



Arms & Environmental Technologies

by Miriam Pemberton, National Commission for Economic Conversion and Disarmament

Rule #1 of market competitiveness is this: concentrate resources on growth opportunities. Such market logic turns out to work remarkably well in buttressing the case against arms exports. To all the moral and strategic reasons to defund American support for trade in lethal technologies, this one can be added: compared to other stronger alternatives, the arms trade is an economic loser. Although the world market for environmental technologies is twice the size of the world arms market, the U.S. supports its arms exports over its environmental technologies market by a staggeringly large margin.

The Clinton administration has identified the environmental technologies industry as one of the strongest growth opportunities for American companies in the economy in general and in the export market in particular. The most widely circulated estimate puts the size of this industry's market worldwide at about \$400 billion. Market prognosticators are virtually unanimous in forecasting growth in this market, matching or exceeding its current trajectory and outstripping the growth rate of the global economy as a whole.

created a private industry for goods and services in pollution monitoring, control, and remediation. Industry analysts identify the "waves of the future" to be in technologies that prevent pollution rather than cleaning up after it, especially clean manufacturing processes and renewable energy sources. While pollution prevention "waves" have expanded their share of this market since then, they remain—as a proportion of the whole—mere ripples. If the world is to make a dent in its climate change problem, these segments of the market will need to expand exponentially.

Government support for these technologies is, however, currently under virulent attack in Congress. No money appears likely to be appropriated this year for the administration's Climate Change Initiative, including the substantial portion allocated to the development and promotion of clean energy technologies. In its broadside attack on programs with any possible application to the Kyoto agreement on climate change, Congress has cut funding for most of the programs with the potential to expand global markets—and American exports—for these technologies.

Regarding the arms trade, on the other hand, Congress has been generous. During the 1990's, Congress and the administration have quietly acceded to virtually every item on the arms exporters' wish list of new trade supports. According to the standard of market competitiveness, then, the U.S. is backing the wrong horse. The moral and strategic reasons to defund the arms trade are abundant and compelling, and include the following vicious cycle: this trade seeds the world with lethal technologies that fuel regional arms races, these arms then get turned on our own troops, and this boomerang is used to justify new U.S. spending on even-more-cutting-edge weapons. Yet if we set aside all these reasons and base our trade decisions solely on our economic self-interest, the conclusion would be the same. Redirecting our funding priorities toward the economically stronger (as well as life-enhancing) market for environmental technologies would allow us to marry our principles with our self-interest—to do well by doing good.

Key points

- The world market for environmental technologies is twice the size of the world market for weapons.
- Most market forecasting predicts strong growth for envirotech trade, but decline or stagnation for the arms trade.
- The U.S. is backing the economic loser by favoring its arms exports over its envirotech exports.

Meanwhile, the entire world market for military hardware is estimated at about \$200 billion—just about half the size of the envirotech market. And no forecast, including those emanating from our own Defense Department, predicts any substantial rebound in world military spending from its 40% post-cold war decline.

This disparity in the current size and the future prospects of these two markets is repeated in the figures on the jobs they

create. Efforts to cut funding for weapons procurement or arms export subsidies are always countered with reference to the specter of lost jobs. Yet the U.S. envirotech industry employs an estimated 4.3 million people, up from 2.8 million in 1985, compared to the arms industry's 2.3 million, down from 3.7 million in 1987. Using trade in environmental technologies as the point of comparison with the arms trade makes sense on a number of grounds; perhaps the most compelling is that it contrasts a set of technologies that lifts all boats—improving human health and productivity worldwide—with one that sinks them.

The environmental technologies market originated with public spending on infrastructure for water utilities and waste management. Its second wave of technology development occurred with the advent of environmental regulation, led by the U.S. in the early 1970s, which

Figure 1

U.S. Environmental Export Performance

(units in billions)

	1993	1997
Global Market	\$414	\$468
U.S. Market	\$160	\$177
Non-U.S. Market	\$254	\$291
% Exports	5.9%	9.9%
U.S. Exports	\$9.6	\$18.4
% U.S. Share of Non-U.S. Market	3.8%	6.3%

Source: Environmental Business International, Inc., San Diego, California.

U.S. taxpayers underwrite both arms and environmental technology exports with an array of support programs involving both financial backing and marketing manpower. The accompanying chart (on back page) summarizes the problem with the current priorities of U.S. export promotion policy with respect to these two markets. It shows that for every dollar the U.S. spends to expand our share of a growing market for environmental technology, it spends nearly \$12 promoting our exports in a stagnant world market for weapons.

