



ENVIRONMENTAL TECHNOLOGY

INTRODUCTION

Environmental Technology (ET) encompasses a wide variety of products and services including biotechnology, sanitary engineering, hazardous, industrial and solid waste management, and air/water pollution control. While the scope is large and hard to define, the initial concern is prioritizing those environmental problems that can be solved by systems in a cost-effective way starting with better organization and measurement using information services and equipment. Ultimately, the environment has benefited from these systematic approaches to defining the situation, as well as advancing technologies which hope to protect or restore nature.

Water and wastewater treatment accounts for about 40% of the total funds spent on ET. While the public sector provision of water, sewage, and refuse are the largest sector for ET products, also included are noise, vibration, vegetation, and pest control. Because of the adoption of new environmental standards and compliance, the global ET market value is high and growing rapidly. Currently, ET revenues are estimated at \$700 billion worldwide and are expected to double by 2020. The U.S. represents the largest producer and consumer market for ET at around 40% of revenues. Nearly 2 million Americans work in 122,000 eco-industries generating over \$280 billion per year. The European Union represents about one-third of the market, amounting to over \$200 billion and more like 50% of the water/waste management field. Virginia's ET market consists of 3,200 enterprises statewide. Top U.S. export destinations for ET are Canada, Mexico, Germany, China, and Japan. In total, the U.S. exported over \$40.2 billion in ET goods and services in 2008. While the U.S. is a leading producer of ET, it exports only about 11% of its output, while key competitors (Japan, Germany, and Great Britain) export over 20%.



Air



Water



Land



Ecosystems



Stewardship

APPLICATIONS

- **Monitoring and Assessment** products and services used to establish and monitor the condition of the environment.
- **Pollution Prevention** equipment and processes used to prevent or minimize the generation of pollutants in the air, water, or ground.
- **Pollution Control** products and technologies that render hazardous substances harmless before they enter the environment.
- **Remediation and Restoration** products and services used to render hazardous substances harmless and can burn toxic chemicals from contaminated soil, or turn sludge into safe topsoil.
- **Energy** products and services include solar, wind, and hydroelectric power generation equipment and technologies, electricity conservation technology and machinery.



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EXPORT IMPORT BANK—ENVIRONMENTAL EXPORTS PROGRAM

The US Export Import Bank (Ex-Im) has an Environmental Exports Program providing support for a broad range of renewable energy and other environmentally beneficial exports. For example, Ex-Im Bank's short-term environmental export insurance policy provides enhanced short-term, multi-buyer and single-buyer insurance coverage for small businesses. The policy provides the exporter with the ability to offer credit terms to its foreign customers for up to 180 days. Ex-Im Bank also offers enhanced medium and long-term loan and guarantee support for environmental projects, products and services. For more information about Ex-Im's Environmental Exports program, see: www.exim.gov/products/special/environment.html

HOT ENVIRONMENTAL TECHNOLOGY MARKETS

COUNTRIES / REGIONS

Target Markets Ranked by Favorability

- China
- India
- United States
- Canada
- Mexico
- Western Europe
- Central and South America
- Middle East
- Eastern Europe
- Africa
- Australia

CHINA

In 2004, the global market for ET was growing at about 8% in developed countries. In a survey of industry leaders, China topped the list of countries with the most potential growth which is running over 20% yearly. The China market was estimated at \$13.4 billion in 2008 and will be \$34 billion by 2013 with the largest sectors being products and services for water pollution, air pollution, then municipal solid waste. While there are numerous large Chinese companies that can afford to consider ET applications, most firms are small and cannot afford the new technology. With a population over one billion, eventually regulations will be enforced to recover any lost quality of life for its citizens.

SUB-SECTOR SERVICE ACTIVITIES

Growth Prospects Ranked by Favorability

- Energy Efficiency and Renewable Energy
- Strategic Environment Management
- Carbon Emissions and Climate Change
- Water Purifications and Delivery
- Air Quality
- Permitting and Compliance
- Natural Resources
- Wastewater Treatment
- Private Remediation and Redevelopment
- Environmental Information Management
- Pollution Prevention
- Project Management
- Design, Operation, and Maintenance
- Monitor / Investigate / Assess / Audit
- Solid Waste
- Government Remediation and Base Conversion
- On-going Generation of Hazardous Waste

While energy is the current buzz, air and water pollution are more readily addressed by new and competing ET firms. Furthermore, cross-border issues arise which must be resolved and the expenses shared. Along with infrastructure projects, funding is available from world agencies for countries that cannot afford ET solutions. U.S. firms have the advantage in technology and experience so their role is instrumental in saving the planet!



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VEDP SERVICES

The VEDP offers a number of export-related services to Virginia businesses, including group market visits and market research by our Global Network of in-country consultants. These services are available to all Virginia exporters. For more information, please visit our website: www.exportvirginia.org

ADDITIONAL RESOURCES

- DG Market: <http://www.dgmarket.com/>
- Environmental Business International: <http://www.ebiusa.com/>
- Global Directory for Environmental Technology: <http://www.eco-web.com/>
- Institute of Scrap Recycling Industries: <http://www.isri.org/>
- ISO14001 Guide, Environ Corp: <http://www.environcorp.com/img/media/ISOpreview.pdf>
- Major International Power Projects: <http://www.power-technology.com/projects/index.html>
- Recycler's World: <http://www.recycle.net/>
- Regional Environmental Center for Central Eastern Europe: <http://www.rec.org/>
- Showcase Europe: Environmental Technologies: http://www.buyusa.gov/europe/environmental_technologies.html
- UN Environment and Sustainable Development Division: <http://www.unescap.org/esd/index.asp>
- Virginia-based ET Company Directory: <http://www.deq.virginia.gov/innovtech/envbus.html>
- World Bank Projects: <http://www.worldbank.org/projects/>

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- United States Department of Commerce. International Trade Administration. Office of Energy and Environmental Industries. <<http://www.environment.ita.doc.gov/>>
- United States Environmental Protection Agency. The Environmental Technology Opportunities Portal. <<http://www.epa.gov/etop/index.html>>

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