Showcase Europe: ENVIRONMENTAL TECHNOLOGIES

Europe Environmental Markets Binder 2008





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Exporting U.S. Environmental Technologies to Europe – Why Now?

While the United States is the world's leading producer of environmental technologies (ET), it earns only 9% of its revenues from exports, while Japan and the EU earn 15-20%. This comparatively meager export record translates into billions in lost opportunities for revenue and tens of thousands of U.S. manufacturing jobs.

Europe represents one-third of the world's \$550 billion and growing environmental market, and is the U.S.'s largest ET exports market. European Union (EU) environmental regulations are some of the toughest in the world, and get more stringent each year. U.S. technology is badly needed to cost efficiently meet many EU standards. The EU is offering \$4.2 billion in cohesion funds to new members to help them achieve EU environmental standards. U.S. companies are eligible to compete for this funding. The European Union's Environmental Technologies market, therefore, represents one of our most significant under-penetrated export markets.

The Purpose of this Binder

The purpose of this report is to give U.S. companies an overview of environmental sector opportunities in Europe. This binder offers:

- A brief introduction offering good approaches to the market
- Country-by-country market analysis
- A guide to sources of financing.
- Key trade shows and exhibitions.

This report includes Western, Central, and Eastern Europe, including Russia.

A Note on Methodology

The purpose of this report is NOT to provide comprehensive market research on the European market. Such a report would require a much more intensive research effort, and probably would not be particularly helpful to companies in this stage of market entry. Instead, we are drawing upon Commercial Service expertise on the European marketplace to provide a general overview, which companies can then use to tailor specific strategies.

About the Quicktake:

In its role as coordinator for Showcase Europe's Environment sector, Commercial Service Prague is now offering the Quicktake (QT) for the environmental sector. The Quicktake offers exporters new to Europe a Europe-wide approach to entering the market. Quicktake is a new service for qualified American companies where around 25 market specialists across Europe quickly review your product's export potential in their respective markets. In ten business days, you will get a survey that covers: current demand, future demand, competition and next steps. (Note: Due to human resources limitations we accept only one QT client in two weeks).

For more information contact: <u>Veronika.Novakova@mail.doc.gov</u>

Showcase Europe Environmental Technology team web pages:

http://www.buyusa.gov/europe/environmental_technologies.html

EU legislation:

For more information on how EU legislation shapes the European market for environmental technologies and on how to benefit from EU funding for environmental projects, contact the Commercial Service at the U.S. Mission to the EU or visit the website at: http://www.buyusa.gov/europeanunion/

Let the U.S. Commercial Service Help You Enter European Markets

At the U.S. Commercial Service, our staff study market trends and work with your business to evaluate different channels of distribution. We help you identify business opportunities that suit your objectives. We work with you to find the best local partners, distributors, and representatives. We advocate on your behalf to help you resolve issues in your favor. Professional staff in our offices located at U.S. embassies and consulates throughout Europe are prepared to work with you to increase your opportunities and your successes in Europe.

Ask us about our Gold Key Service, International Partner Search, or Customized Market Research to learn more.

Europe: West, Central, and East

Although the 27 EU member states all fall under EU environmental regulations, the EU leaves individual countries wide discretion in terms of environmental goals, techniques, and incentive programs. Each country in the EU has a distinct environmental market with distinct characteristics.

Those in Eastern European countries not yet in the EU are, for the most part, seeking EU accession. While they are not required to be in compliance with EU environmental standards, most are seeking better compliance as part of the EU accession process. These countries, therefore, act much like the newest EU member-states in environmental approaches.

Western European environmental markets are characterized by:

- Substantial government funding
- Public (usually transparent) tenders
- Strong European and local competition

Eastern European markets are characterized by:

- Large array of potential projects, most without feasibility studies
- Extensive potential EU funding
- Fewer, less transparent tenders
- Weaker competition
- New for innovative project financing approaches

These are two distinct types of markets requiring distinct market approaches.

Suggested Market Entry Strategies

One good approach for U.S. firms new to the European market is to use two mid-sized markets: one Western, one East, as test markets. Companies can use these test markets to learn and make initial revenue, then expand from there making best use of lessons learned.

Western Europe Market Strategy

While this marketplace has more competition, opportunities remain, and U.S. technologies are well respected. At the beginning of the market entry process, U.S. companies should make repeated visits to Western Europe to meet and develop key contacts. Many major industry trade shows are held in Western Europe - attending them is an ideal way to get a broad feel for the market and competition. Supplementing trade show participation with the US Commercial Service's Gold Key "Matchmaking" Service is an efficient, effective way to begin prospecting the market. As a follow-up, consider inviting the best prospects to the US to view the technologies in action. These are simple but necessary steps needed to build up the relationships that are so vital to doing business in Europe and tapping into EU funding.

Central/Eastern Europe Market Strategy

The environmental remediation market of Central and Eastern Europe is not an easy one to penetrate, but it remains one of the most dynamic – and still unknown – market opportunities of the decade.

For U.S. companies to successfully compete in the Central and Eastern European markets, a partnership with a local company is crucial. Native companies have the personal connections and networks required to learn about potential projects. Your local partner will have a firm grasp of the business practices and standards of the local market. In general, a local environmental consulting or engineering firm is your best entree.

Once you have a good local partner, there are two good approaches to finding environmental projects. The first is to search for tenders. A second – and very worthwhile approach – is to create projects from the ground-up. Once you have the local partner, seek out for the potential opportunities. Most cities in the region have long lists of environmental issues, and are anxious for proposals on what to do with them. Work with the city or regional government, and a local partner. Work with your government partner to submit the plan for the European Union and other funding.

Information on Tenders:

Sources of tenders include:

- Regional or city government tenders (Usually newly EU-funded regional projects)
- Feasibility studies (or follow-ups to studies) from the U.S. Trade and Development Agency (TDA) grants (See http://www.tda.gov and <u>http://www.fedbizopps.gov</u>).
- European Union Tenders database: <u>http://www.buyusa.gov/europeanunion/</u>

AUSTRIA

Capital: Vienna Accession to the EU: Yes, since 1995 Currency: Euro since January 1999 NATO: No Population: 8,184,691 Language: German GDP: \$255.9 billion GDP/Cap: \$31,300

Environment - Current issues:

Austria has a generally high level of environmental protection and eco-efficiency, with organic farming and renewable energy use among the best in Europe. Pressure on the environment is increasing due to rising levels of passenger and freight transport, causing air emissions, noise, and the disruption of ecosystems. Austria has thus been unable to reduce its greenhouse gas and NOX emissions to meet Kyoto objectives (instead of a 13% cut, emissions actually rose by 3%).

Environment - International agreements:

Party to agreements on: Air Pollution, -Nitrogen Oxides, -Persistent Organic Pollutants, -Sulfur 85, -Sulfur 94, -Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Tropical Timber 83 and 94, Wetlands, Whaling.

Industries:

Construction, machinery, vehicles and parts, food, chemicals, lumber and wood processing, paper and paperboard, communications equipment, tourism.

Best prospect sectors:

Spending on the environment is heavily weighted towards water pollution control (34%) and waste management (33%). Bio-diversity and landscape preservation consume 13% of total spending. Air pollution control accounts for 8%, and noise abatement 4%. These two sectors shall growth in the coming years as vehicle traffic poses problems for the Austrian environment.

Summary:

Austria is a small country, about the size of Maine, with a beautiful natural topography including the verdant Danube Valley, the rolling hills of the south and east, and the famous Austrian Alps. Preservation of the environment is an extremely important issue here, and both lawmakers and citizens take it very seriously. Among the world leaders in per capita spending on environmental protection measures, and number one in Europe, Austria spends about EUR 6.8 billion or roughly 3% of its national GDP on the environment annually. About 56% of total expenditure is financed by private enterprises. Private households pay for 23%, and 21% comes from the public sector. Austria is also a leader in environmental technology, with more than 330 companies employing over 17,000 people and selling goods with a value of more than 3.78 billion EUR annually (service companies excluded). Over 65% of this value is exported, making up around 10% of all Austrian exports.

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BELGIUM

Capital: Brussels Accession to the EU: Yes, a founding member (1957) Language: Dutch/French/German **Currency:** Euro since January 1999 **NATO:** Member since 1949

Population: 10,296,421 **GDP:** \$373.4 billion **GDP/Cap:** \$36,265

Environment - Current issues:

The environment is exposed to intense pressures from a dense population: urbanization, transportation network, industrialization, extensive animal breeding and crop cultivation. Land from former coalmines and hazardous industrial sites will be decontaminated. The market is primarily driven by EU, national and regional environmental legislation and targets.

Environment - International agreements:

Party to: Air Pollution,-Nitrogen Oxides, -Sulfur 85, -Sulfur 94, -Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Laver Protection, Ship Pollution, Tropical Timber 83 and 94, Wetlands Signed, but not ratified: Air Pollution-Persistent Organic Pollutants.

Industries:

Engineering and metal products, motor vehicle assembly, processed food and beverages, chemicals, basic metals, textiles, glass, petroleum.

Best prospect sectors:

Best prospects for U.S. firms include innovative and/or competitive technologies for: water/wastewater treatment/prevention: drinking water purification, underground water pollution prevention and treatment; measurement and analysis instruments, monitoring equipment, process controls; air and noise pollution control equipment: air pollutants emissions control (CO2, VOC, Nox), air filters, scrubbers, dedusters, air/gas purification systems, noise abatement materials; competitive soil remediation technologies; and cost-efficient recycling technologies in niche waste streams, recycling of final residues to avoid land filling.

