$477,448	852.3%	Norway	$7,023,213	10.6%
	Argentina	$4,222,828	$11,782,198	$16,005,026	Nigeria	$431,501	4.8%	Pakistan	$6,612,751	22.9%
	Bangladesh	$4,093,285	NA	$4,093,285	Algeria	$395,571	84.8%	Vietnam	$6,402,768	11.4%
	Nigeria	$3,906,691	$4,864,973	$8,771,664	Argentina	$372,522	2.1%	Serbia	$6,354,245	41.9%
	Ukraine	$3,791,842	$3,034,575	$6,826,417	Vietnam	$346,028	5.2%	Singapore	$5,979,926	4.5%
	Slovakia	$3,525,499	$1,325,735	$4,851,234	Serbia	$312,064	373.5%	Indonesia	$5,975,733	5.8%
	Ireland	$3,193,795	$8,521,331	$11,715,126	Austria	$262,390	2.8%	Argentina	$5,964,913	8.0%
	Sudan	$2,852,008	NA	$2,852,008	Eq Guinea	$255,398	15.2%	Denmark	$5,353,717	9.3%
	Syria	$2,838,963	$28,557	$2,867,520	Hungary	$251,974	9.5%	Peru	$5,129,020	17.8%
	Luxembourg	$2,796,450	$447,266	$3,243,716	Switzerland	$240,246	5.8%	Greece	$4,586,177	29.5%
	New Zealand	$2,714,954	$3,012,508	$5,727,462	Senegal	$232,007	75.5%	Belarus	$4,317,258	18.6%
	Austria	$2,542,604	$17,413,776	$19,956,380	Kazakhstan	$228,095	9.6%	Republic of South Africa	$4,316,718	2.9%
	Croatia	$2,484,667	$810,660	$3,295,327	Tokelau Is	$214,532	NA	Egypt	$4,104,802	8.0%
	Slovenia	$2,287,854	$416,217	$2,704,071	Cyprus	$205,593	1029.9%	Kuwait	$3,687,829	NA

***Values not for quotation:**

The values shown here were derived using proxy indicators and therefore do not reflect total trade flows or values for services. Please reference Appendix A for more information on study methodology.

	Lebanon	$2,073,611	$428,691	$2,502,302	Lithuania	$201,311	38.6%	Slovenia	$3,236,789	10.3%
	Lithuania	$2,068,828	NA	$2,068,828	Czech Republic	$191,773	9.3%	Bulgaria	$3,035,880	34.5%
	Uruguay	$2,047,465	NA	$2,047,465	Italy	$186,626	1.1%	United Arab Emirates	$2,888,030	9.9%
	Sri Lanka (Ceylon)	$2,002,239	$45,268	$2,047,507	Ghana	$171,649	68.2%	Morocco	$2,373,053	10.7%
	Belarus	$1,565,962	$1,357,600	$2,923,562	Angola	$165,965	5.5%	Tunisia	$2,217,546	13.4%
	Guatemala	$1,550,182	$1,523,994	$3,074,176	Azerbaijan	$161,704	48.6%	Iceland	$2,036,778	78.5%
	Ghana	$1,549,143	$98,661	$1,647,804	Belarus	$153,076	849.1%	Ireland	$1,978,736	7.5%
	Tunisia	$1,498,666	$958,021	$2,456,687	Slovak Republic	$138,167	21.4%	Oman	$1,634,484	4.1%
	Jordan	$1,404,802	NA	$1,404,802	Turkmenistan	$131,371	46.4%	New Zealand	$1,493,524	9.6%
	Ethiopia	$1,372,570	$21,064	$1,393,634	Yemen	$128,195	41.6%	Bosnia-Hercegovina	$1,474,441	31.3%
	Yemen (Sana before 1993)	$1,343,588	NA	$1,343,588	Cote d`Ivoire	$118,102	297.8%	Yemen (Sana before 1993)	$1,435,871	NA
	Qatar	$1,316,274	$3,449,075	$4,765,349	Aruba	$110,306	31.1%	Ecuador	$1,382,619	11.7%
	Bulgaria	$1,267,559	$1,279,365	$2,546,924	Greece	$105,928	9.2%	Lithuania	$1,180,221	15.9%
	Kenya	$1,263,821	$174,513	$1,438,334	Guatemala	$99,053	9.2%	New Caledonia	$1,123,872	23.7%
	Honduras	$1,227,993	NA	$1,227,993	Panama	$90,836	4.2%	Macedonia	$1,044,918	NA
	Latvia	$1,207,329	$217,829	$1,425,158	Netherlands Ant	$81,805	53.3%	Trinidad and Tobago	$1,032,938	11.9%
	Macao	$1,187,832	$155,397	$1,343,229	Guadeloupe	$80,283	NA	Gabon	$938,743	NA
	Cyprus	$1,097,496	$122,089	$1,219,585	Sri Lanka	$79,806	25.8%	Bahrain	$886,977	27.3%
	Macedonia	$1,011,602	NA	$1,011,602	Slovenia	$79,295	47.2%	Estonia	$852,570	17.3%
	Turkmenistan	$1,009,552	NA	$1,009,552	Lebanon	$79,147	28.8%	Georgia	$777,005	21.6%
	Tanzania	$986,326	$73,322	$1,059,648	Finland	$76,473	1.6%	Jordan	$752,668	21.9%
	Panama	$887,388	$1,092,664	$1,980,052	Latvia	$75,954	19.3%	Madagascar	$707,197	27.8%
	Cameroon	$864,624	$286,225	$1,150,849	Estonia	$69,862	88.7%	Montenegro	$679,568	68.9%
	Afghanistan	$855,444	NA	$855,444	Bahamas	$63,238	29.8%	Luxembourg	$664,690	12.7%
	Bosnia-Hercegovina	$840,974	$160,007	$1,000,981	Kenya	$56,766	10.3%	Ivory Coast	$613,907	16.2%
	Paraguay	$818,580	$221,368	$1,039,948	Madagascar	$56,651	64.0%	Sudan	$612,438	NA
	Senegal	$816,188	NA	$816,188	Nicaragua	$51,515	83.6%	Latvia	$597,180	9.2%
	Uganda	$789,818	$38,368	$828,186	Georgia	$50,658	74.8%	Cyprus	$595,481	24.8%
	Ivory Coast	$741,565	$506,636	$1,248,201	Indonesia	$49,898	0.3%	El Salvador	$508,318	28.3%
	Iceland	$738,758	$182,861	$921,619	Philippines	$49,598	2.3%	Uruguay	$480,605	NA
	Estonia	$702,702	$527,070	$1,229,772	Congo (ROC)	$32,791	50.6%	Bolivia	$469,474	8.9%
	Zambia	$695,183	$76,057	$771,240	Luxembourg	$29,255	8.2%	Tanzania	$463,487	27.8%
	Gabon	$694,658	NA	$694,658	Tanzania	$28,963	11.7%	Mozambique	$447,258	45.8%
	Botswana	$692,109	$10,561	$702,670	Uruguay	$27,696	1.7%	Senegal	$422,852	44.0%
	Albania	$661,846	$33,628	$695,474	Belize	$27,065	50.6%	Cameroon	$406,813	21.7%
	Nepal	$637,599	$170	$637,769	Bermuda	$26,584	55.8%	Azerbaijan	$383,325	2.8%
	Brunei	$628,470	NA	$628,470	Barbados	$23,569	26.5%	Zambia	$373,720	20.8%
	Bermuda	$609,400	$182,444	$791,844	Togo	$20,781	307.8%	Macao	$339,845	26.2%
	Congo	$607,079	$12,103	$619,182	Congo (DROC)	$19,682	NA	Netherlands Antilles	$321,363	NA
	Namibia	$600,904	NA	$600,904	San Marino	$19,055	NA	Kenya	$308,209	18.4%
	Jamaica	$571,647	$703,728	$1,275,375	Anguilla	$16,557	NA	Lebanon	$302,905	9.1%
	Georgia	$554,974	$87,578	$642,552	Gabon	$16,436	13.9%	Armenia	$295,598	2.4%
	Bahrain	$537,314	$589,812	$1,127,126	Moldova	$16,231	164.8%	Congo	$280,532	14.2%
	Cambodia (Kampuchea)	$518,181	NA	$518,181	Benin	$15,558	141.8%	Paraguay	$249,647	8.7%
	Mozambique	$448,461	$11,556	$460,017	New Caledonia	$14,032	NA	Ghana	$178,228	7.9%
	Papua New Guinea	$436,851	NA	$436,851	Antigua Barbuda	$13,392	207.3%	Jamaica	$166,774	17.7%
	Malta and Gozo	$429,996	$71,222	$501,218	Serbia Pre-2009	$13,281	NA	Honduras	$156,695	NA
	El Salvador	$396,158	$1,267,029	$1,663,187	Malta	$11,806	15.2%	Mayotte	$147,355	NA
	Benin	$387,911	$1,574	$389,485	Honduras	$11,392	2.3%	Malta and Gozo	$140,116	19.3%
	Armenia	$377,506	$144,799	$522,305	St Kitts-Nevis	$10,605	38.4%	Sri Lanka (Ceylon)	$135,266	5.6%
	Madagascar	$376,321	$35,717	$412,038	Paraguay	$10,585	10.1%	Mongolia	$132,009	NA
	Mongolia	$340,219	NA	$340,219	Cambodia	$9,620	NA	Belize	$129,097	93.0%
	Zimbabwe (Rhodesia)	$325,811	$47,026	$372,837	Mauritania	$7,216	21.2%	Panama	$128,014	5.3%
	Tajikistan	$308,709	NA	$308,709	Ethiopia	$7,163	12.0%	Costa Rica	$124,584	1.6%
	Guinea	$298,293	NA	$298,293	Fiji	$7,100	55.0%	Mauritius	$123,568	6.4%
	Rwanda	$298,233	NA	$298,233	Tonga	$6,696	NA	Benin	$106,477	47.1%
	Andorra	$292,950	NA	$292,950	Zambia	$6,512	1.6%	French Polynesia	$104,018	18.5%
	Moldova	$284,957	$72,625	$357,582	Mozambique	$6,280	35.1%	Guinea	$101,323	NA
	Niger	$266,880	$72,020	$338,900	Montenegro	$6,016	24.6%	Bahamas	$90,334	8.4%
	Mauritius	$244,768	$200,277	$445,045	Nepal	$5,893	NA	Palestinian Authority	$89,700	NA