Calculating export promotion spending across an array of federal agencies is not an exact science, as—among other things—these agencies don't all agree on common definitions of either export promotion or environmental technology. The figures here represent a serious effort to compare apples with apples and to err on the side of under-representing rather than over-representing the disparity between the two promotional resource banks. The disparity that results—favoring weapons over environmental technologies by a factor of twelve to one—is bad enough.

Highlights of this disparity:

- The "Operations" category refers to spending that supports personnel who help international buyers and American sellers come together to strike deals. It contrasts a sales force of more than 6,000 uniformed and civilian personnel administering and facilitating government-to-government arms sales with fewer than 20 people responsible for all government work promoting U.S. envirotech exports.
- Finance for the arms industry includes:
 - More than three billion dollars a year in grants (80%) and loans (20%) subsidizing the foreign purchase of U.S. weapons;
 - More than two billion dollars a year in "Economic Support Fund" grants issued by the Agency for International Development (AID), yet defined within the federal budget as a security assistance program; about 90% of this fund directly or indirectly supports military-related expenditures;
 - About a billion dollars a year in loan write-offs;
- Plus: Congressional action in 1995 created a new \$15 billion Defense Exports Loan Guarantee

Program. Officially the program is self-financing, but the Congressional Budget Office has judged that it entails high risks of "significant" subsidy costs from defaults. At about the same time, congressional action wiped out a small envirotech promotion program at the Environmental Protection Agency (U.S. Technology for International Environmental Solutions) and two others at the Energy Department—the Committee on Renewable Energy Commerce and Trade (CORECT) and the Committee on Energy Efficiency Commerce and Trade (COEECT).

Finance for the envirotech industry includes:

- About \$420 million in AID funds for U.S. companies providing environmental goods and services for the developing world;
- About \$150 million calculated by the Export-Import Bank as the environmentally beneficial proportion of their total loan portfolio, plus tiny amounts from the Trade and Development Agency and the Overseas Private Investment Corporation.

As worldwide military spending has fallen in the post-cold war period, federal subsidies underwriting American arms exports have become a growing portion of the industry's profits. As arms export revenues for U.S. companies have hovered around \$12 to \$15 billion and are subsidized to the tune of nearly \$7 billion, one dollar of every two in arms export revenues is now coming from U.S. taxpayers. This is, to say the least, poor bang for the buck. For the envirotech market, by contrast, one public dollar is spent on export promotion for every \$25 in revenues. Government assistance to increase the U.S. share of this growing envirotech market lags proportionally behind what the governments of major competitor countries like Japan, Germany, the UK, Canada, France, and Korea are providing.

Key Problems

- The U.S. spends twelve times as much supporting our arms exports as it does supporting our envirotech exports.
- One dollar of every two in arms export revenues now comes from U.S. taxpayers; one public dollar spent promoting envirotech exports generates \$25 in revenues.
- The U.S. "leads" the world in arms export support but lags behind its major competitors in support for envirotech exports.



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The Clinton administration has made the goal of increasing exports a centerpiece of both its foreign and its economic policy. And it has always viewed environmental technology as one of the keys to building support for environmental protection: the way to counter the assumption that such protection is bad for business is to focus on the new business it can create.

Yet while devoting far more rhetorical attention than previous presidents to the potential for expanding our trade in environmental technologies, Clinton continues

to direct far more money toward the arms trade, indeed more money than to any export save agriculture. A decade after the end of the cold war, the U.S. remains the leader in vigorously diffusing military hardware and know-how worldwide. This is not what the world needs. Nor, as this comparison of the arms and envirotech markets has shown, is it in our economic self-interest.

A policy aligning the world's interests and our own would shift U.S. export promotional resources away from the arms market and toward such stronger opportunities as environmental technologies.

Strengthening the capacity of tiny agencies—such as the International Trade Administration's Office of Environmental Technologies Exports—to provide “one-stop shopping” assistance to firms seeking access to envirotech export markets would be one place to start.