Summary:

The average Belgian environmental expenditure (public and private sectors) is approximately 2% of GDP, amounting to approximately \$5.1 billion that is divided among air pollution control, water/wastewater treatment, waste management, soil remediation, and environmental consultancy. The market is primarily engineering and service-oriented, it has several reputable companies active on worldwide markets. Most companies provide environmental services in integrated wastewater treatment, waste management, and soil remediation. Owing to the country's size and demographics, waste treatment and disposal services are extremely developed and sophisticated. Industrial take-back obligations management systems are blossoming in increasing number of industrial sectors. Still, challenges remain in areas such as reduction of toxic emissions, manure treatment, acidification, progressive clean-up of former industrial sites.

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BOSNIA & HERZEGOVINA

Capital: Sarajevo Accession to the EU: No Currency: Marka NATO: No **Population:** 4,025,476 **Language:** Bosnian, Croatian, Serbian **GDP:** \$28.26 billion **GDP/Cap:** \$6,800

Environment - Current issues:

Air pollution from metallurgical plants; sites for disposing of urban waste are limited; water shortages and destruction of infrastructure because of the 1992-95 civil strife; deforestation

Environment - International agreements:

Party to: Air Pollution, Biodiversity, Climate Change, Hazardous Wastes, Law of the Sea, Marine Life
Conservation,OzoneLayerProtection,Wetlands

Industries:

Steel, coal, iron ore, lead, zinc, manganese, bauxite, vehicle assembly, textiles, tobacco products, wooden furniture, tank and aircraft assembly, domestic appliances, oil refining (2001)

Best prospect sectors:

Improvement of water supply systems and waste water treatment facilities; sanitation of waste disposal sites, incineration, systems for waste separation; and air pollution emission control.

Summary:

As a result of the war, the wastewater and waste management systems were severely damaged. Since 1996, reconstruction led by the World Bank raised \$213 million for water supply, wastewater and waste management systems. Since 80% of the investment was targeted for water supply projects, that sector is now improving. Yet, sewage collection and treatment are still unsatisfactory and far behind the EU standards. E.g.: only 4 of the country's 10 water treatment plants are now operating.

Until now, emergency intervention was emphasized, but attention is now focused on permanent restoration of existing systems and development of new projects. It is estimated that about \$80 million will be spent to increase both the quality and population coverage of water supply and wastewater collection, bring solid waste collection and disposal up to environmentally sound standards, clean up illegal solid waste dumping sites, and provide additional wastewater treatment facilities for discharges from urban areas.

For these purposes, the World Bank is preparing the Environmental Infrastructure Project. It will target funding to waste collection and water supply, especially in the rural areas and to involve private sector. Major objectives of the project are to improve solid waste services and water supply; increase regulatory, administrative and technical capacity; improve legal regulatory framework and cost recovery mechanism to encourage private sector involvement and correct env. problems and reduce health hazards caused by inadequate collection and disposal systems.

The World Bank has approved a \$292,490 grant for environmental capacity building. The main grant activities are institutional needs assessment; environmental standards and environmental monitoring system review; and development of an environmental strategy and national action plan.

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BULGARIA

Capital: Sofia Accession to the EU: 2007 Currency: Lev NATO: since 2004 **Population:** 7,450,349 **Language:** Bulgarian, Turkish, Roma **GDP:** \$66.96 billion **GDP/Cap:** \$9,000

Environment – Current issues:

Air pollution from industrial emissions; rivers polluted from raw sewage, heavy metals, detergents; deforestation; forest damage from air pollution and resulting acid rain; soil contamination from heavy metals from metallurgical plants and industrial wastes.

Environment – International agreements:

Party to: Air Pollution, -Nitrogen Oxides, -Persistent Organic Pollutants, -Sulfur 85, -Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Wetlands *Signed, but not ratified:* Air Pollution-Sulfur 94

Industries:

Electricity, gas and water; food, beverages and tobacco; machinery and equipment, base metals, chemical products, coke, refined petroleum, nuclear fuel.

Best prospect sectors:

<u>1. Water/wastewater management</u> – Plants needed for more than 250 cities of above 2,000. Only 58% of wastewater is treated. The water pipe network is worn-out. 70% of the pipes are made of asbestos and cement and have been in use for more than 20 years. Drinking water loss from the pipes is 52.77%. The level of water supply system control is unsatisfactory. 70.2% of towns have sewerage systems while only 2.1% of villages. State/municipally owned Water Supply and Sewerage Companies, will be privatized.

<u>2. Energy</u> – Energy is used inefficiently. The country will be required to generate at least 8% of its total power from renewable resources in order to meet the criteria for the EU entry.

<u>3</u>, <u>Waste management</u> - Bulgaria utilizes only landfills for municipal waste disposal. These account for 99% of all collected waste. With few exceptions, landfills do not comply with the new requirements. Modern technologies for solid waste treatment are welcome. The opportunities over the medium term are in solid waste management and industrial waste management.

Summary:

Promising but unexplored market for U.S. pollution control products technologies. In addition to domestic concerns, e.g. human health, nature protection, industrial efficiency and tourism promotion, the process of accession to the EU in 2007 will require a massive enviro. Cleanup and strict implementation of standards. We will need more than US\$2 billion for environmental projects in order to meet EU requirements. The EU is providing major grant financing for environmental infrastructure projects. We will need to import almost all technology for this, and U.S. companies that possess world-class, competitive technology, equipment, services and systems will be best poised to benefit from these opportunities. Some U.S. companies are already working in Bulgaria successfully. The low US dollar, quality, technological leadership, and reputations of U.S. companies are often viewed in Bulgaria as effective counterweights to pressure from EU companies to "buy European."

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CROATIA

Capital: ZagrebPopulation: 4,496,869Accession to the EU: Candidate CountryLanguage: CroatianCurrency: KunaGDP: \$47.05 billionNATO: Candidate CountryGDP/Cap: \$10,600

Environment – Current issues:

Control of air pollution emissions, construction of new and upgrade of existing waste water treatment facilities, urban and industrial waste management, treatment and disposal of hazardous waste, rehabilitation of existing and erection of new waste disposal sites, construction of incineration facilities.

Environment - International agreements:

Party to: Air Pollution, -Sulfur 94, Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands *Signed, but not ratified:* Air Pollution-Persistent Organic Pollutants, Climate Change-Kyoto Protocol

Industries:

Chemicals and plastics, machine tools, fabricated metal, electronics, pig iron and rolled steel products, aluminum, paper, wood products, construction materials, textiles, shipbuilding, petroleum and petroleum refining, food and beverages; tourism

Best prospect sectors:

Water quality maintenance and monitoring, improvement of water supply systems and waste water treatment facilities, solid waste management, systems for waste separation, rehabilitation of waste disposal sites, treatment and disposal of hazardous waste, construction of incineration(s), air pollution emissions control.

Summary:

Concerns are: insufficient treatment and coverage for municipal and industrial wastewater, uncontrolled dumping of wastes and lack of proper disposal sites, check on air pollution emissions in industrial areas to meet the legal limits. Meeting the criteria for utility infrastructure quality in cities and communities is one of the prerequisites for getting closer to the EU too. This especially refers to infrastructures used in env. protection: wastewater collection and purification, waste collection and disposal, air protection. We will be required to invest up to US\$ 10 billion in the env. sector prior to the EU accession. So far, only 0.2-0.3% of GDP have been directly invested, which is US\$ 30-35 million annually. It is expected that these amounts will increase in line with the practice in developed countries to approx. 1% of GDP. Along with the non-returnable international funds already available for the major improvements, env. protection is financed by loans from the World Bank and European Bank for Reconstruction and Development. IPA (Instrument for Pre-Accession Assistance), the new single EU pre-accession assistance for the period 2007 - 2013 has replaced CARDS and pre-accession programs PHARE, ISPA and SAPARD. Its objective is to assist candidate countries in the process of gradual harmonization with the EU acquis communautaire. Pursuant to the Croatian Government Regulation of 28 September 2006, the Central Office for Development Strategy and Coordination of EU funds is the body competent for an overall coordination and preparation for the use of the IPA program in the Republic of Croatia. IPA program is available to Croatia from 2007 until Croatia's accession to the EU. In the period until 2010, the amount allocated to Croatia is USD 885 million, starting with USD 92.3 million in 2007 with a foreseen permanent increase of the annual amount of funds which in 2010 should amount to USD 231.3 million.

Key institutions: Ministry of Env. Protection, Physical Planning and Construction; <u>www.mzopu.hr</u>;Min. of Agriculture, Forestry and Water Management; <u>www.mps.hr</u>;Croatian Waters; <u>www.voda.hr</u>,Agency for the Env. Protection; <u>www.azo.hr</u>;Fund for the Env. Protection and Energy Efficiency; <u>www.fzoeu.hr</u>,Croatian Business Council for Sustainable Development; <u>www.hrpsor.hr</u>

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CZECH REPUBLIC

Capital: Prague Accession to the EU: Yes, since 2004 Currency: Crowns NATO: Yes, a member since 1999 Population: 10,241,138 Language: Czech GDP: \$184.9 billion GDP/Cap: \$18,100

Environment - Current issues:

Air and water pollution in areas of northwest Bohemia and in northern Moravia around Ostrava present health risks; acid rain damaging forests; efforts to bring industry up to EU code should improve domestic pollution, wastewater treatment plans upgrades

Environment - International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Wetlands, Air Pollution-Persistent Organic Pollutants

Industries:

Automotive, metallurgy, machinery and equipment, glass, armaments

Best prospect sectors:

Prague Waste water treatment plant is planning large upgrade project – it will be the largest water project in the country. Other water companies also planning investments in next year or two include Water and Sewerage company Vyskov (\$19 mil. for reconstruction of its water infrastructure) and Severoceska vodarenska (\$42 mln. for acquiring new and repairing existing water and sewerage pipes). The Environment Ministry has approved the construction of a storage facility for spent nuclear fuel inside the facility of nuclear power plant Temelín. Energy company ČEZ wants to commence construction of the facility with a capacity of 1,370 tons in 2010. Government pushes for larger proportion of renewable energy sources.