***Values not for quotation:**

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	Azerbaijan	$232,513	$2,262,854	$2,495,367	St Lucia Is	$5,492	167.9%	Albania	$86,363	6.8%
	Faroe Islands	$199,619	NA	$199,619	Monaco	$5,343	NA	Moldova	$67,270	2.3%
	Togo	$196,683	NA	$196,683	Gibraltar	$5,075	NA	Suriname	$53,861	11.6%
	Swaziland	$188,839	NA	$188,839	Cen African Rep	$4,620	NA	Uganda	$49,877	6.0%
	Greenland	$183,247	NA	$183,247	Botswana	$4,531	28.7%	Barbados	$49,782	11.8%
	Mauritania	$172,197	$81,883	$254,080	Jamaica	$4,401	1.0%	Namibia	$49,708	NA
	Fiji	$158,170	$10,308	$168,478	St Vinc and Gren	$4,113	25.3%	Burkina (Upper Volta)	$43,649	3.9%
	Sierra Leone	$133,142	NA	$133,142	Somalia	$3,995	NA	Antigua Barbuda	$31,021	66.1%
	Eritrea	$126,412	NA	$126,412	Nauru	$3,723	NA	Rwanda	$26,393	NA
	Cape Verde	$123,982	$1,884	$125,866	Rwanda	$3,625	109.8%	Cape Verde	$25,395	21.0%
	Central African Republic	$121,548	NA	$121,548	Macedonia	$3,339	123.8%	Fiji	$25,303	3.0%
	Burkina (Upper Volta)	$120,676	$407,620	$528,296	Turks and Caic Is	$3,239	30.4%	Cambodia (Kampuchea)	$19,455	11.4%
	St Lucia	$115,869	NA	$115,869	Mauritius	$3,106	9.0%	Swaziland	$18,307	NA
	Lesotho	$115,398	NA	$115,398	French Guiana	$3,028	NA	Djibouti	$17,724	NA
	Burundi	$93,987	NA	$93,987	Kyrgyzstan	$2,797	33.4%	Aruba	$17,550	1.2%
	Maldive Islands	$91,463	$9,650	$101,113	Dominica Is	$2,751	NA	Faroe Islands	$15,757	NA
	Bhutan	$86,149	NA	$86,149	Armenia	$2,745	NA	Grenada	$10,582	NA
	Antigua Barbuda	$83,283	$42,332	$125,615	Fr Polynesia	$2,656	NA	Lesotho	$8,653	NA
	Grenada	$81,034	NA	$81,034	Niger	$2,609	42.7%	Vanuatu (New Hebrides)	$7,380	NA
	St Christopher-Nevis	$71,263	NA	$71,263	Suriname	$2,436	4.2%	Maldive Islands	$6,884	12.9%
	Malawi	$68,936	$193,511	$262,447	Zimbabwe	$2,281	20.4%	Seychelles	$5,296	NA
	Guinea-Bissau	$66,428	NA	$66,428	Guyana	$2,061	2.7%	Central African Republic	$5,072	NA
	Djibouti	$62,631	NA	$62,631	Kosovo	$2,039	NA	St Christopher-Nevis	$3,524	NA
	Gambia	$62,226	NA	$62,226	Grenada Is	$1,831	44.3%	Montserrat	$3,362	NA
	Seychelles	$53,056	NA	$53,056	Mayotte	$1,341	NA	Gambia	$3,318	393.1%
	Barbados	$42,754	$313,814	$356,568	Br Virgin Is	$921	3.2%	Tonga	$3,163	105.3%
	Guyana	$41,705	$145,777	$187,482	Lesotho	$839	NA	Anguilla	$3,094	NA
	Vanuatu (New Hebrides)	$40,432	NA	$40,432	Greenland	$827	NA	Western Samoa	$2,409	51.6%
	Solomon Islands	$39,274	NA	$39,274	Liechtenstein	$801	NA	Guyana	$2,164	1.1%
	East Timor	$38,134	NA	$38,134	Eritrea	$789	NA	St Lucia	$2,138	NA
	St Vincent and Grenadines	$34,642	$35,701	$70,343	East Timor	$725	NA	Togo	$1,686	0.7%
	Western Samoa	$34,082	$158	$34,240	Cape Verde	$702	NA	Greenland	$999	NA
	Nicaragua	32526	$513,336	$545,862	Laos	$572	1.1%	St Vincent and Grenadines	$879	1.3%
	Comoros	32351	NA	$32,351	Uganda	$543	5.1%	Nicaragua	$830	0.1%
	Belize	25311	$113,650	$138,961	St Helena	$458	NA	Sao Tome and Principe	$728	1.6%
	Tonga	21494	$502	$21,996	Samoa	$450	16.1%	Kiribati (Gilbert Isl)	$343	NA
	Sao Tome and Principe	14571	NA	$14,571	Haiti	$389	0.6%	Burundi	$78	0.1%
	Kiribati (Gilbert Isl)	10431	NA	$10,431	Gaza Strip	$315	NA	East Timor	$4	NA
	Suriname	6539	$264,110	$270,649	Faroe Islands	$307	NA	Dominica	$(6,513)	-14.5%
	Dominica	5970	$43,403	$49,373	Sierra Leone	$33	1.2%	Niger	$(12,166)	-1.8%
	Tuvalu	2407	NA	$2,407	Niue	NA	NA	Bermuda	$(17,454)	-9.1%
	Egypt	888	$9,597,700	$9,598,588	St Pierre and Miq	NA	NA	Malawi	$(37,521)	-6.9%
	Oman	-148643	$2,609,906	$2,461,264	Sudan prior2011	NA	NA	Nepal	$(38,997)	-5.7%
	Bahamas	-253027	$1,056,216	$803,189	Malawi	$(188)	-1.9%	Kyrgyzstan	$(44,941)	-1.3%
	Bolivia	-433621	$1,616,811	$1,183,190	Maldive Is	$(192)	-2.4%	Zimbabwe (Rhodesia)	$(47,680)	-1.2%
	Kyrgyzstan	-478024	$736,703	$258,679	Guinea-Bissau	$(375)	-15.9%	Mauritania	$(63,528)	-2.6%