In addition, reallocating export promotion funds from the arms trade to the envirotech trade will require specific cuts and investments like the following:

- Eliminating the Excess Defense Articles Program and the Leased Defense Articles Program, which either give away or lend at minimal rates surplus U.S. equipment, thereby creating a market for follow-on U.S. procurement and service contracts;
- Restoring fees on international arms sales that used to recover some of the taxpayer-financed costs of R&D on domestic contracts;
- Phasing out Foreign Military Financing funding, which provides grants and subsidized loans for U.S. weapons sales;
- Prohibiting the use of AID Economic Support Funds for military support and redirecting these funds toward the agency's purported core mission of sustainable development, including its ten programs directly related to environmental export;
- Transferring funds supporting the Defense Loan Guarantee Program to the Environmental Exports Program of the Export Import Bank;

- Transferring funds supporting U.S. participation in overseas arms promotions (at international arms bazaars and demonstrations for potential weapons customers) to AID programs providing assistance packages enabling developing countries to purchase U.S. environmental technologies that help them improve public health and reduce greenhouse emissions;
- Restoring funding for the EPA-led Environmental Technologies Initiative, including the U.S. TIES program that promoted U.S. envirotechs to solve international environmental problems;
- Restoring funding for the Energy Department's Committee on Renewable Energy Commerce and Trade (CORECT) and its Committee on Energy Efficiency Commerce and Trade (COEECT);
- Redirecting the predominant orientation of the energy division of the International Trade Administration away from fossil fuels and toward renewables;
- Fully funding the administration's Climate Change Initiative as a first step toward compliance with the Kyoto protocols.

Finally, to forestall the most costly and misguided arms market development program now on the horizon, freeze NATO expansion and place a ceiling of \$2 billion on its costs to U.S. taxpayers through the year 2010.

These measures would help support—not thwart—U.S. exports in markets that enhance economic activity around the world. They would allow us to stop—or at least to slow down—our current drive to throw good money into a stagnant market and to start concentrating more of our energies on one of the great growth opportunities of the next century.

Key Recommendations

- The U.S. should redirect its trade promotion resources away from the arms trade and toward the stronger market opportunity presented by environmental technology.
- Washington should redirect AID's Economic Support Fund away from military support and toward the agency's purported core mission of sustainable development.
- The U.S. should phase out the Foreign Military Financing program and use the savings to fund initiatives to achieve compliance with the Kyoto climate change accords.

Figure 2

U.S. Environmental Exports as a Percentage of World Environmental Exports, 1997

<i>Equipment</i>	<i>% of Exports</i>
Water Equipment & Chemicals	25%
Air Pollution Control	13%
Instruments & Information Systems	49%
Waste Management Equipment	16%
Process & Prevention Technology	5%
<i>Services</i>	
Solid Waste Management	4%
Hazardous Waste Management	2%
Consulting & Engineering	11%
Remediation/Industrial Services	3%
Analytical Services	3%
Wastewater Treatment Works	1%
<i>Resources</i>	
Water Utilities	1%
Resource Recovery	22%
Environmental Energy	53%
Total	9.9%

Source: Environmental Business International, Inc., San Diego, California.

Statistical Background

Government Support for Trade in Military and Environmental Technologies (in millions of dollars)

<u>Military Technologies</u>		<u>Environmental Technologies</u>	
<i>OPERATIONS</i>			
Defense Security Assistance Agency	109.0	Office of Environmental Technologies Exports	2.0
Office of Strategic Industries	2.3	U.S. Foreign & Commercial Service	2.0
Air Shows	26.5	Department of Energy	13.4
		Environmental Protection Agency	11.0
<i>FINANCE</i>			
FMF	3,199.2	Agency for Int'l Development	420.0
ESF (AID)	2,114.1	Export-Import Bank	148.5**
Loan Defaults	1,000.0	Trade and Development Agency	6.2
No Recoupment	500.0	OPIEC (Global Environment Fund)	2.0***
Export-Import Bank	3.9*		
Totals	\$6,955.0		\$605.1

* "Subsidy total for transactions having some potential military implications for FY 1995," calculation as of 9/08/97, as reported by Exlm Bank Vice President for Engineering and Environment.

** "Environmentally beneficial transactions FY 95."

*** According to the president of OPIEC's Global Environment Fund, this figure, representing 5% of the program's appropriation, is a generous estimate of its cost, since its reserve (to cover defaults) is within the cushion of its profits in hand.

Source: *A Tale of Two Markets: Trade in Arms and Environmental Technologies*, Miriam Pemberton and Michael Renner (National Commission for Economic Conversion and Disarmament & Institute for Policy Studies, Washington, DC: 1998).

Sources for More Information

Organizations

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