Summary

The Czech Republic's accession to EU was one of the main drivers for introduction of new environmental laws in the country. Expenditures needed to comply with these laws are estimated 250 billion CZK (approx. 9 bil.) over the next few years. New regulations require wastewater treatment plants for towns between 2–10,000 people by 2010. A number of WWTPs plans upgrades. In 2003, the estimated overall production of waste reached 29,198 thousand tons. About 10% of total waste production was municipal waste. One citizen produces approximately 330 kg of waste a year, a number below EU average. On the other hand, the Czech republic still lags behind original EU-15 countries in the amount of recycled waste. In the renewable energy sector there is a large gap between the Czech Republic and EU member countries. The EU – current 15 member states - is aiming to supply 12% of gross energy consumption from renewable sources by 2010. In the Czech Republic renewable energy usage is about 3 % of total energy consumption now. Czech Republic committed itself to reaching the goal of 8 % usage by 2010.

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DENMARK

Capital: Copenhagen Accession to the EU: Yes, since 1973 Currency: Danish Crown NATO: member since 1949 Population: 5,432,335 Language: Danish, Faroese, German GDP: \$182.1 billion GDP/Cap: \$33,500

Environment – Current issues:

Air pollution, principally from vehicle and power plant emissions; nitrogen and phosphorus pollution of the North Sea; drinking and surface water becoming polluted from animal wastes and pesticides

Environment – International agreements:

Party to: Air Pollution,-Nitrogen Oxides,-Persistent Organic Pollutants,-Sulfur 85,-Sulfur 94,-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change,Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, 94, Wetlands, Whaling Signed, but not ratified: Law of the Sea

Industries:

Food processing, machinery and equipment, textiles and clothing, chemical products, electronics, construction, furniture and other wood products, shipbuilding, windmills

Best prospect sectors:

<u>Remediation of contaminated sites</u> – The market players are very competitive and the newest remediation technologies are in use. A U.S. company wanting to enter the Danish market should be among the leaders in the industry and be able to offer cost-efficient and innovative products. A local representation or partnership with a Danish company is crucial for success.

Summary:

Denmark is a technological world leader in the area of environment and clean energy. The Danish government has always been very active in promoting new and efficient means to keep the environment clean. The country is one of the most environmentally regulated in the world. There have been several financial incentives to promote research and development within the industry. In general Danish environmental companies are highly skilled and very competitive. Many are working with innovative technologies.

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ESTONIA

Capital: Tallinn Accession to the EU: Yes, since May, 2004 Currency: Estonian Crown NATO: since spring 2004 Population: 1,332,893 Language: Estonian, Russian GDP: \$21.81 billion GDP/Cap: \$16,400

Environment – Current issues:

Air polluted with sulfur dioxide from oil-shale burning power plants in northeast; however, the amount of pollutants emitted to the air have fallen steadily, the emissions of 2000 were 80% less than in 1980; the amount of unpurified wastewater discharged to water bodies in 2000 was one twentieth the level of 1980; in connection with the start-up of new water purification plants, the pollution load of wastewater decreased; Estonia has more than 1,400 natural and manmade lakes, the smaller of which in agricultural areas need to be monitored; coastal seawater is polluted in certain locations

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 85, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Endangered Species, Hazardous Wastes, Ship Pollution, Ozone Layer Protection, Wetlands

Industries:

Engineering, electronics, wood and wood products, textile; information technology, telecommunications

Best prospect sectors:

Some of the major causes of the Estonian environmental deterioration are above all, the use of out-to-date technologies consuming large volumes of raw material and generating large quantities of waste, underdeveloped environmental-technical infrastructure and insufficiency of financial resources and management instruments.

Summary:

Fifty years of development under conditions of unbalanced economic relations in a closed society has resulted in underdeveloped machinery and technology and irrational use of natural resources. As a result, conflict situation between the use and protection of the environment developed in a number of regions of Estonia and formed the preconditions for environmental crisis. Significant environmental stress was also caused by past pollution associated with the activities of the former Soviet army. Elimination of past pollution will take decades. In 1989, the Supreme Council of Estonia adopted the Policy on Nature Conservation and Sustainable Use of Natural Resources, which provided an assessment of the state of the environment. Today, the use of natural resources as well as environmental protection, are regulated by administrative means. Principles of environmental protection are being integrated into economic activities. The Act on Sustainable Development was passed in 1995. Current priority environmental problems are waste management, contaminated soil and water and air pollution caused by past military, industrial and agricultural activities.

FINLAND

Capital: Helsinki Accession to the EU: Yes, since 1995 Currency: Euro since January 2002 NATO: No Population: 5,3 million Languages: Finnish (92%), Swedish(5.5%) GDP: \$210.8 billion GDP/Cap: \$40,036

Environment - Current Issues:

Acid rain damage to soils and lakes; pollution of the North Sea and the Baltic Sea; air pollution; global warming.

Environment - International Agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulphur 85, Air Pollution-Sulphur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Whaling, Climate Change-Kyoto Protocol, Air Pollution-Persistent Organic Pollutants.

Industries:

Electronics/telecommunications, forest industry, machinery, chemicals, shipbuilding, energy, etc.

Best Prospect Sectors:

Monitoring, measuring, and sampling instruments for detection of air and water pollution. All types of advanced air cleaning technology used in the pulp and paper, chemical, and heavy metal industries, as well as in municipal energy and power plants. Nitrogen oxide emissions removal technology: including catalytic converters and low nitrogen oxide combustion technology for burners and boilers. Dust reduction equipment: including dynamic and electrostatic precipitators, fabric filters, centrifugal fans, and blowers. Waste management: equipment to improve waste management processes, in particular, closed systems for lumber companies and prevention of phosphorous discharges. Municipal waste recycling and recovery: technical advances for the entire recycling logistics chain, including sensors, separators, monitoring, optic handling devices for metal recycling, crushers, and bio waste separation equipment.

Summary:

The environmental sector in Finland has evolved into a dynamic area where production of new technologies is gaining international prominence. Both individuals and leaders of industry have become highly conscious of the high standards of environmental protection and preservation. In Finland, the necessity for utilizing the best available technology is included in the Water Act, Air Pollution Control Act, Waste Act, and Sea Protection Act.

Demand for air pollution control equipment is strong in Finland due to increasing environmental concerns in surrounding countries (i.e., in Russia -- the Kola Peninsula and St. Petersburg -- and the Baltic States). There is very favorable demand for imported U.S. products and investments in Finland. There are no trade barriers or major regulations that need to be overcome. The key competitive factors in selling environmental technology in Finland are quality and level of technology, with price as a secondary factor. Using an importer is recommended.

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FRANCE

Capital: Paris Accession to the EU: Yes, a founding member (1957) Currency: Euro since January 1999 NATO: Member since 1949 Population: 60,424,213 Language: French GDP: \$1.66.1 trillion GDP/Cap: \$27,600

Environment - Current issues:

Some forest damage from acid rain (major forest damage occurred as a result of severe December 1999 windstorm); air pollution from industrial and vehicle emissions; water pollution from urban wastes, agricultural runoff

Environment - International agreements:

Party to: Air Pollution, -Nitrogen Oxides, -Sulphur 85, -Sulphur 94, -Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling Signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Climate Change-Kyoto Protocol

Industries:

Machinery, chemicals, automobiles, metallurgy, aircraft, electronics; textiles, food processing; tourism

Best prospect sectors:

Due to EU directives, the market for construction, operations, maintenance and repairs of small-tomedium-sized water treatment plants capable of servicing communities of 10,000 inhabitants is expected to offer some of the greatest opportunities. Wastewater sludge treatment, installation and maintenance of septic and stand-alone sewage treatment tanks, remote monitoring technology; and water filters and purifiers will also offer important opportunities. Financial and environmental legal liability has been a key driver for strong and continued growth in the risk assessment, characterization, RI and soil remediation market

Summary:

France will have to construct major water distribution and wastewater treatment facilities covering all of France because of EU standards. In most cases, all of France's regions will have to comply by 2006. Cities with a population of 2000 to 15,000 will have until 2006. This EU directive is expected to offer a growing market over the next few years. Currently there are 5.3 million non municipal sewage treatment systems (4 million septic and stand-alone sewage treatment tanks) in France. According the French authorities over 90 percent of these systems do not conform to the French Water Agencies Directives (over half of the stand alone units do not comply with current or future environmental regulations). They will, therefore, need to be replaced or revamped. Point-of-Use water treatment products and equipment will be in greater demand as the deadline to conform to EU Directives (98/83/CE) French law on tap water standards approaches. Instrumentation capable of measuring and treating Lead, Bromides, Trihalomethanes, and turbidity will be highly desirable over the next 10 years.

French Ministry of Environment has identified approximately 4000 potentially polluted industrial sites to date. The Ministry is scheduled to survey and classify 300,000 public and private industrial land sites and brown fields within the next year, thus, stimulating demand for remediation equipment and services. The market, estimated at USD 1.24 billion (1 billion euros), is expected to grow at 10 to 15 percent over the next decade.

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GERMANY

Capital: Berlin	Population: 82,501,000
Accession to the EU: founding member	Language: German
Currency: Euro since January 1999	GDP: \$2.753 trillion
NATO: Yes	GDP/Cap: \$29,968

Environment – Current issues:

Emissions from coal-burning utilities and industries contribute to air pollution; acid rain from sulfur dioxide emissions damaging forests; pollution in the Baltic Sea from raw sewage and industrial effluents from rivers in eastern Germany; hazardous waste disposal; ending the use of nuclear power over the next 15 years; identify nature preservation areas in line with the EU's Flora, Fauna, and Habitat directive.