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	Pakistan	-848934	$8,136,626	$7,287,692	F St Micronesia	$(417)	-5.1%	Botswana	$(84,971)	-8.1%
	Dominican Republic	-1238030	$5,397,670	$4,159,640	Djibouti	$(732)	-10.6%	Bhutan	$(108,910)	-3.6%
	Hong Kong	-1304528	$9,952,623	$8,648,095	Solomon Is	$(778)	-15.4%	Mali	$(304,510)	-4.7%
	Ecuador	-1387441	$5,043,753	$3,656,312	Cook Is	$(793)	-15.9%	Guatemala	$(368,502)	-11.0%
	Algeria	-2075271	$10,213,877	$8,138,607	Marshall Is	$(840)	-4.3%	Ethiopia	$(395,090)	-4.5%
	Costa Rica	-2179865	$4,771,994	$2,592,129	Iran	$(881)	-15.9%	Hong Kong	$(426,310)	-0.5%
	Chile	-2772612	$12,463,199	$9,690,587	Burkina Faso	$(932)	-11.0%	Philippines	$(438,111)	-4.3%
	Mali	-3087044	$3,653,099	$566,055	Tuvalu	$(1,262)	-15.9%	Dominican Republic	$(630,559)	-3.3%
	Venezuela	-4661772	$28,604,738	$23,942,966	Cayman Is	$(1,755)	-1.5%	Qatar	$(764,595)	-1.8%
	Peru	-4680520	$13,009,547	$8,329,027	Uzbekistan	$(2,223)	-0.3%	Venezuela	$(937,544)	-1.3%
	Australia	-5479837	$39,153,537	$33,673,700	Swaziland	$(2,390)	-11.4%	Israel	$(1,166,382)	-2.4%
	Trinidad and Tobago	-5873790	$7,421,061	$1,547,271	Curacao	$(5,663)	-15.9%	Syria	$(1,166,787)	-6.2%
	Israel	-5963092	$15,722,000	$9,758,908	Cameroon	$(8,476)	-18.8%	Brazil	$(1,838,240)	-0.5%
	Thailand	-10820794	$23,040,306	$12,219,512	Macao	$(10,241)	-7.5%	Colombia	$(1,954,727)	-3.1%
	Malaysia	-11018328	$19,673,591	$8,655,263	Ecuador	$(10,907)	-0.3%	Saudi Arabia	$(2,807,515)	-2.6%
	Saudi Arabia	-15540178	$32,607,774	$17,067,596	Sint Maarten	$(11,903)	-15.9%	Hungary	$(5,832,964)	-5.5%
	Colombia	-16660961	$33,594,737	$16,933,776	Brunei	$(12,609)	-2.4%	Iran	$(7,327,264)	-9.2%
	Korea	-36815712	$75,792,160	$38,976,448	Bulgaria	$(14,495)	-45.6%	Mexico	$(36,847,612)	-4.9%
	Singapore	-50876836	$58,462,105	$7,585,270	Liberia	$(14,718)	-12.9%			
	Canada	-92717400	$584,637,784	$491,920,384	Guinea	$(17,609)	-34.7%			
	Mexico	-304814368	$481,372,624	$176,558,256	Bosnia-Hercegov	$(20,261)	-14.3%			
					Afghanistan	$(20,368)	-2.2%			
					Andorra	$(21,149)	-16.0%			
					Romania	$(23,632)	-3.0%			
					Papua New Guin	$(26,407)	-24.7%			
					Tajikistan	$(34,895)	-15.4%			
					Mongolia	$(67,017)	-11.3%			
					El Salvador	$(74,175)	-5.9%			
					Morocco	$(76,285)	-9.0%			
					Costa Rica	$(77,375)	-3.8%			
					Korea	$(90,868)	-0.1%			
					Pakistan	$(101,534)	-1.5%			
					Jordan	$(111,390)	-5.7%			
					Namibia	$(122,780)	-15.5%			
					Ireland	$(123,365)	-1.2%			
					Israel	$(126,145)	-0.7%			
					Ukraine	$(134,424)	-9.9%			
					New Zealand	$(160,066)	-4.2%			
					Bolivia	$(216,052)	-16.4%			
					Dominican Rep	$(277,309)	-9.8%			
					Belgium	$(299,593)	-1.1%			
					Bahrain	$(375,703)	-5.8%			
					Sweden	$(426,220)	-8.5%			
					Oman	$(441,152)	-5.9%			
					United Kingdom	$(693,090)	-1.2%			
					Iceland	$(750,522)	-17.7%			
					Malaysia	$(1,230,884)	-3.2%			
					Taiwan	$(1,922,509)	-4.6%			
					Canada	$(13,635,077)	-2.0%			
					Mexico	$(14,467,393)	-4.6%			

WASTE MANAGEMENT and RECYCLING

Proposed Top Markets	Export Gap Analysis				U.S. Exports Analysis (2011-2015)			World Import Analysis (2010-2014)		
Country	**Country**	**Export Gap**	**Actual Exports**	**Predicted Exports**	**Country**	**Average Annual Growth**	**Average Annual Growth Rate**	**Country**	**Average Annual Growth**	**Average Annual**

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										Growth Rate
China	India	$15,227,944	$4,161,218	$19,389,162	Canada	$1,168,069	2.9%	China	$26,808,888	4.9%
India	Russia	$10,292,024	$4,877,289	$15,169,313	Mexico	$593,577	4.8%	Korea	$21,311,161	13.6%
Brazil	Spain	$6,338,601	$716,930	$7,055,531	Netherlands	$541,071	5.7%	Pakistan	$19,337,869	58.7%
Vietnam	Italy	$5,782,719	$1,509,546	$7,292,265	Australia	$504,266	18.1%	United States	$18,962,816	6.8%
Turkey	France	$4,679,291	$3,748,448	$8,427,739	Korea	$480,896	21.6%	Germany	$14,846,097	6.9%
	United Kingdom	$4,189,564	$5,205,152	$9,394,716	Ireland	$472,936	73.5%	Greece	$10,269,427	173.2%
South Africa	Poland	$3,449,782	$872,582	$4,322,364	India	$378,683	7.8%	France	$8,725,994	6.2%
Indonesia	Egypt	$2,456,295	$729,493	$3,185,788	Saudi Arabia	$285,152	13.9%	Spain	$8,370,937	18.4%
Thailand	Turkey	$2,215,549	$3,412,502	$5,628,051	United Kingdom	$284,403	10.5%	Belgium	$7,996,674	18.9%
Russia	Ukraine	$1,972,455	$253,738	$2,226,193	Egypt	$271,850	350.0%	Thailand	$7,930,290	8.1%
UAE	Algeria	$1,850,734	$258,237	$2,108,971	Brazil	$261,111	5.4%	Vietnam	$6,964,865	13.2%
	Romania	$1,831,802	$190,453	$2,022,255	Costa Rica	$248,151	58.2%	Turkey	$6,913,755	12.9%
	Vietnam	$1,614,341	NA	$1,614,341	Belgium	$230,656	15.0%	Italy	$6,247,912	8.6%
	Portugal	$1,554,282	$152,866	$1,707,148	Venezuela	$198,626	14.9%	United Kingdom	$5,800,063	8.2%
	Nigeria	$1,508,628	$754,690	$2,263,318	Turkey	$194,101	37.2%	Mexico	$5,777,630	10.3%
	Bangladesh	$1,427,224	NA	$1,427,224	Thailand	$176,130	23.6%	Austria	$5,399,076	11.2%
	United Arab Emirates	$1,402,201	NA	$1,402,201	United Arab Emirates	$134,194	14.9%	Canada	$5,358,786	6.5%
	Greece	$1,371,579	$68,230	$1,439,809	Taiwan	$127,774	19.8%	Indonesia	$5,312,973	7.9%
	Philippines	$1,366,236	$297,421	$1,663,657	Germany	$121,331	2.5%	Switzerland	$5,230,412	7.7%
	Germany	$1,309,492	$10,630,681	$11,940,173	Malaysia	$116,699	14.7%	Poland	$5,118,192	14.6%
	Hungary	$1,282,436	NA	$1,282,436	French Guiana	$75,691	NA	Romania	$4,977,213	41.0%
	Belarus	$1,074,338	$39,100	$1,113,438	Panama	$74,694	17.4%	Sweden	$4,727,112	10.4%
	Republic of South Africa	$1,042,867	$1,085,623	$2,128,490	Equatorial Guinea	$66,880	279.6%	Australia	$4,655,490	9.6%
	Kazakhstan	$930,470	NA	$930,470	New Zealand	$64,961	14.8%	Kazakhstan	$4,611,720	NA
	Dominican Republic	$899,269	$597,711	$1,496,980	Trinidad and Tobago	$61,069	11.7%	United Arab Emirates	$4,546,142	NA
	Norway	$844,133	$283,747	$1,127,880	Argentina	$59,431	3.5%	India	$4,292,768	10.0%
	Tunisia	$774,781	$75,849	$850,630	Ghana	$57,598	26.6%	Japan	$4,117,069	5.4%
	Slovakia	$760,538	$13,793	$774,331	Ukraine	$54,245	NA	Republic of South Africa	$3,676,272	13.6%
	Argentina	$757,432	$3,019,395	$3,776,827	Greece	$53,298	19.3%	Norway	$3,321,605	9.9%
	Denmark	$671,068	$243,987	$915,055	Poland	$51,999	12.6%	Czech Republic	$3,286,313	12.3%
	Ethiopia	$643,246	$19,032	$662,278	Norway	$50,618	23.0%	Egypt	$3,209,416	16.3%
	Syria	$638,822	$49,922	$688,744	Oman	$46,472	101.3%	Slovakia	$3,040,118	42.5%
	Sudan	$546,754	NA	$546,754	Italy	$44,607	9.4%	Denmark	$2,895,813	13.1%
	Sri Lanka (Ceylon)	$519,125	$53,973	$573,098	Austria	$41,618	76.7%	Belarus	$2,807,795	15.8%
	Azerbaijan	$506,352	$52,000	$558,352	Kenya	$37,460	NA	Bulgaria	$2,496,076	80.0%
	Austria	$500,688	$931,460	$1,432,148	Kuwait	$37,245	58.9%	Serbia	$2,361,553	44.2%
	Honduras	$474,931	NA	$474,931	Switzerland	$37,049	7.3%	Netherlands	$2,291,832	7.4%
	Croatia	$470,258	$77,705	$547,963	Dominican Republic	$36,138	16.1%	Ukraine	$2,140,602	14.8%
	Lithuania	$442,850	NA	$442,850	Barbados	$35,389	132.1%	Slovenia	$2,129,671	16.4%
	Tanzania	$413,759	$39,244	$453,003	Algeria	$34,739	32.0%	Venezuela	$1,986,596	10.9%
	Bolivia	$410,140	$123,794	$533,934	Sweden	$32,557	16.3%	Oman	$1,771,241	58.2%
	Saudi Arabia	$407,922	$2,276,003	$2,683,925	Luxembourg	$29,496	NA	Finland	$1,713,150	10.0%
	Morocco	$403,437	$803,008	$1,206,445	Denmark	$29,460	11.7%	Morocco	$1,504,323	10.2%
	Yemen (Sana before 1993)	$375,037	NA	$375,037	Netherlands Antilles	$29,117	NA	Brazil	$1,434,786	2.1%
	Kenya	$369,381	$38,557	$407,938	Croatia	$28,426	473.9%	Malaysia	$1,434,614	3.0%
	Sweden	$354,762	$1,202,780	$1,557,542	Pakistan	$26,661	335.4%	Ireland	$1,407,062	19.3%
	Guatemala	$349,380	$562,873	$912,253	Morocco	$24,734	75.6%	Croatia	$1,382,817	21.7%
	Uganda	$311,572	$5,847	$317,419	Czech Republic	$24,338	411.0%	Chile	$1,315,483	11.4%
	Afghanistan	$309,551	NA	$309,551	Cayman Islands	$17,678	NA	Hungary	$1,231,485	10.1%
	Turkmenistan	$299,302	NA	$299,302	Aruba	$17,378	NA	Madagascar	$1,222,635	10.8%
	Uruguay	$287,977	NA	$287,977	Romania	$16,670	19.3%	Argentina	$1,162,711	8.8%
	Slovenia	$271,467	$57,097	$328,564	Bolivia	$16,507	NA	Jordan	$1,115,429	17.3%
	Lebanon	$262,350	$99,180	$361,530	Qatar	$16,328	23.3%	Colombia	$1,090,209	9.1%
	Albania	$252,801	$2,687	$255,488	Nicaragua	$14,080	42.8%	Peru	$1,000,120	11.9%
	Senegal	$242,141	NA	$242,141	Indonesia	$12,625	1.9%	New Zealand	$974,073	11.7%
	Ghana	$237,919	$367	$238,286	St Lucia	$12,502	144.0%	Singapore	$969,680	3.7%
	Macedonia	$225,182	NA	$225,182	Kazakhstan	$11,521	153.5%	Latvia	$833,292	21.0%

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	Bulgaria	$222,880	$597,663	$820,543	Estonia	$9,807	4.1%	Bosnia-Hercegovina	$736,854	21.3%
	Luxembourg	$220,194	$1,254	$221,448	Macedonia	$8,405	NA	Estonia	$687,516	13.5%
	Bahamas	$217,907	$13,326	$231,233	St Vincent and Grenadines	$7,289	NA	Cyprus	$632,367	68.6%
	Cambodia (Kampuchea)	$217,616	NA	$217,616	Suriname	$6,701	NA	Sudan	$591,426	NA
	Nepal	$208,788	NA	$208,788	Jordan	$6,473	59.3%	Lithuania	$586,891	16.1%
	Jordan	$195,954	NA	$195,954	Jamaica	$5,938	7.0%	Yemen (Sana before 1993)	$571,902	NA
	Burkina (Upper Volta)	$189,652	$16,633	$206,285	Dominica	$5,792	NA	Syria	$454,149	10.9%
	Botswana	$167,155	$5,669	$172,824	Lebanon	$4,836	39.4%	Israel	$448,007	3.4%
	Gabon	$161,632	NA	$161,632	Bahrain	$4,551	NA	Guatemala	$409,245	26.5%
	Macao	$154,819	$785	$155,604	Cyprus	$4,209	NA	Macedonia	$402,623	NA
	Mozambique	$152,735	NA	$152,735	Tunisia	$3,563	NA	Honduras	$396,471	NA
	Mali	$145,405	$3,224	$148,629	Belarus	$3,419	60.6%	Luxembourg	$365,049	8.1%
	Nicaragua	$143,429	$181,298	$324,727	Bermuda	$2,937	NA	Portugal	$301,010	1.8%
	Malaysia	$137,052	$1,526,858	$1,663,910	Israel	$2,847	0.2%	Iceland	$297,670	10.5%
	Tajikistan	$134,155	NA	$134,155	Vietnam	$2,827	0.5%	Kuwait	$271,022	NA
	Ivory Coast	$130,825	$149,651	$280,476	Kyrgyzstan	$2,487	NA	Mozambique	$241,285	8.4%
	Guinea	$129,815	NA	$129,815	Libya	$2,460	NA	Malta and Gozo	$230,262	93.2%
	Estonia	$129,642	$75,406	$205,048	Georgia	$2,099	9.4%	Palestinian Authority	$226,700	465.0%
	Benin	$128,679	NA	$128,679	British Virgin Islands	$2,057	NA	Bahrain	$217,216	16.1%
	Brazil	$124,100	$8,792,492	$8,916,592	Brunei	$1,813	NA	Ethiopia	$207,364	3.2%
	Armenia	$119,148	$8,417	$127,565	Tokelau Islands	$1,770	NA	Azerbaijan	$192,741	38.3%
	Kyrgyzstan	$112,302	NA	$112,302	Paraguay	$1,476	NA	Ecuador	$189,450	3.8%
	Cyprus	$109,523	$26,477	$136,000	Turks and Caicos Islands	$1,117	NA	Senegal	$186,835	34.8%
	Mauritania	$109,128	NA	$109,128	St Christopher-Nevis	$1,014	NA	Philippines	$185,123	4.6%
	Niger	$107,077	NA	$107,077	Uganda	$997	NA	Trinidad and Tobago	$172,474	30.7%
	Congo	$106,513	NA	$106,513	Gambia	$975	NA	Cameroon	$171,394	9.5%
	Mauritius	$97,389	$1,502	$98,891	Slovenia	$936	20.6%	Kyrgyzstan	$157,402	17.1%
	Papua New Guinea	$97,237	NA	$97,237	Guadeloupe	$882	NA	Uruguay	$154,523	NA
	Rwanda	$96,281	NA	$96,281	Palau	$732	NA	Gabon	$150,195	NA
	Malawi	$93,171	$14,030	$107,201	Tajikistan	$704	NA	Mali	$146,494	30.2%
	Moldova	$90,817	$7,426	$98,243	Yemen (Sana)	$681	NA	Guinea	$135,378	NA
	Zambia	$90,583	$12,336	$102,919	Burkina (Upper Volta)	$661	NA	Mauritania	$135,373	18.0%
	Mongolia	$81,853	NA	$81,853	Malta and Gozo	$523	NA	Ivory Coast	$129,786	5.3%
	Malta and Gozo	$79,506	$1,086	$80,592	Bosnia-Hercegovina	$501	NA	Uganda	$115,313	14.8%
	Namibia	$78,585	NA	$78,585	Gabon	$470	2.0%	Costa Rica	$113,285	5.1%
	Sierra Leone	$62,756	NA	$62,756	Niger	$398	NA	Namibia	$109,863	NA
	Togo	$56,476	NA	$56,476	Namibia	$260	NA	Lebanon	$108,472	2.4%
	Swaziland	$40,674	NA	$40,674	Sierra Leone	$225	NA	Macao	$107,747	91.5%
	Gambia	$39,705	NA	$39,705	Laos	$209	NA	Dominican Republic	$106,989	6.8%
	Antigua Barbuda	$34,402	$1,123	$35,525	Cameroon	$171	NA	Seychelles	$104,368	NA
	St Lucia	$34,211	NA	$34,211	French Polynesia	$150	NA	Botswana	$103,682	22.3%
	Bhutan	$33,926	$707	$34,633	Antigua Barbuda	$97	3.1%	Bangladesh	$80,369	NA
	Burundi	$29,491	NA	$29,491	San Marino	$73	NA	Jamaica	$78,823	18.0%
	Bosnia-Hercegovina	$29,202	$243,654	$272,856	Armenia	$70	NA	New Caledonia	$71,993	7.5%
	Central African Republic	$28,719	NA	$28,719	Sri Lanka (Ceylon)	$39	0.5%	Mauritius	$66,021	22.4%