Environment – International agreements:

Party to: Air Pollution,-Nitrogen Oxides,-Sulfur 85,-Sulfur 94,-Volatile Organic Compounds, Antarctic-Env. Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, 94, Wetlands, Whaling *signed, but not ratified:* Air Pollution-Persistent Organic Pollutants

Industries:

Production of iron, steel, coal, cement, chemicals, machinery, vehicles, machine tools, electronics, food and beverages; shipbuilding; textiles

Best prospect sectors:

<u>Waste management</u> – 260,000 employees in more than 5170 companies and a turnover of 55 bln. Euro (2003). The total volume of waste was 366 million tons in 2003. 56% of the municipal and 40% of the industrial waste is recycled (2002) – showing an increasing tendency.

<u>Soil remediation</u> – In 2000, the total number of estimated contaminated sites was nearly 363,000. The maturing market will likely lead to treatment for end-use only, thus further slowing remediation expenditures. Increasingly stringent legislation requirements will become a driving force in sub-sectors of the market rising demand for new technologies designed for the remediation of specific contaminants.

Summary:

Germany is the largest market for contaminated site remediation in Europe. Policies focus on maintaining or reestablishing the ecological balance of water bodies, guaranteeing drinking and process water supplies and providing long-term safeguards for other water uses, in particular preventing ground and surface water pollution with hazardous substances. In 2004, 70 mln. tones of the climate-damaging CO2 gas release were prevented by use of renewable energies. Germany subsidizes the use of env.friendly technologies. State helps to fund evaluations and installation of renewables. Air pollution has declined considerably, even taking into consideration the major air pollution from coal-burning stoves and industrial plants in East Germany. Based on the Kyoto Protocol, Germany has pledged to reduce greenhouse gas emissions by 21% during the period 2008-2012 as compared to 1990. German operators of about 2,400 installations are able to participate in emissions trading from 2005. Ground-level ozone elimination is a challenge. The summer smog action program, launched in 2000, comprises different measures with long-term impacts aimed at reducing the precursors that lead to summer smog.

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Environment - Current issues: Air pollution; water pollution

Environment - International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulphur 94, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Antarctic Treaty, Climate Change-Kyoto Protocol *Signed, but not ratified:* Air Pollution-Persistent Organic Pollutants, Air Pollution-Volatile Organic Compounds

Industries:

Tourism; food and tobacco processing, textiles; chemicals, metal products; mining, petroleum

Best prospect sectors:

There are numerous opportunities for U.S. suppliers of environmental technologies and for U.S. engineering and consulting firms specializing in the development and operation of recycling and waste management facilities, since waste management market is expected to have excellent growth in the near future due to EU standards. Greece's lack of hazardous waste disposal systems, the growing public awareness of environmental problems, and the availability of EU funds are just three reasons for the need. The areas with the best prospects for U.S. during the period of 2004 - 2006 are recycling technologies such as equipment for transshipment stations; consulting and engineering services for the development and operation of waste management facilities; innovative technologies for treatment and disposal of hazardous waste; composting equipment; water treatment technologies; and waste water treatment aeration and purification systems and air pollution products.

Summary:

According to the Greek Ministry of Environment, the Greek environmental market is estimated annually at approximately 1.5% of the GDP, surpasses \$2.2 billion. In 2003, the Greek Government decided to implement a development plan that includes the building of 7 new "Sanitary Legal Waste Burial Sites" and 18 trash-processing centers in Attica, where major pollution problems have emerged. The plan also calls for construction of new recycling plant in the greater area of Athens and one of the largest biogas stations in the world. Similar actions will be soon taken in other Greek prefectures. Greek Ministry of the Environment has put forward legislation designed to recycle packaging materials and promote new waste management methods, such as converting decomposing refuse into biogas to produce electricity. The importance of waste management is highlighted with investments supported by government funds: more than \$370 million budgeted for greener technologies, recycling facilities, and effluent processing units. Moreover, the Operational Program for "Environment", funded by the 3rd Community Support Framework and the Greek Government, has 10 divisions consisting of programs and actions dealing with the environmental problems, including sustainable development, ecological restorations, air quality, water quality, wastewater treatment plants, sewage works, management of solid and toxic wastes, as well as environmental education and awareness. The budget for the program is in excess of \$800 million.

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HUNGARY

Capital: Budapest Accession to the EU: Yes, since May, 2004 Currency: Forint NATO: since 1999 Population: 10,032,375 Language: Hungarian GDP: \$139.8 billion GDP/Cap: \$13,900 (at ppp)

Environment – Current issues:

The upgrading of Hungary's standards in waste management, energy efficiency, and air, soil, and water pollution with environmental requirements for EU accession will require large investments

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 85, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands

Signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 94

Industries:

Automotive, electronic parts and instruments, metallurgy, chemicals & pharmaceuticals, machinery, processed foods.

Best prospect sectors:

Primarily, the government decided to maintain focus on wastewater treatment developments, while water quality improvements and waste management are also supported. Further priorities include environmentrelated infrastructure projects like motorways, roads to by-pass cities, etc. Until recently the country's spending on environmental projects was low, 1.2-1.3 % of GDP. With current ambitious development plans this must increase in the upcoming years. Today, expenditure on wastewater accounts for nearly 50% of the total spending on env. Projects, waste management for 15 %, followed by remediation of contaminated sites and air pollution control. Currently more major wastewater and regional waste management projects are being financed partially by the EU Cohesion Fund and supplemented by Hungarian state's funding. In December 2005, a French consortium, led by Degremont and OTV France, won a tender for the construction of Budapest's central sewage treatment plant, Europe's largest env. investment. The \$6-700 million project will be financed 65% by Cohesion Fund, 20% by the Hungarian Government and 15% by Budapest Municipality. In addition to a great number of small local companies, Germany and Austria are the major players on the env. technology market, followed by France in the water sector and also the Netherlands, USA, Japan and the Scandinavian countries; thus American companies face stiff competition. Many foreign environmental companies have made significant investments during the last decade while others work via local consulting companies and/or distributors.

Summary:

Improving environmental standards is one of Hungary's top priorities after joining the EU on May 1, 2004. While Hungarian env. legislation has adopted most EU laws and regulations, enforcement is not strong enough. It will take several years to bring the country's environmental infrastructure to EU standards. After the EU accession, Hungary became eligible for EU Structural and Cohesion Fund grants. Since tenders for EU-funded projects under the Structural (infrastructure related) and Cohesion (environment and transportation infrastructure) Funds do not have a nationality requirement, they may extend to U.S. involvement and U.S. companies may benefit from Hungary's receiving EU funds.

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IRELAND

Capital: Dublin Accession to the EU: Yes, since 1973 Currency: euro NATO: No Population: 4,015,676 Language: English, Irish, Gaelic GDP: \$136.9 billion GDP/Cap: \$34,100

Environment – Current issues:

Water pollution, especially of lakes, from agricultural runoff

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 94, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling Signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Marine Life Conservation

Industries:

Food products, brewing, textiles, clothing; chemicals, pharmaceuticals, machinery, transportation equipment, glass and crystal; software

Summary:

While Ireland currently enjoys a relatively healthy environment, it is under increasing pressures. The country's economy, over the past ten years, has experienced unprecedented growth with marked changes in industrial and agricultural production. While the potential pressures on the environment are growing, the means to combat them are keeping pace through a widening range of laws and policies. At international level, there have been developments in relation to controlling greenhouse and acidifying gas emissions and to the protection of air and water quality. At national level, the statutory controls on industrial activity and waste management have been strengthened, while policies have been devised to counter the regionally unbalanced nature of development. Three specific challenges for the Irish environment are: 1, meeting international commitments on air emission; 2, eutrophication prevention and control; 3, waste management

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ITALY

Capital: Rome Accession to the EU: Yes, a founding member (1957) Currency: Euro since January 1999 NATO: Member since 1949 Population: 58,103,033 Language: Italian GDP: \$1.645 trillion GDP/Cap: \$26,700

Environment - Current issues:

Air pollution from industrial emissions such as sulfur dioxide; coastal and inland rivers polluted from industrial and agricultural effluents; acid rain damaging lakes; inadequate industrial waste treatment and disposal facilities.

Environment - International agreements:

Party to: Air Pollution-Sulphur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling, Climate Change-Kyoto Protocol *Signed, but not ratified:* Air Pollution-Persistent Organic Pollutants

Industries:

Machinery, chemicals, automobiles, metallurgy, aircraft, electronics; textiles, food processing; tourism

Best prospect sectors:

Italy has considerably strengthened its national environmental institutions, implemented EU Directives, and further developed environmental responsibilities to regional and local authorities. Opportunities for U.S. companies exist in the water supply systems and wastewater management systems, waste recycling and hazardous waste management equipment technologies and services.

Summary:

The pollution control equipment and services market in Italy provides one of the best prospects for U.S. firms, technologies, and services. Pollution continues to represent one of the most serious problems facing Italy. The Italian government fully recognizes these problems and is moving forward both at the structural level and through individual projects. The Italian water treatment equipment sector is undergoing strong growth largely driven by European and national water legislation. A "Water Resources Act" known as the "Galli Law", will eventually force thousands of public entities currently managing the various phases of the water cycle with no coordination, to group together, thus establishing new larger entities (either public or private) to manage the entire water cycle as an integrated operation. The investment needed to bring Italy's water and sewage system up to international ranges from approximately 18 billion dollars over four years to approximately 47 billion dollars over ten years.

Italy has also been experiencing serious industrial and urban waste problems for years. The shortage of landfills has created extremely difficult situations in major Italian cities. Every year Italy generates approximately 64 million tons of waste. At present, Italy has the capacity to properly manage and dispose of only 30 percent of the waste it generates. The emergency situation, together with the availability of EU and GOI funds and new safer technologies for waste-to-energy incineration should give a boost to this sector in the medium-long term.