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	Jamaica	$26,641	$310,246	$336,887	Anguilla	$28	NA	Guyana	$59,133	254.9%
	Belize	$24,229	$20,444	$44,673	Liberia	$23	NA	Cambodia (Kampuchea)	$57,847	30.5%
	Fiji	$23,696	NA	$23,696	Yugoslavia(Serbia/Montenegro)	$8	NA	Bahamas	$52,994	235.9%
	Guinea-Bissau	$23,649	NA	$23,649	Hungary	$(6)	93.6%	Congo	$48,559	4.7%
	Lesotho	$22,908	NA	$22,908	Madagascar	$(40)	-1.3%	Bhutan	$43,030	57.7%
	Guyana	$22,875	$9,604	$32,479	Grenada	$(121)	-0.9%	Moldova	$42,419	3.3%
	Cameroon	$19,821	$311,193	$331,014	Philippines	$(322)	-0.1%	Mongolia	$41,939	NA
	Eritrea	$19,702	NA	$19,702	Tanzania	$(324)	-1.6%	Bolivia	$39,772	2.4%
	Cape Verde	$19,559	NA	$19,559	Azerbaijan	$(386)	-2.3%	Ghana	$34,996	3.5%
	Grenada	$19,042	NA	$19,042	Ivory Coast	$(388)	-1.7%	Rwanda	$34,462	NA
	St Christopher-Nevis	$16,913	NA	$16,913	Botswana	$(431)	-1.8%	Faroe Islands	$31,730	NA
	Seychelles	$16,304	NA	$16,304	Maldive Islands	$(435)	-10.0%	French Polynesia	$28,897	39.3%
	Dominica	$16,147	$2,063	$18,210	New Caledonia	$(453)	-10.0%	Zambia	$28,819	5.5%
	Maldive Islands	$16,117	NA	$16,117	Zambia	$(496)	-3.7%	Brunei	$28,555	NA
	Solomon Islands	$12,421	NA	$12,421	Macao	$(783)	-2.3%	Armenia	$22,695	1.7%
	St Vincent and Grenadines	$7,755	$15,910	$23,665	Guinea	$(926)	-10.0%	Mayotte	$21,889	NA
	Vanuatu (New Hebrides)	$7,683	NA	$7,683	Mongolia	$(987)	-10.0%	Malawi	$20,579	5.7%
	East Timor	$6,554	NA	$6,554	Uruguay	$(1,021)	-1.2%	Djibouti	$17,212	NA
	Comoros	$5,885	NA	$5,885	Bangladesh	$(1,217)	-6.3%	Cuba	$16,156	NA
	Tonga	$3,523	$118	$3,641	Papua New Guinea	$(1,248)	-10.0%	Tanzania	$15,817	0.8%
	Sao Tome and Principe	$3,284	NA	$3,284	Peru	$(1,414)	-0.2%	St Lucia	$15,167	NA
	Western Samoa	$3,279	$2,545	$5,824	Congo	$(1,590)	-7.0%	Hong Kong	$14,904	0.1%
	Kiribati (Gilbert Isl)	$2,320	NA	$2,320	Guatemala	$(2,307)	-2.0%	Netherlands Antilles	$13,737	NA
	Indonesia	$(57,848)	$3,364,664	$3,306,816	Djibouti	$(2,352)	-10.0%	Burkina (Upper Volta)	$12,984	21.1%
	Trinidad and Tobago	$(70,959)	$533,465	$462,506	Senegal	$(2,595)	-3.6%	Maldive Islands	$12,657	16.3%
	Georgia	$(110,308)	$284,795	$174,487	Lithuania	$(3,566)	-3.9%	Cape Verde	$11,034	15.5%
	Ecuador	$(179,683)	$1,494,289	$1,314,607	Afghanistan	$(4,309)	-16.9%	Burundi	$10,754	15.4%
	Switzerland	$(188,319)	$1,566,381	$1,378,062	Latvia	$(4,970)	-3.7%	St Vincent and Grenadines	$8,268	52.0%
	El Salvador	$(237,993)	$862,395	$624,403	Fiji	$(5,974)	-10.0%	St Christopher-Nevis	$7,691	NA
	Costa Rica	$(290,551)	$944,097	$653,546	Sint Maarten	$(8,125)	-10.0%	Dominica	$6,395	199.1%
	Finland	$(298,096)	$1,177,523	$879,427	Spain	$(10,155)	-5.3%	Western Samoa	$6,166	117.3%
	Paraguay	$(386,928)	$674,117	$287,189	Nigeria	$(14,064)	-13.8%	Grenada	$2,272	NA
	Ireland	$(529,365)	$1,547,676	$1,018,311	Iraq	$(21,041)	-5.8%	Lesotho	$2,019	NA
	Hong Kong	$(629,115)	$1,964,331	$1,335,216	Bulgaria	$(21,613)	-6.1%	Gambia	$1,859	885.1%
	Latvia	$(744,329)	$1,016,545	$272,216	Portugal	$(25,685)	-10.6%	Niger	$1,497	0.6%
	Colombia	$(804,280)	$4,825,364	$4,021,084	Ecuador	$(26,137)	-4.8%	Anguilla	$936	NA
	Czech Republic	$(847,449)	$2,305,607	$1,458,159	Hong Kong	$(28,102)	-2.0%	Vanuatu (New Hebrides)	$923	NA
	Madagascar	$(908,384)	$1,043,019	$134,635	Colombia	$(33,596)	-1.4%	Togo	$559	14.7%
	Japan	$(986,101)	$11,735,005	$10,748,904	Serbia	$(34,342)	-9.7%	Tonga	$144	122.3%
	Iceland	$(1,062,163)	$1,160,897	$98,734	Mozambique	$(35,142)	-10.0%	Kiribati (Gilbert Isl)	$115	NA
	Israel	$(1,183,189)	$2,090,000	$906,811	Republic of South Africa	$(61,642)	-6.3%	East Timor	$54	NA
	Singapore	$(1,188,433)	$2,250,159	$1,061,726	Honduras	$(80,529)	-9.5%	Guinea-Bissau	$0	NA
	Peru	$(1,205,291)	$3,473,949	$2,268,658	Russia	$(93,199)	-2.4%	Antigua Barbuda	$(336)	-6.1%
	Chile	$(1,347,308)	$2,794,353	$1,447,045	China	$(103,067)	-0.5%	Sao Tome and Principe	$(886)	-5.5%
	Venezuela	$(1,635,376)	$4,327,269	$2,691,893	Haiti	$(113,779)	-9.9%	Albania	$(2,109)	-0.1%
	Netherlands	$(1,724,409)	$4,672,010	$2,947,601	Japan	$(164,087)	-1.3%	Fiji	$(2,186)	-1.8%
	Panama	$(1,892,153)	$2,542,140	$649,987	Finland	$(227,256)	-7.9%	Belize	$(5,005)	-5.9%
	Pakistan	$(3,267,126)	$6,145,481	$2,878,355	France	$(231,491)	-12.3%	Aruba	$(10,887)	-7.2%
	Belgium	$(5,266,008)	$7,037,409	$1,771,401	Singapore	$(237,502)	-7.4%	Bermuda	$(14,910)	-10.0%
	Australia	$(6,616,685)	$8,429,692	$1,813,007	Chile	$(362,280)	-8.3%	Burma	$(18,486)	-12.7%

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								(Myanmar)		
	Thailand	$(6,652,954)	$9,157,343	$2,504,389	Angola	$(531,092)	-10.0%	Kenya	$(18,813)	-0.7%
	Korea	$(11,848,766)	$17,224,569	$5,375,803				Sri Lanka (Ceylon)	$(20,497)	-0.4%
	Mexico	$(15,433,930)	$31,031,382	$15,597,452				Suriname	$(26,750)	-4.4%
	China	$(16,053,876)	$52,275,280	$36,221,404				El Salvador	$(40,229)	-2.6%
	Canada	$(16,646,005)	$45,870,951	$29,224,946				Barbados	$(43,250)	-4.5%
								Benin	$(47,643)	-10.0%
								Tunisia	$(53,756)	-0.3%
								Panama	$(54,840)	-1.3%
								Algeria	$(60,977)	-0.2%
								Nicaragua	$(79,843)	-5.3%
								Paraguay	$(104,118)	-2.6%
								Nepal	$(111,764)	-4.3%
								Zimbabwe (Rhodesia)	$(138,487)	-7.2%
								Georgia	$(248,402)	-6.6%
								Nigeria	$(263,475)	-1.2%
								Qatar	$(298,538)	-4.2%
								Montenegro	$(398,369)	-6.4%
								Saudi Arabia	$(739,734)	-1.5%
								Iran	$(2,007,986)	-12.0%
								Russia	$(2,808,035)	-0.7%

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WATER and WASTEWATER TREATMENT

Proposed Top Markets	Export Gap Analysis				U.S. Exports Analysis (2011-2015)			World Imports Analysis (2010-2014)		
Country	Country	Export Gap	Actual Exports	Predicted Exports	Country	Average Annual Growth	Average Annual Growth Rate	Country	Average Annual Growth	Average Annual Growth Rate
China	Brazil	$24,654,190	$5,040,620	$29,694,810	Canada	$20,530,900	9.3%	Australia	$124,326,418	16.6%
Saudi Arabia	China	$22,814,366	$26,201,710	$49,016,076	China	$14,153,666	7.0%	Germany	$84,596,464	8.8%
India	Germany	$18,336,116	$16,037,437	$34,373,552	Australia	$6,671,075	11.2%	France	$76,078,278	10.7%
Brazil	Russia	$14,196,635	$9,344,669	$23,541,304	Belgium	$6,484,086	12.2%	China	$56,917,697	5.5%
Indonesia	Italy	$13,444,540	$7,302,368	$20,746,908	Spain	$6,409,042	27.9%	United States	$56,783,567	3.2%
	United Kingdom	$9,273,843	$19,271,427	$28,545,270	United Arab Emirates	$5,511,443	11.9%	Spain	$45,727,280	12.7%
Pakistan	Turkey	$9,216,542	$3,069,059	$12,285,601	Mexico	$5,118,254	4.2%	Belgium	$40,208,871	9.7%
Morocco	Switzerland	$7,733,469	$1,545,342	$9,278,811	Saudi Arabia	$4,697,716	12.4%	Russia	$39,859,705	11.3%
Kuwait	Iran	$7,350,014	$16,305	$7,366,319	Singapore	$4,610,531	15.9%	Austria	$36,249,681	15.5%
Vietnam	Norway	$6,885,161	$2,081,664	$8,966,825	India	$4,181,147	6.9%	Poland	$36,220,359	13.7%
Peru	Argentina	$6,584,585	$987,842	$7,572,427	Algeria	$4,149,121	93.9%	Canada	$34,143,932	6.3%
	France	$6,120,103	$21,199,671	$27,319,774	Iraq	$3,779,499	139.8%	Italy	$32,965,072	8.3%
	Austria	$5,352,466	$1,201,317	$6,553,783	Netherlands	$3,709,722	7.5%	Netherlands	$31,360,571	11.6%
	United Arab Emirates	$5,316,447	NA	$5,316,447	Brazil	$3,589,208	12.6%	Japan	$27,410,922	5.1%
	Poland	$5,268,010	$3,842,293	$9,110,303	Egypt	$3,164,619	32.0%	United Kingdom	$24,625,888	4.7%
	Ireland	$4,712,450	$1,183,225	$5,895,675	Israel	$2,932,447	18.4%	Sweden	$21,249,707	12.6%
	Portugal	$4,607,782	$1,391,418	$5,999,200	Chile	$2,814,243	5.8%	India	$20,903,984	8.3%
	Sweden	$4,417,581	$2,179,474	$6,597,055	Trinidad and Tobago	$2,277,765	69.8%	Korea	$18,402,105	4.7%
	Indonesia	$4,407,520	$5,781,178	$10,188,698	Qatar	$1,903,121	20.4%	Singapore	$18,068,319	5.4%
	Greece	$4,073,479	$2,063,729	$6,137,208	Germany	$1,849,222	6.6%	Norway	$14,438,442	14.0%
	Romania	$3,917,404	$318,446	$4,235,850	Thailand	$1,781,448	9.2%	Romania	$14,203,284	14.7%
	India	$3,855,114	$16,885,324	$20,740,438	Madagascar	$1,649,299	128.9%	Switzerland	$13,969,139	6.9%
	Cuba	$3,797,241	NA	$3,797,241	Italy	$1,530,501	6.0%	Ireland	$13,393,523	20.0%
	Kazakhstan	$3,704,276	NA	$3,704,276	Kuwait	$1,336,134	56.6%	Chile	$11,128,534	11.0%
	Kuwait	$3,608,606	NA	$3,608,606	Peru	$1,280,414	8.8%	Ukraine	$10,783,994	18.3%
	Czech Republic	$3,600,167	$779,854	$4,380,021	Poland	$1,265,380	24.6%	Mexico	$10,605,632	3.5%
	Nigeria	$3,500,917	$1,419,602	$4,920,519	Malaysia	$1,117,898	7.0%	Finland	$10,263,479	14.0%
	Denmark	$3,429,002	$2,152,519	$5,581,521	Russia	$868,612	6.8%	Turkey	$10,188,704	6.9%
	Netherlands	$3,101,585	$10,266,755	$13,368,340	Pakistan	$860,408	27.1%	Thailand	$10,104,390	5.7%
	Finland	$2,739,708	$1,198,030	$3,937,738	New Zealand	$835,243	14.3%	Republic of South Africa	$9,828,202	8.2%
	Vietnam	$2,543,635	NA	$2,543,635	Colombia	$821,403	5.3%	Czech Republic	$9,368,440	7.3%
	Bangladesh	$2,518,689	NA	$2,518,689	Taiwan	$807,069	2.0%	Brazil	$9,032,937	4.7%
	Slovakia	$2,373,598	$161,511	$2,535,109	Vietnam	$774,625	10.9%	Algeria	$8,551,086	3.4%
	Hungary	$2,361,463	NA	$2,361,463	Turkey	$747,382	7.4%	Malaysia	$8,049,114	4.3%
	Colombia	$2,174,619	$6,517,353	$8,691,972	Finland	$732,585	8.2%	Kazakhstan	$7,920,898	NA
	Morocco	$1,905,563	$1,157,484	$3,063,047	Indonesia	$674,851	9.9%	Portugal	$6,020,967	9.9%
	Sudan	$1,901,595	NA	$1,901,595	Dominican Republic	$667,508	10.8%	Israel	$5,116,473	6.3%
	Croatia	$1,646,389	$273,864	$1,920,253	Netherlands Antilles	$634,931	71.3%	Hungary	$4,899,855	7.6%
	Azerbaijan	$1,598,254	$94,031	$1,692,285	United Kingdom	$624,872	1.5%	Greece	$4,868,358	11.3%
	Bulgaria	$1,578,773	$85,571	$1,664,344	Kazakhstan	$606,344	102.3%	Bulgaria	$4,740,596	16.0%
	Ukraine	$1,570,529	$2,186,209	$3,756,738	Djibouti	$594,534	337.8%	Serbia	$4,480,443	19.6%
	Belarus	$1,562,056	$348,800	$1,910,856	Republic of South Africa	$588,904	6.2%	Belarus	$4,477,644	11.3%
	Sri Lanka (Ceylon)	$1,399,501	$19,568	$1,419,069	Oman	$576,749	4.7%	Vietnam	$4,261,656	NA
	Luxembourg	$1,348,170	$501,390	$1,849,560	Guatemala	$510,773	32.2%	Egypt	$4,032,217	5.0%
	Syria	$1,183,998	$704,530	$1,888,528	Angola	$410,149	5.8%	Oman	$3,936,687	6.5%
	Slovenia	$1,048,877	$391,768	$1,440,645	Bahamas	$406,154	7.7%	Morocco	$3,910,271	7.0%
	Honduras	$1,027,736	NA	$1,027,736	Sweden	$399,996	4.0%	Kuwait	$3,908,668	NA
	Yemen (Sana before 1993)	$1,013,935	NA	$1,013,935	Austria	$366,152	34.4%	Luxembourg	$3,897,293	25.7%
	Lithuania	$990,064	NA	$990,064	Portugal	$347,105	29.3%	Argentina	$3,734,086	5.4%
	Jordan	$976,905	NA	$976,905	Libya	$346,986	59.2%	Croatia	$3,729,196	15.4%
	Ivory Coast	$932,904	$45,027	$977,931	Greece	$342,211	22.3%	New Zealand	$3,588,122	12.3%
	Ethiopia	$908,073	$137,697	$1,045,770	Lebanon	$289,477	21.2%	Indonesia	$3,279,928	1.7%
	Cameroon	$876,580	$28,593	$905,173	Tanzania	$284,432	137.5%	Hong Kong	$3,179,090	2.3%
	Philippines	$822,857	$3,333,664	$4,156,521	Guinea	$277,778	NA	Nigeria	$3,164,393	5.1%
	Tunisia	$809,609	$669,037	$1,478,646	Namibia	$272,987	702.1%	Lithuania	$3,163,011	13.8%