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NETHERLANDS

Capital: Amsterdam: The Hague is the seat of government Accession to the EU: Yes, a founding member (1957) Currency: Euro since January 1999 NATO: Founding member Population: 16,570,613 Language: Dutch/Frisian GDP: \$638.9 billion GDP/Cap: \$38,600

Environment – Current issues:

Air pollution, climate change, acidification, eutrophication, toxic and hazardous substances, contaminated land, waste disposal, disturbance, groundwater depletion, water pollution

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Kyoto Protocol, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling

Industries:

Agro-industries, steel and aluminum, metal and engineering products, electric machinery and equipment, bulk chemicals, natural gas, petroleum products, transport equipment, microelectronics, and fishing

Best prospect sectors:

Best prospects for U.S. companies include equipment for soil remediation, state-of-the-art water treatment equipment and measuring and analysis instruments, particulate emission collectors and emission filters, equipment for monitoring air quality and air testing instruments, fuel gas desulphurizing and purifying equipment, gas monitors and samplers, Nox and SO2 analyzers, biological water cleaning systems, water pollution control equipment.

Summary:

The Netherlands is one of the most densely populated countries in the world and also has the highest density of industry, cattle and transport in the European Union. Its economic, industrial and leisure activities are extensive and expanding so, not surprisingly, the quality of its environment is facing serious threats. The environmental sector consists of suppliers of products and services for environmental management. Suppliers of products (manufacturers and importers) manufacture, supply and/or install equipment and installations designed to prevent or combat pollution. The service providers are engaged in design and engineering activities, project management, policy support, sampling and analysis. There are 1.455 companies operating in the Dutch environmental sector. The majority are SMEs. The sector supplies innovative solutions for the following environmental themes: waste disposal and processing, wastewater treatment, air purification, soil remediation, environmental noise control, environmental management and consultancy. The market is largely a replacement market dominated by orders to replace old machinery and equipment rather than purchase new equipment for the first time. A recent principle of the Dutch government is to spend more money on environmental protection in order to compensate the negative effect of ongoing economic growth. Current environmental policy objectives include continuing the implementation of strict environmental rules and regulations, focus on soil remediation, reduction of the domestic warming effect and noise control. A high priority in the Netherlands is reducing air pollution. The National Institute for Public Health and the Environment (RIVM) of the Netherlands estimates that each year 18,000 people die prematurely because of air pollution in the Netherlands. Cutting pollution levels can help and is a European priority. Pollutant emissions have fallen substantially over the past two decades, but are still dangerously high. Current regulations in the Netherlands are insufficient to reach European air quality targets. New measures and a new approach are required.

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NORWAY

Capital: Oslo Accession to the EU: No Currency: Norwegian Crown NATO: since 1949 Population: 4,593,041 Language: Norwegian GDP: \$194.7 billion GDP/Cap: \$42,400

Environment – Current issues:

Water pollution; acid rain damaging forests and adversely affecting lakes, threatening fish stocks; air pollution from vehicle emissions

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling *Signed, but not ratified:* none of the selected agreements

Industries:

Petroleum and gas, food processing, shipbuilding, pulp and paper products, metals, chemicals, timber, mining, textiles, fishing

Best prospect sectors:

In Norway, a total of 8.8 million tones of waste are generated every year. In 2002 about 67% of all the industrial and household waste was utilized either as a source of energy or as a raw material in recycling plants. The remaining 34% was delivered for final treatment such as land-filling or incineration without energy recovery. The proportion of household waste that was recycled also increased, from 9% in 1992 to 45% in 2003.

Summary:

Norway is a strong driving force in international environmental issues. It is a small country with few major environmental problems of its own, but serious damage to its environment can be caused by activities in other countries. Examples of damage caused by other countries are acid rain, nuclear accidents and environmental toxins in arctic food chains.

Norway's coastal and marine waters are generally clean and healthy. However, in many fjords and harbors, there are high concentrations of hazardous chemicals in bottom sediments. This is mainly the result of earlier releases of pollutants from industrial activities and polluted seepage from landfills near the coast. The country has also been trying to tackle the issue of contaminated sites, most of which originate from earlier industrial and mining activities or from closed landfills containing hazardous waste. So far, over 3000 sites have been identified. The Norwegian government has set the objective that pollution of soil, water and sediments caused by earlier activities, inappropriate disposal of waste etc., shall not entail a risk of serious pollution problems.

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POLAND

Capital: Warsaw Accession to the EU: Yes, since 2004 Currency: Zloty NATO: Member since 1999 **Population:** 38,125,000 **Language:** Polish **GDP in 2006:** \$552.4 billion **GDP/Cap in 2006:** \$14,489

Environment - Current issues:

Situation has improved since 1989 due to decline in heavy industry and increased environmental concern by post-communist governments; air pollution nonetheless remains serious because of sulfur dioxide emissions from coal-fired power plants, and the resulting acid rain has caused forest damage; water pollution from industrial and municipal sources is also a problem, as is disposal of hazardous wastes

Environment - International agreements:

Party to: Air Pollution, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Wetlands, Climate Change-Kyoto Protocol. *Signed, but not ratified:* Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulphur 94,

Industries:

Machine building, iron and steel, coal mining, chemicals, shipbuilding, automotive, electronics, home appliances, food processing, glass, beverages, and textiles

Best prospect sectors:

Recent EU directives are stimulating modernization of Polish environmental equipment. Such modernization is prevalent in the fuel sector, the water sewage treatment plant systems, storage facilities, and the manufacturing and recycling of discarded packaging. Poland's EU commitments are drivers for renewable energy development. Poland's target is 10.4% of energy production from renewable sources by 2010 what means almost tripling the current production.

Summary:

As a new EU member Poland's biggest environmental market driver is the strong desire to meet European Union environmental standards. The cost of adapting the Polish economy to EU standards of environmental protection will amount to between USD 19 and 35 billion.

The most significant new challenges, which lie ahead for entrepreneurs follow: Businesses need to obtain integrated permits gained by the use of more environmentally friendly materials. EU membership also means high costs for entrepreneurs running energy installations with a capacity exceeding 50 MW, and also operators of waste furnaces and installations for the production of titanium dioxide. New regulations in the field of environmental protection, which came into force as of May 1, 2004, tightened up storage requirements for petrol, its distribution, and transportation from terminals to petrol stations. Entrepreneurs have to significantly reduce the levels of emission into the atmosphere of volatile organic compounds. Industrial waste produced by entrepreneurs has to meet the most stringent standards.

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PORTUGAL

Capital: Lisbon Accession to the EU: Yes, since 1986 Currency: Euro since January 1999 NATO: Founding member Population: 10,566,212 Language: Portuguese, Mirandese GDP: \$194.8 billion GDP/Cap: \$18,400

Environment – Current issues:

Soil erosion; air pollution caused by industrial and vehicle emissions; water pollution, especially in coastal areas

Environment – International agreements:

Party to: Air Pollution, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands *Signed, but not ratified:* Air Pollution-Persistent Organic Pollutants, Air Pollution-Volatile Organic Compounds, Environmental Modification

Industries:

Textiles and footwear; wood pulp, paper, and cork; metals and metalworking; oil refining; chemicals; fish canning; rubber and plastic products, ceramics, electronics and communications equipment, rain transportation equipment, aerospace equipment, ship construction and refurbishment, wine; tourism

Best prospect sectors:

Prospects for environmental suppliers within the Portuguese market are exceptionally favorable.

<u>Wind energy</u> – There are good opportunities for U.S. companies engaged in the manufacture of turbines, towers, remote monitoring system, foundations, electrical and civil infrastructures as well as operations and maintenance of the wind power plants.

<u>Solar thermal energy</u> – Close to 240,000 m2 of solar collectors are installed in Portugal, which is a small amount considering the resource available.

<u>Solid waste</u> – Residents are encouraged to separate recyclables from the rest of their trash but they are not required to do so. Residents are also encouraged to separate their wastes and deposit them at curbsides or at drop-off centers. Recycling has grown 11% during January-July 2003 to similar period of 2002.

<u>Soil remediation</u> – This field offers good opportunities for American environmental companies since they are recognized leaders in this area. The best sales prospects in the remediation sector are in products, innovative environmental technologies, soil services, groundwater remediation services, and human health risk assessments.

Summary:

The Portuguese environmental market can be characterized as a one having all the main drivers in place. In particular there is 1, an increasing emphasis on enforcement as a means of correcting the poor standards of pollution control and waste management applying throughout Portuguese industry, 2, an accelerating program of privatization, aimed at bringing in both the capital and expertise needed to provide adequate environmental infrastructure, 3, the availability of EU funding for major environmental infrastructure projects. The Portuguese market for environmental technologies and services is estimated at ± 3.3 billion between 2000-2006. The largest market sector is water and wastewater treatment (WWT), valued at ± 2.5 billion, followed by waste management (WM), at ± 303 m. The EU will be contributing with over ± 1.5 billion of the total amount.

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ROMANIA

Capital: Bucharest **EU Member** since January 1st, 2007 **Currency:** RON **NATO:** Yes Population: 22,276,056 Language: Romanian GDP: \$256.9 billion (estimate 2007) GDP/Cap: \$11,800 (estimate 2007)

Environment - Current issues:

Air pollution due to heavy traffic, chemical and petrochemical industry, and thermo power plants; Waste disposal (industrial and municipal), Water pollution because of agricultural practices and insufficient wastewater treatment, Soil pollution due to mining, oil & gas industry and agricultural practices.

Environment - International agreements:

Party to: Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Ozone Layer Protection, Kyoto Protocol, Danube River Protection Convention, Black Sea Convention.