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	Turkmenistan	$798,890	NA	$798,890	Yemen (Sana)	$259,277	20.0%	Peru	$3,087,333	4.1%
	New Zealand	$772,882	$2,335,929	$3,108,811	Ecuador	$256,261	6.2%	Azerbaijan	$3,081,579	19.0%
	Bosnia-Hercegovina	$703,317	$43,315	$746,632	Jamaica	$222,977	16.5%	Jordan	$2,954,244	19.0%
	Iceland	$698,697	$74,921	$773,618	Denmark	$218,744	2.2%	Slovenia	$2,879,341	12.0%
	Senegal	$697,970	NA	$697,970	Nicaragua	$181,394	34.2%	Pakistan	$2,857,474	6.7%
	Afghanistan	$688,397	NA	$688,397	Uruguay	$179,148	12.6%	Sri Lanka (Ceylon)	$2,408,185	23.6%
	Estonia	$623,589	$180,825	$804,414	Azerbaijan	$163,622	41.3%	Slovakia	$2,342,223	4.8%
	Zambia	$618,615	$22,488	$641,103	El Salvador	$162,514	13.7%	Denmark	$1,915,031	1.3%
	Uganda	$614,771	$51,663	$666,434	Romania	$155,007	22.2%	Colombia	$1,877,789	4.7%
	Paraguay	$599,677	$235,789	$835,466	British Virgin Islands	$149,281	20.7%	Bosnia-Hercegovina	$1,870,862	21.3%
	Gabon	$595,853	NA	$595,853	Equatorial Guinea	$143,365	17.4%	Cyprus	$1,715,157	9.9%
	Uruguay	$592,108	NA	$592,108	Croatia	$127,786	36.5%	Bangladesh	$1,680,934	NA
	Congo	$539,822	NA	$539,822	Georgia	$127,573	83.8%	Venezuela	$1,677,757	1.7%
	Brunei	$529,750	NA	$529,750	Bulgaria	$124,559	215.9%	Ecuador	$1,507,452	6.9%
	Namibia	$524,801	NA	$524,801	Bolivia	$118,856	32.6%	Madagascar	$1,500,416	10.3%
	Albania	$511,726	$60,460	$572,186	Congo	$117,255	19.8%	Latvia	$1,441,694	11.6%
	Botswana	$495,484	$97,330	$592,814	Brunei	$114,851	62.0%	Dominican Republic	$1,219,053	10.0%
	Macedonia	$470,902	NA	$470,902	Bermuda	$107,712	10.9%	Montenegro	$1,213,521	89.7%
	Nepal	$461,578	$78,341	$539,919	Turks and Caicos Islands	$102,139	28.9%	Cuba	$1,079,589	NA
	Kenya	$436,096	$571,362	$1,007,458	Honduras	$97,748	4.5%	Iceland	$976,420	33.0%
	Armenia	$418,932	$40,739	$459,671	Barbados	$96,089	35.0%	Sudan	$884,138	NA
	Mozambique	$415,922	$2,019	$417,941	Slovenia	$85,922	42.1%	Jamaica	$865,367	26.0%
	Bolivia	$409,389	$555,731	$965,120	Guyana	$84,219	36.6%	Lebanon	$815,269	7.4%
	Cambodia (Kampuchea)	$405,827	$39,472	$445,299	Ivory Coast	$79,086	41.8%	Estonia	$777,904	8.1%
	Papua New Guinea	$398,049	NA	$398,049	Ghana	$74,190	1.9%	Bolivia	$693,794	13.1%
	Georgia	$391,396	$154,142	$545,538	Tunisia	$73,720	11.9%	Uruguay	$663,058	NA
	Republic of South Africa	$389,942	$5,920,979	$6,310,921	Luxembourg	$73,087	34.5%	Yugoslavia(Serbia/Montenegro)	$651,980	NA
	Peru	$376,186	$4,513,447	$4,889,633	St Lucia	$72,725	23.9%	Panama	$649,238	10.8%
	Benin	$367,895	$2,401	$370,296	Sri Lanka (Ceylon)	$62,032	13.0%	Kenya	$648,258	8.4%
	Latvia	$356,074	$62,595	$418,669	Zaire	$60,151	235.5%	Bahamas	$627,117	10.1%
	Niger	$326,476	$3,223	$329,699	Fiji	$57,787	24.2%	Yemen (Sana before 1993)	$618,359	NA
	Burkina (Upper Volta)	$324,523	$150,983	$475,506	Cayman Islands	$57,425	11.3%	Ghana	$607,963	5.6%
	Mongolia	$319,627	NA	$319,627	Latvia	$51,971	8.5%	Macedonia	$568,309	NA
	Moldova	$318,034	$16,532	$334,566	Antigua Barbuda	$49,353	5.3%	Moldova	$557,365	14.4%
	Zimbabwe (Rhodesia)	$307,033	$44,305	$351,338	Slovakia	$49,220	16.0%	Honduras	$512,888	NA
	Tajikistan	$303,907	NA	$303,907	Serbia	$49,216	32.9%	Maldive Islands	$512,591	7.8%
	Guinea	$301,798	NA	$301,798	Mozambique	$49,063	77.4%	Costa Rica	$498,957	3.9%
	Rwanda	$291,914	NA	$291,914	Haiti	$41,456	4.2%	Tanzania	$489,497	3.9%
	Mauritania	$260,885	NA	$260,885	Niger	$40,997	911.0%	Namibia	$477,819	NA
	Macao	$252,708	$668,444	$921,152	Papua New Guinea	$37,893	18.3%	French Polynesia	$462,709	18.8%
	Malawi	$242,465	$19,390	$261,855	Marshall Islands	$37,710	17.9%	New Caledonia	$432,229	5.0%
	Mauritius	$236,303	$162,487	$398,790	Mauritius	$31,790	30.2%	Albania	$424,564	13.6%
	Andorra	$220,944	NA	$220,944	Albania	$27,503	208.7%	Mongolia	$423,367	NA
	Faroe Islands	$213,364	NA	$213,364	Botswana	$27,075	108.4%	Gabon	$417,535	NA
	Kyrgyzstan	$210,460	$46,979	$257,439	Zimbabwe (Rhodesia)	$25,477	52.6%	Paraguay	$399,761	6.1%
	Greenland	$210,330	NA	$210,330	Uganda	$23,811	30.2%	Qatar	$394,139	0.8%
	Togo	$210,049	NA	$210,049	Benin	$21,216	258.3%	Congo	$387,408	15.7%
	Swaziland	$195,980	NA	$195,980	Suriname	$16,864	10.5%	Mozambique	$375,607	11.4%
	Cyprus	$167,890	$415,099	$582,989	Reunion	$16,155	171.2%	Botswana	$358,594	4.6%
	Belgium	$154,664	$8,866,055	$9,020,719	Gabon	$15,541	10.0%	Zambia	$355,158	5.3%
	Sierra Leone	$153,533	NA	$153,533	Togo	$13,131	NA	Cameroon	$348,756	7.8%
	Cape Verde	$145,911	$2,651	$148,562	Sierra Leone	$11,260	4.2%	Malta and Gozo	$346,230	8.6%
	Suriname	$145,550	$143,367	$288,917	Dominica	$6,952	26.4%	Antigua Barbuda	$337,293	128.6%
	St Lucia	$139,267	NA	$139,267	Mali	$6,787	93.0%	Georgia	$331,178	9.1%
	Central African Republic	$139,137	NA	$139,137	Belize	$5,563	3.4%	El Salvador	$321,238	7.5%
	Eritrea	$137,493	NA	$137,493	Fed States of Micronesia	$5,334	NA	Papua New Guinea	$280,872	NA
	Malta and Gozo	$136,675	$236,914	$373,589	Macedonia	$5,120	133.3%	Fiji	$274,173	17.4%
	Lesotho	$133,012	NA	$133,012	Malawi	$4,933	28.1%	Macao	$259,953	13.7%
	Burundi	$102,840	$8,795	$111,635	Kiribati (Gilbert Isl)	$4,845	NA	Guatemala	$255,149	1.1%
	Bhutan	$102,260	NA	$102,260	Monaco	$4,610	NA	Armenia	$244,949	6.7%

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	St Christopher-Nevis	$95,574	NA	$95,574	Swaziland	$4,084	90.8%	Mauritius	$238,144	6.3%
	Jamaica	$93,886	$920,252	$1,014,138	East Timor	$3,638	NA	Cape Verde	$227,660	32.5%
	Maldive Islands	$89,492	$27,574	$117,066	Moldova	$3,220	35.8%	Ivory Coast	$212,868	2.7%
	Guinea-Bissau	$87,529	NA	$87,529	Ethiopia	$2,859	9.1%	Uganda	$210,259	5.4%
	Gambia	$82,107	NA	$82,107	Malta and Gozo	$2,682	0.8%	Mauritania	$191,456	40.6%
	Djibouti	$79,460	NA	$79,460	Montserrat	$1,347	NA	Senegal	$189,028	5.0%
	Fiji	$76,210	$107,345	$183,555	Tajikistan	$1,324	NA	Nicaragua	$169,002	9.2%
	Seychelles	$68,230	NA	$68,230	Armenia	$1,186	3.2%	Bhutan	$161,995	20.8%
	Grenada	$64,657	NA	$64,657	Cocos (Keeling) Islands	$1,157	NA	Brunei	$150,102	NA
	Vanuatu (New Hebrides)	$55,777	NA	$55,777	French S. Antarctic Terr	$865	NA	Turkmenistan	$137,603	NA
	Solomon Islands	$54,263	NA	$54,263	Martinique	$783	2.0%	Faroe Islands	$133,135	NA
	East Timor	$52,058	NA	$52,058	Vanuatu (New Hebrides)	$492	NA	Seychelles	$129,119	NA
	Comoros	$45,946	NA	$45,946	Czech Republic	$487	0.0%	St Lucia	$127,558	NA
	Tonga	$33,930	NA	$33,930	Laos	$418	2.0%	Barbados	$120,653	8.1%
	Sao Tome and Principe	$24,033	NA	$24,033	French Guiana	$416	13.2%	Suriname	$113,509	15.9%
	Kiribati (Gilbert Isl)	$18,165	NA	$18,165	Kyrgyzstan	$412	0.8%	Swaziland	$106,361	NA
	Western Samoa	$10,270	$181	$10,451	Eritrea	$404	NA	Guinea	$103,904	NA
	Nicaragua	$7,639	$514,561	$522,200	Solomon Islands	$288	NA	Belize	$91,724	16.3%
	Tuvalu	$5,411	NA	$5,411	Comoros	$166	NA	Turks and Caicos Islands	$85,685	NA
	Dominica	$(3,161)	$74,254	$71,093	Pitcairn Island	$158	NA	Rwanda	$85,135	NA
	El Salvador	$(14,613)	$1,307,364	$1,292,751	Lesotho	$91	NA	Syria	$72,302	0.4%
	St Vincent and Grenadines	$(57,988)	$153,740	$95,752	Norfolk Island	$68	1.1%	Mayotte	$66,240	NA
	Guyana	$(73,550)	$287,281	$213,731	(blank)	NA	NA	Burundi	$63,468	55.6%
	Mali	$(122,153)	$632,062	$509,909	Cook Islands	$(130)	-1.4%	Anguilla	$62,594	NA
	Antigua Barbuda	$(128,071)	$225,283	$97,212	Kosovo	$(286)	-6.0%	Netherlands Antilles	$51,343	NA
	Egypt	$(129,040)	$5,220,700	$5,091,660	Montenegro	$(335)	-12.5%	Greenland	$42,789	NA
	Belize	$(150,312)	$315,032	$164,720	Tokelau Islands	$(520)	-4.8%	Malawi	$39,461	11.6%
	Qatar	$(223,125)	$3,106,296	$2,883,171	South Sudan	$(750)	-12.5%	Palestinian Authority	$37,696	NA
	Barbados	$(489,932)	$854,353	$364,421	Iceland	$(1,340)	-1.3%	Grenada	$37,513	NA
	Dominican Republic	$(619,264)	$3,496,020	$2,876,756	Cambodia (Kampuchea)	$(1,345)	-2.0%	Benin	$36,364	8.7%
	Bermuda	$(702,550)	$1,455,478	$752,928	Guadeloupe	$(1,856)	-17.5%	Andorra	$29,192	NA
	Lebanon	$(919,502)	$1,749,483	$829,982	Nepal	$(2,182)	-2.4%	Cambodia (Kampuchea)	$28,875	2.5%
	Guatemala	$(1,002,828)	$3,142,812	$2,139,984	Uzbekistan	$(2,520)	-1.2%	St Christopher-Nevis	$25,766	NA
	Panama	$(1,250,567)	$2,638,598	$1,388,031	Hungary	$(7,686)	-0.1%	Vanuatu (New Hebrides)	$8,002	NA
	Spain	$(2,300,352)	$20,467,018	$18,166,666	Western Samoa	$(13,650)	-15.3%	Dominica	$7,660	6.3%
	Tanzania	$(2,313,548)	$3,145,807	$832,259	Liberia	$(14,259)	-7.4%	Central African Republic	$6,607	NA
	Ecuador	$(2,630,605)	$5,099,966	$2,469,361	Afghanistan	$(18,047)	-0.9%	Guyana	$6,228	0.7%
	Chile	$(2,931,976)	$8,291,189	$5,359,213	Gibraltar	$(19,407)	-10.9%	Lesotho	$5,392	NA
	Pakistan	$(3,446,667)	$7,502,560	$4,055,893	St Christopher-Nevis	$(21,200)	-11.3%	Tonga	$4,781	53.6%
	Hong Kong	$(3,592,921)	$7,414,997	$3,822,076	Jordan	$(24,776)	-0.8%	Aruba	$3,201	0.4%
	Bahamas	$(3,831,214)	$4,575,725	$744,511	Paraguay	$(26,106)	-4.6%	Eritrea	$2,541	NA
	Costa Rica	$(3,860,934)	$5,734,629	$1,873,695	Seychelles	$(26,127)	-7.0%	Sao Tome and Principe	$2,108	13.3%
	Ghana	$(3,876,585)	$5,099,712	$1,223,127	Belarus	$(26,817)	-8.1%	Western Samoa	$1,557	1.9%
	Madagascar	$(4,732,985)	$5,107,139	$374,155	Burkina (Upper Volta)	$(27,207)	-8.1%	Montserrat	$993	NA
	Bahrain	$(4,792,791)	$5,658,872	$866,082	French Polynesia	$(28,853)	-12.5%	Wallis and Futuna	$899	NA
	Israel	$(7,769,562)	$9,953,000	$2,183,438	Zambia	$(29,748)	-16.4%	East Timor	$856	NA
	Venezuela	$(9,319,405)	$21,437,641	$12,118,236	St Vincent and Grenadines	$(31,778)	-5.9%	Comoros	$603	NA
	Algeria	$(11,992,648)	$16,533,295	$4,540,648	Ukraine	$(32,940)	-1.5%	Guinea-Bissau	$365	NA