Industries:

Apparel, timber, agriculture, construction materials, metallurgy, chemicals, machine building, food processing, petroleum production and refining, mining, tourism.

Best prospect sectors:

Although EU is one of the largest investors in this sector, U.S. companies may enter the Romanian environmental sector.

Best prospect areas for such products and services are related to projects managed by municipalities and local governments (water supply, waste water treatment, solid minimization, recycling and disposal, district heating, mining waste), projects handled by individual companies (emissions and effluent reduction and treatment, pollution prevention measures, hazardous waste disposal, energy utilization, and soil remediation), projects related to the construction, modernization, or extension of landfill sites for both cities and villages or construction of deposits for industrial wastes, the creation of secure centralized deposits for dangerous waste, the establishment of incinerators for dangerous and clinical waste, and waste re-cycling.

Summary:

In order to comply with the European Union standards, Romania will need investments totaling USD 44 billion in order to implement the environmental protection standards by 2018, when the extension clauses previously negotiated with the European Commission expire. The highest investments will be required in the areas of water and wastewater, solid and hazardous waste management, and large combustion plant air quality control.

According to the Romanian government's strategy, priorities for allocating the investments mentioned above must focus on waste and wastewater, for which adequate treatment facilities must be built, to prevent them from turning into a permanent pollution factor. The cost assessment for building such facilities is approximately USD 14.25 billion, of which USD 8.55 billion will be destined for wastewater treatment and USD 5.7 billion for sewage systems.

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RUSSIA

Capital: Moscow	Population: 143,420,309
Accession to the EU: No	Language: Russian
Currency: Ruble	GDP: \$1.535 trillion
NATO: No	GDP/Cap: \$10,700

Environment - Current issues:

Air pollution from heavy industry, emissions of coal-fired plants and transportation in cities; industrial, municipal, and agricultural pollution of inland waterways and seacoasts; deforestation; soil erosion and contamination from improper application of agricultural chemicals; radioactive contamination; groundwater contamination; urban solid waste management; abandoned stocks of obsolete pesticides

Environment - International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 85, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Wetlands, Whaling, Climate Change-Kyoto Protocol, Signed, but not ratified: Air Pollution-Sulfur 94

Industries:

Mining and extractive industries in coal, oil, gas, chemicals, and metals; machine building, defense, shipbuilding; road and rail transportation equipment; communications equipment; agricultural machinery, tractors, and construction equipment; electric power generating and transmitting equipment; medical and scientific instruments; consumer durables, textiles, foodstuffs, handicrafts

Best prospect sectors:

Pollution control equipment, environmental technologies and consulting services, recycling technologies and cleaner manufacturing processes, opportunities for bio mass plants, municipal solid waste plants, and the oil spill prevention and treatment technologies, fresh water preparation and water sanitation

Summary:

Issues connected with offshore oil and gas development, forestry, fishing, and mining are receiving increasing attention. Secondary processing of raw materials is an economic development priority for the administration, but not yet realized. The lack of infrastructure investment means that sewer/water services are insufficient. Municipal wastewater treatment, drinking water improvement, and residential solid wastes' utilization have become urgent. Majority of solid wastes in are being stored at landfills, only a small percentage of it is being burned. Recycling has already started to attract the attention, especially wastes containing non-ferrous and precious metals. The municipal authorities of some cities (i.e. Yakutsk) have expressed interest in building trash-steam plants for residential solid waste treatment. Less than one third of sewage in Russia goes through any kind of treatment. A very low percentage of the wastewater is being purified. The situation in the cities located on the ocean is worse than in those that are situated on the rivers. The technologies of the wastewater treatment plants are mostly outdated. Energy sector is based on coal and diesel fuel. Out of renewables, wind stations have the most promising potential. Nuclear waste utilization and treatment is also a concern (especially nuclear submarines). Modern technologies for fire-prevention and extinguishing, forests reforestation and rehabilitation are required. There is also growing demand for wood-wastes minimization and recycling into commercial products.

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SLOVAK REPUBLIC

Capital: Bratislava Accession to the EU: May, 2004 Currency: Slovak Crown NATO: since May, 2004 **Population:** 5,423,567 **Language:** Slovak **GDP 2005:** \$46.17 billion **GDP 2005/Cap:** \$8,500

Environment – Current issues:

Air pollution caused by metallurgical plants; windstorms damaged six percent of Slovak forests in 04, only 60% of sewage water is cleaned in wastewater treatment plants.

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Wetlands, Agreement of Cooperation between The Ministry of Environment of the Slovak Republic and state of Maryland, Memorandum of Understanding between The Ministry of Environment of the Slovak Republic and U.S. Agency for International Development, Memorandum of Understanding between The Ministry of Environment of the Slovak Republic and U.S. Peace Corps in Slovakia

Signed, but not ratified: Air Pollution-Persistent Organic Pollutants

Industries:

Automotive (manufacturing. 1 m cars/year), automotive parts and components, metallurgy, electrical machinery/parts, automatic data processing machinery, medical equipment, chemical, plastics, dental supplies and equipment.

Best prospective sectors:

In Slovakia there are approximately 800 companies active in the environmental sector with 150 in wastewater and treatment. Slovakia has groundwater monitoring at nearly 300 stations in country and opportunities for the US firms are ripe in fields like protection, prevention, remediation, monitoring, and waste disposal. In particular, prospects for U.S. companies remain strong in the privatization of state-owned water utilities, construction of new wastewater treatment plants as well as rebuilding and updating existing plants, recycling facilities, and biological waste facilities. Consulting services, market research and management services in implementing new government procedures and regulations are needed also.

Summary:

Slovakia is heavily industry-oriented without a coherent environmental strategy and suffers from significant environmental damage. It has developed to the point that most legal regulations and frameworks for environmental protection are adopted, yet enforcement is still an issue. The Strategy, Principles and Priorities of the State Environmental Policy were approved in 1993. This document outlines Slovakia's environmental policy agenda until 2010 and includes a comprehensive legal platform for solving issues related to waste management, an environmental impact assessment and the environment as a whole. Two basic areas of immediate concern are to connect populations to water and sewer system (as indicated by EU Directives) and eliminate pollution. The biggest foreign competitors are Germany (waste management) and France, Belgium and Italy (water treatment and protection technologies). The Czechs and Austrians have a significant share of the Slovak market with U.S. environmental companies a minor market share.

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SLOVENIA

Capital: Ljubljana **Accession to the EU:** May 1st, 2004 **Currency:** Slovene Tolar (Euro from 1.1.2007) **NATO:** Member since 2004 Population: 2,000,860 Language: Slovenian GDP: \$35 billion GDP/Capita(PPP): \$18,500

Environment - Current issues:

Sava River polluted with domestic and industrial waste; pollution of coastal waters with heavy metals and toxic chemicals; forest damage in the south western region from air pollution, acid rain, and frequent forest fires.

Environment - International agreements:

Party to: Air Pollution, Air Pollution-Sulfur 94, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands, Basel Convention (monitoring of movement of dangerous waste)

Signed, but not ratified: Air Pollution-Persistent Organic Pollutants *Planed for ratification*: Helsinki Convention

Industries:

Ferrous metallurgy and aluminum products, lead and zinc smelting, electronics (including military electronics), automotive (cars and car parts), electric power equipment, wood products, textiles, chemicals, machine tools

Best prospect sectors:

Improvement of water supply systems and waste water treatment facilities; sanitation of waste disposal sites, incineration, systems for waste separation; and air pollution emission control.

Summary:

Slovenia's environmental legislation is harmonized with the European Union and its latest directives. Although waste and pollution control mechanisms in Slovenia have improved over the last five years, Slovenia has to intensify activity for better environmental protection. The major concerns in Slovenia are: insufficient level of treatment and coverage for municipal and industrial wastewater; uncontrolled dumping of solid and hazardous wastes; lack of proper disposal sites; lack of recycling facilities and incinerators; control of air pollution emissions in industrial areas. Increase of hazardous waste is of particular concern. In July 2002, Slovenia ratified the Kyoto protocol, according to which Slovenia has to reduce greenhouse gases 8% between 2008 through 2012. Industry in Slovenia produces 873 kilos of waste per capita annually. Industry contributes 90% of the country's air emissions. Slovenia has only two incinerators and 10 active industrial waste dumps (landfills). A couple of them will have to be closed in the next two years and two will operate only untill 2008, because they cannot meet the minimum environmental criteria. Slovenia currently exports a significant share of its waste, but plans to build new landfills in the coming years. Environmental indicators for Slovenia show that Slovenia's main efforts will have to be made regarding wastewater, NO_x emissions, greenhouse emissions, and solid waste. Slovenia's objective through 2010 is to decrease emissions of SO₂ from 71 kt down to 27 kt, NO_X from 60 kt to 45 kt, HOS from 48 kt to 40, and NH₃ to 20 kt. Largest contributor to the SO₂ emissions is the energy production, which accounts for 81%. The largest contributor to the NO_X emissions is traffic(66%).

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SPAIN

Capital: Madrid Accession to the EU: Yes, since 1986 Currency: Euro since January 1999 NATO: Member since 1982 Population: 45,200,737 Language: Spanish GDP: \$1.23 trillion GDP/Cap: \$27,422 million

Environment – Current issues:

Pollution of the Mediterranean Sea from raw sewage and effluents from the offshore production of oil and gas; water quality and quantity nationwide; air pollution; deforestation; desertification

Environment - international agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling signed, but not ratified: Air Pollution-Persistent Organic Pollutants.

Industries:

Textiles and apparel (including footwear), food and beverages, metals and metal manufactures, chemicals, shipbuilding, automobiles, machine tools, tourism, clay and refractory products, footwear, pharmaceuticals, medical equipment.