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	Canada	$(12,677,169)	$139,910,233	$127,233,064	Mauritania	$(33,365)	-14.0%	Kiribati (Gilbert Isl)	$306	NA
	Saudi Arabia	$(12,798,958)	$21,071,226	$8,272,268	Macao	$(35,445)	-10.1%	Sierra Leone	$259	NA
	Trinidad and Tobago	$(12,872,931)	$14,099,759	$1,226,828	New Caledonia	$(38,115)	-10.6%	Djibouti	NA	NA
	Oman	$(13,065,960)	$14,720,366	$1,654,406	Cameroon	$(39,700)	-10.0%	Gambia	$(7,110)	-1.8%
	Singapore	$(13,585,145)	$17,115,962	$3,530,817	Cape Verde	$(48,049)	-11.7%	Burkina (Upper Volta)	$(22,587)	-1.1%
	Thailand	$(14,416,334)	$20,179,812	$5,763,478	Bangladesh	$(49,195)	-6.0%	Togo	$(30,413)	-5.7%
	Malaysia	$(16,551,151)	$20,807,027	$4,255,876	Lithuania	$(51,062)	-1.2%	Tunisia	$(36,941)	-0.1%
	Mexico	$(20,661,432)	$79,581,353	$58,919,920	Rwanda	$(52,984)	-11.8%	Burma (Myanmar)	$(117,187)	-13.5%
	Australia	$(28,576,444)	$41,817,703	$13,241,260	Maldive Islands	$(52,993)	-5.0%	Niger	$(146,901)	-3.2%
	Korea	$(29,598,356)	$42,933,870	$13,335,514	Estonia	$(55,432)	-6.4%	Kyrgyzstan	$(153,710)	-2.7%
	Japan	$(43,760,228)	$91,239,484	$47,479,256	Morocco	-69536.95455	-5.3%	St Vincent and Grenadines	$(165,391)	-8.0%
					Mongolia	-79891.67273	-15.7%	Nepal	$(170,396)	-6.4%
					Nigeria	-81390.93409	-1.9%	Mali	$(232,160)	-2.4%
					Argentina	-85831.15455	-0.5%	Zimbabwe (Rhodesia)	$(324,905)	-5.9%
					Grenada	-92510.12273	-19.1%	Bermuda	$(341,040)	-9.1%
					Bahrain	-93593.76591	-1.9%	Ethiopia	$(634,806)	-4.8%
					Senegal	-114445.7591	-12.2%	Philippines	$(1,375,394)	-3.3%
					Aruba	-137763.3523	-3.0%	Trinidad and Tobago	$(2,213,837)	-11.8%
					Anguilla	-169231.3795	-7.5%	Bahrain	$(2,430,848)	-5.0%
					Curacao	-170981.375	-12.5%	Saudi Arabia	$(6,333,989)	-3.0%
					Kenya	-178499.9795	-6.6%	United Arab Emirates	$(6,396,024)	-14.6%
					Sint Maarten	-239874.875	-12.5%	Iran	$(6,530,333)	-11.3%
					Philippines	-255405.1909	-2.8%			
					Ireland	-265456.7273	-3.7%			
					Cyprus	-342619.6182	-8.4%			
					Switzerland	-362547.5455	-12.4%			
					Norway	-375932.7455	-5.6%			
					Turkmenistan	-407587.5341	-12.6%			
					Costa Rica	-581801.5455	-16.4%			
					Panama	-821363.4227	-7.7%			
					Hong Kong	-1208349.711	-6.6%			
					Venezuela	-1357032.666	-5.6%			
					France	-1605156.307	-5.6%			
					Korea	-5519210.025	-5.5%			
					Japan	-9300113.516	-7.8%			

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APPENDIX C

Recommendations from the Environmental Technologies Trade Advisory Committee

October 15, 2012

The Honorable Rebecca Blank
Acting Secretary of Commerce
US Department of Commerce
1401 Constitution Avenue N.W.
Washington, D.C 20230

Dear Acting Secretary Blank:

The members of the Environmental Technologies Trade Advisory Committee (ETTAC) are very appreciative of the work of the International Trade Administration in the development of a Top Prospects study to aid in the targeting of trade policy and promotional activities for environmental technologies goods and products.

The aforementioned efforts are key to the development of a systematic and well thought out process that would target trade promotion activities at those markets most likely to result in US exports, particularly for Small and Medium Sized Enterprises.

ETTAC created a Markets Prioritization Working Group to help identify and validate these Top Export Markets with primary focus on the Water, Air Pollution and Solid Waste sectors. Our group considered criteria based on historical US exports vs. total imports of the targeted countries, lists of identified future projects as well as qualitative market input from a number of key opinion leaders in the environmental technologies sector. Detailed backup information on the quantitative and qualitative criteria and methodology used to determine our proposed priorities exists on file and we would be glad to share if the opportunity arises.

The ETTAC Markets Prioritization Working Group recommends the following 5 countries as priorities to target trade policy and promotional activities:

China
India
Saudi Arabia
Brazil
Indonesia

In addition, we would also like to recommend, that as resources permit, the following 6 countries also be considered as targets for trade policy and promotional activities:

Morocco
Kuwait
Vietnam
Peru
Mexico
Turkey

ETTAC believes that a well executed and focused trade policy, supported with the necessary promotional activities, would significantly improve the effectiveness of the export activities for goods and products of the US environmental technologies sector, ultimately providing significant benefits to US companies which would translate into incremental job opportunities. Additionally, as our recommendation only encompasses goods and products, we would like to suggest that a similar study and analysis be conducted for the Environmental Services sector.

We stand ready to assist in any additional work required to drive the implementation of a more aggressive trade policy and provide the necessary support for promotional activities in the recommended export markets.

Sincerely,

Mark Schoenfield
ETTAC Chair