Best prospect sectors:

Priority environmental issues include water management, biodiversity conservation, climate change and air pollution, sustainable tourism and waste management. Spain needs to improve areas of further controlling air emissions and improving air quality by reducing ground level ozone and particulates from stationary and transport sources, shifting to water demand management and efficient water pricing, phasing out subsidies and making better use of economic instruments to encourage the efficient management of resources and reduce pollutants, anticipating the EU reduction of environmental support in areas such as water infrastructure, more tightly enforcing pollution and land use regulations, such as coastal zone protection, at national and regional levels. The Spanish Ministry of Environment estimates that the environmental market in Spain has grown an average of 14 percent in recent years.

Summary:

The areas of need for improvement include urban waste and hazardous waste. There is a big investment in desalination plants through the AGUA program. The AGUA Program intends to obtain water from rivers and the ocean, as well as to better re-use treated wastewater. Most soil remediation equipment is imported. Due to the priority given by the government to environmental issues such as pollution control and contaminated soil, public and private sector companies are and will continue to invest in this market. From August 2005, companies selling a broad range of electrical goods in Europe need to conform to WEEE (Waste Electrical and Electronic Equipment Directive) and as of July 2006, those same companies will also need to conform to RoHS (Restriction of Use of certain Hazardous Substances Directive). Renewable energies represent the biggest opportunity for Spain over the next ten years. According to Renewable Energy Plan (2005-2010), 12 percent of the energy consumed will be renewable energy in Spain to reduce energy dependence and increase the safety of supply. Waste-to-energy is one of the areas covered by the Spanish Renewable Energy Plan.

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SWEDEN

Capital: Stockholm Accession to the EU: Yes, since 1995 Currency: Swedish crown NATO: No Population: 9,031,088 Language: Swedish GDP: \$290.1 billion GDP/Cap: \$32,200

Environment – Current issues:

Climate change is considered to be one of the major environmental challenges. Air pollution – caused by emissions from transportation as well as industrial sectors. Acid rain damage to soils and lakes; pollution of the North Sea and the Baltic Sea

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling Signed, but not ratified: none of the selected agreements

Industries:

Engineering industry, machinery, paper products, electrical and computer equipment, motor vehicles, chemical products, pharmaceuticals, iron and steel, foodstuffs

Best prospect sectors:

Equipment/techniques for remediation of contaminated sites. Monitoring, measuring and sampling instruments for air pollution. The import climate is open and the Swedish market is receptive to U.S. products. American firms interested in entering the Swedish market should be able to offer cost-efficient and innovative products. Although domestic production is strong and Swedish equipment and technology for the environmental sector is highly competitive, trade sources believe that there is room for new, innovative equipment and services.

Summary:

Sweden was among the first countries in the world to recognize the growing environmental problems. The Swedish Environmental Protection Agency, the first national agency in the world with responsibility for environmental issues, was formed in 1967. The Swedish environmental technology market has an estimated annual turnover of SEK 102 billions (USD14 billion), The number of Swedish companies active in the area of environmental technology (water and waste water treatment, waste management and recycling, as well as renewable energy and energy efficiency improvements) now totals 3,755 of which 32 percent are exporting. Swedish exports in this area has shown a strong growth and reports an increase of 36% since 2003.

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SWITZERLAND

Capital: Bern Accession to the EU: No Currency: Swiss franc NATO: No **Population:** 7,489,370 **Language**: German, French, Italian, others **GDP**: \$262.1 billion **GDP/Cap**: \$35,000

Environment – Current issues:

Air pollution from vehicle emissions and open-air burning, acid rain, water pollution from increased use of agricultural fertilizers, loss of biodiversity.

Environment – International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Persistent Organic Pollutants, Air Pollution-Sulfur 85, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling *Signed, but not ratified:* Law of the Sea

Industries:

Machinery, chemicals, watches, textiles, precision instruments

Best Prospect Sectors:

Both land filling of waste and industrial activities have left their mark on Swiss soil: around 50,000 sites, including numerous bodies of water, are polluted, and up to 4,000 will have to be remediated over the next 20-25 years, at a total cost of CHF 5 billion. Every year, some 30,000-60,000 tones of waste are still burnt illegally. Although this is only 1-2% of the total amount of combustible waste, it produces more than twice the amount of dioxins and furans that is emitted by all the country's hazardous-waste and municipal- waste incinerators combined. Switzerland is now in a position to dispose most of its hazardous waste in domestic facilities. Technical solutions for the recovery of recyclable metals from automobile shredder residue (ASR) are currently being readied for the market. Since 1996, landfilling of ASR has been prohibited, and some of this waste is now being incinerated as an interim solution. Since ASR requires extremely high incineration capacities, there is a need to find specialized solutions.

Summary:

Switzerland's position in the heart of Europe and its advanced, prosperous economy makes it an attractive market for U.S. exporters. Since Switzerland has few natural resources, international trade has therefore been key to Switzerland's prosperity, with the United States being the second-largest trading partner after Germany. Overall, for U.S. companies, Switzerland is an attractive country in which to do business. In Switzerland, glaciers play an important role as water reservoirs for hydro-power production (generating 50% of all electricity). They were frequently associated with natural hazards, endangering humans and infrastructure in this densely populated mountain region. Environmental impacts from glacier hazards: Lake outbursts and ice avalanches. Detection and monitoring of potentially hazardous lakes has been achieved by satellite remote sensing and subsequent detailed photo-grammetric studies.

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TURKEY

Capital: Ankara Accession to the EU: Candidate Currency: New Turkish Lira NATO: Yes, since 1952 Population: 69,660,559 Language: Turkish GDP: \$344.8 billion GDP/Cap: \$4,949

Environment – Current issues:

Water pollution from dumping of chemicals and detergents; air pollution, particularly in urban areas; deforestation; concern for oil spills from increasing Bosphorus ship traffic, solid/hazardous waste management

Environment – International agreements:

Party to:Air Pollution, Antarctic Treaty, Biodiversity, Desertification, Endangered Species, HazardousWastes,OzoneLayerProtection,ShipPollution,WetlandsSigned, but not ratified:Environmental ModificationVetlandsVetlandsVetlands

Industries:

Textiles, food processing, autos, mining (coal, chromite, copper, boron), steel, petroleum, construction, lumber, paper.

Best prospect sectors:

The municipal drinking water sector offers significant opportunities for U.S. firms. Many of the major cities have already established facilities but they either update the systems or build additional facilities. There is potential for new projects in cities (other than the major ones noted above) with population of 250,000+ for the construction of new water treatment plants. Turkey is an important stepping stone for American companies to enter into other markets; particularly the Turkic states. Solid waste management is a big problem in Turkey. Twenty-six million tons of waste is produced each year and this is disposed of in an uncontrolled fashion. There is potential for U.S. environmental companies working on the construction of hygienic and controlled landfills for solid waste collection, offering consultancy services on separation of waste at landfills, landfill gas removal, recycling and composting. U.S. solid waste services related equipment and machinery companies might also find market in the country. On the hazardous waste ground, 2.1 million tons of hazardous solid waste is disposed of each year in Turkey and the number of plants that treat this type of waste is not enough to serve the whole country. Air pollution is also another problem the country is face to face with. Other potential is air pollution prevention and monitoring projects at micro and macro level both on the services and equipment.

Summary:

Turkey has made progress over the past fifteen years in addressing its environmental problems. Public awareness about environmental issues and concerns is increasing and non-governmental organizations are emerging and exerting greater influence in the environmental lobby. The start of the accession talks with the EU has prompted the Government of Turkey (GOT) to address env. concerns and will continue to do as the env. negotiations with the EU is expected to be one that will take comparatively more time with respect to many of the other chapters. The GOT is quickly adopting legislation to conform to EU directives. As the Municipalities are the main actors in the management of environmental resources, the Turkish government would like to accomplish some improvement in the ability of Municipalities to efficiently and effectively manage solid waste, wastewater and drinking water services.

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UKRAINE

Capital: Kiev Accession to the EU: No Currency: Hryvnia NATO: No Population: 46,465,700 Language: Ukrainian GDP: \$103.9 billion GDP/Cap: \$2,236

Environment - Current issues:

Inadequate supplies of potable water; air and water pollution; deforestation; radiation contamination in the northeast from 1986 accident at Chernobyl Nuclear Power Plant

Environment - International agreements:

Party to: Air Pollution, -Nitrogen Oxides, -Sulfur 85, Antarctic-Environmental Protocol, -Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Kyoto Protocol, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands *Signed, but not ratified:* Air Pollution-Persistent Organic Pollutants,-Sulfur 94,VolatileOrganicCompounds

Industries:

Coal, electric power, ferrous, nonferrous metals, machinery, transport eq., chemicals, food processing

Best prospect sectors:

Waste management is in need of improvement for the treatment of solid waste and recycling equipment, toxic waste treatment materials and groundwater purification equipment, waste separation equipment and test lab-ware for toxic wastes, new technologies in industrial and municipal water treatments, water filtration, domestic water filters and water meters. Air pollution control needs industrial exhaust filtration equipment, systems for removing sulfur and nitrogen oxides from boiler gases, and emission control/measurement/monitoring systems will be in high demand.

Summary:

New env. policy that corresponds to the "Environment for Europe" international process requirements is being prepared. To handle urgent pollution problems, projects have been proposed. Most critical are waste treatment in coal mining and construction industries. Others include reconstruction and introduction of new technologies for thermal power and oil refining industries, soil remediation and municipal wastewater treatment. Most of the projects have been precluded or are in the stage of feasibility study. Waste management, water treatment, and pollution control equipment are areas needed. We have not yet developed a self-sufficient infrastructure for waste management and disposal. The market for waste recycling equipment is in development. The lack of appropriate water treatment facilities in industries such as energy, chemicals, metallurgy, fertilizer production, coal mining, building materials production, coke-chemical production, coal and fuel processing, machine building and the military has led to serious problems. Facilities at many industrial plants are working above capacity, resulting in the discharge of considerable amounts of untreated water into rivers. Most industrial plants lack proper pretreatment capabilities. The effectiveness of municipal sewage treatment systems has been reduced due to high inorganic loads. High inorganic loads hinder biologically activated sludge treatment in municipal sewage treatment subsystems, thereby reducing the effectiveness of the system. Market analysis is complicated by the difficulty in obtaining exact statistical data from institutions. The majority of Ukrainian industrial enterprises are in need of reconstruction and installation of new water and air pollution control systems. Production, installation and distribution of various pollution control systems are needed.

Contact Information:

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UNITED KINGDOM

Capital: London Accession to the EU: Yes, since 1973 Currency: Pound sterling NATO: Yes, member since 1949 Population: 60,587,000 Language: English GDP: \$2.3 trillion GDP/Cap: \$39,000

Environment - Current issues:

The reduction of greenhouse gas emissions; contaminated land; pollution; urban and industrial waste management.

Environment - International agreements:

Party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 94, Air Pollution-Volatile Organic Compounds, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling *signed, but not ratified:* Air Pollution-Persistent Organic Pollutants

Industries:

Machine tools, electric power equipment, automation equipment, railroad equipment, shipbuilding, aircraft, motor vehicles and parts, electronics and communications equipment, metals, chemicals, coal, petroleum, paper and paper products, food processing, textiles, clothing, and other consumer goods

Best prospect sectors:

U.S. companies should follow legislative developments that may create opportunities for the market with the requisite operational skills. These would include curbside recycling, waste separation, end-of-life vehicle dismantling, electrical and electronic goods disposal, alternatives to landfill disposal such as incineration, anaerobic/enzyme digestion, contaminated land remediation, and construction; U.S. companies having expertise or technologies in specialized areas of the waste management such as collection, treatment and containment/disposal of hazardous waste streams, such as radioactive material, especially in partnership with an established UK firm. There are also opportunities for firms skillful in operations and human resources management, esp. municipal waste sector, as the Govt's Waste Strategy 2000 has targeted curbside recycling, reuse, composting, etc. to minimize waste going to landfill. Prospects are for innovative design so that products are inherently more recyclable and contain less waste.

Summary:

In 2006, the market for waste management was worth \$10.5 billion with 434 million tons of total waste produced p.a. The most significant sectors by "weight waste production": mining and quarrying, demolition, agriculture and construction. Households account for approx. 30 million tons (7%) p.a. More importance is on recycling to reduce the landfill waste. Hazardous waste is also important as the number of sites licensed to receive it has been reduced. No U.S. company operates in the waste management sector. The industrial legacy has created a considerable amount of contaminated land and these sites are often in or near cities where there are pressures to build new residential housing and commercial developments. Recent changes in legislation and govt. initiatives are having impact on contaminated land assessment and treatment.

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EU FUNDING - A brief overview for U.S. companies

Projects that benefit the environment may be eligible for EU funding

What types of projects receive funding? The European Union provides substantial funds to help EU Member States comply with strict EU environmental regulations, improve communications and transportation, improve public administration, and promote economic convergence.

Who can apply? U.S. companies are eligible to compete for EU funds in most cases, though they may need an EU partner or an EU subsidiary for certain projects.

What are the odds? The EU application process can look long and daunting, but if you have prior experience with any government contracting the process will be familiar. Viable projects that submit qualified applications and that fit well into a funding priority have a good chance of receiving support.

What will I need to do? If you want to take a strategic approach to funding your project, you'll need to put in some effort.

- Together with a regional or municipal government, identify a program that fits your product.
- Locate an EU partner.
- Develop a grant application for a project in your area of expertise.

What about tenders? Public procurement requests in the environmental sector can be found in the European Union's Tenders Electronic Daily (TED). The U.S. Commercial Service at the U.S. Mission to the EU has a link to EU tenders on its website where companies can search tenders by sector (see below).

What's the first step? We suggest you:

- Familiarize yourself with EU programs and requirements. (We can help give you a good head-start on accessing EU funding.)
- Develop one or two general concepts for EU-funded projects to pursue. (Look at our Hot Leads section for ideas)
- Come to the EU to find a local partner and have preliminary meetings with government counterparts. (The U.S. Commercial Service can assist you in identifying suitable partners through our Gold Key Service.)

Resources and Contact Inforamation

U.S. Commercial Service at the U.S. Mission to the European Union:

The U.S. Commercial Service at the U.S. Mission to the EU offers business counseling services and advocacy to U.S. companies interested in responding to EU tenders and accessing EU funded programs. CS EU has also drafted several reports that offer guidance for U.S. companies. http://www.buyusa.gov/europeanunion/eu_funds.html http://www.buyusa.gov/europeanunion/market_research.html http://www.buyusa.gov/europeanunion/eu_tenders.html Isabelle Maelcamp, EU Funding Advisor Email: isabelle.maelcamp@mail.doc.gov U.S. Commercial Service at the European Bank for Reconstruction and Development (EBRD): The U.S. commercial Service has a liaison office located inside the EBRD. CS EBRD works to increase the effectiveness of U.S. participation in EBRD and inform U.S. companies of EBRD opportunities. CS EBRD also offers guidance to U.S. companies throughout the project cycle. Alice Davenport, Senior Commercial Officer/EBRD Liaison Officer Email: alice.davenport@mail.doc.gov Tel: +44 20 7588 8481 http://www.buyusa.gov/ebrd/

European Bank for Reconstruction and Development (EBRD): Like the IFC, EBRD can either work independently, or arrange co-financing packages in conjunction with other multilateral government and private institutions. Alain Pilloux, Director, PCSB Team London HQ, tel.: (+44 171) 338-6561, fax: (+44 171) 338-7199. http://www.ebrd.org

European Union: Although the Member States determine what projects to fund, the European Commission in Brussels, Belgium, defines the framework, allocates funds and enforces funding rules. <u>http://europa.eu.int/grants/index_en.htm</u> <u>http://europa.eu.int/comm/environment/funding/intro_en.htm</u>

European Investment Bank (EIB): EIB is the EU long term financing institution; its goal is to contribute towards the integration, balanced development and economic and social cohesion of the Member Countries.

http://www.eib.org

The American Chamber of Commerce to the European Union in Brussels, Belgium: AmCham EU has several publications that may be of interest to U.S. firms interested in increasing their business opportunities in the EU, including:

- Business Guide to EU Enlargement and Wider Europe
- EU Environment Guide 2004
- EU Information Handbook 2004

Visit the AmCham EU website for further details http://www.amchameu.be IFAT 2008 May 5- 9, 2008 Munich, German 15th International Trade Fair For Water, Sewage, Refuse, Recycling and Street Furniture. This conference highlights waste and recycling as well as wastewater treatment. Contact person: Mr. Paul Warren-Smith – <u>Paul.Warren-Smith@mail.doc.gov</u> Web Address: <u>http://www.mtfna.com/IFAT</u>

AQUATECH

September 30 – October 3, 2008 Amsterdam, Neatherlands

Aquatech, Water Technology and Water management trade show, is held once every two years at the RAI Exhibition Centre in Amsterdam. This event attracts some 25,000 highly qualified visitors from the Netherlands and many other countries. The number of exhibitors is traditionally close to 900. Aquatech is one of the leading water technology and management oriented trade shows in Europe, where you can find many US exhibitors.

Contact person: Ms. Jennifer Ritfeld – <u>Jennifer.Ritfeld@mail.doc.gov</u> Web pages: <u>http://www.amsterdam.aquatechtrade.com/aquatech2006/</u>

POLECO

November 17 – 20, 2008

Poznan, Poland

Poleco represents one of the largest Central European shows in the technology and devices for water, ground and air protection, noise and vibration control, atmospheric pollution monitoring, wastes (treatment, collection and transport, recycling & utilization, storage), energy, industrial and power industry building, municipal maintenance equipment, environmental organizations and consultancies, specialist publications, investments of local self-governments as regards environment protection.

Embassy Contact: Ms. Ania Janczewska – <u>Ania.Janczewska@mail.doc.gov</u> Web Address: <u>http://poleko.mtp.pl/en</u>

AQUATHERM

November, 2008

Prague, Czech Republic

The trade fair AQUA-THERM Praha that focuses on heating, ventilation, air conditioning, measuring, regulation, sanitary and ecological equipment, has experienced rapid development in recent years. The proportion of foreign exhibitors and visitors is constantly increasing. Last year every ninth visitor and every sixth direct exhibitor was from abroad. Traders came to the trade fair from 22 countries, and exhibitors came from seventeen.

Embassy Contact: Ms. Veronika Novakova – <u>Veronika.Novakova@mail.doc.gov</u> Web Address: <u>http://www.aquatherm.cz</u>

POLLUTEC

December 2- 5, 2008 Lyon, France Pollutec is one of the top environmental shows taking place in Europe. The show regularly attracts over 40,000 visitors out of which is more then 10 per cent international. There are more then 1,400 exhibitors from around 30 countries on exhibition space of 50,000 m2. Pollutec covers all the major environmental sector sub-sectors. Contact person: Mr. Everett Wakai - <u>Everett.Wakai@mail.doc.gov</u> Web Address: http://www.pollutec.com

ENSORGA-ENTECO

October 27 - 30, 2009

Cologne, Germany

The collocation of Entsorga-Enteco covers the entire value chain for waste management and environmental technology. It is an International Trade Fair for Waste Management and Environmental Technology with the following product segments:.supply, treatment and disposal; solid and liquid materials; water and wastewater; technology and logistics; air and noise, and renewal sources of energy. The fair is hled every three years. Web pages: http://www.entsorga-enteco.com/