

一、請在閱讀下文後，針對台灣「環境產品和服務」與「污染控制」市場進行評析。(30分)

The world market for pollution control technologies and other environmental goods and services grew from \$295 billion in 1992 to \$408 billion in 1994 and then to a projected \$426 billion in 1997, or 2 percent of global gross domestic product, according to Environmental Business International (EBI). Spending may reach \$572 billion by 2001. This group of companies thus easily outclasses the global aerospace products and arms industries (each with annual revenues of about \$ 200 billion), and is drawing close to the chemical industry (\$500 billion in revenues).

The bulk of the operations captured in these figures concern pollution control, waste management, and remediation (cleaning up waste sites, for example). Pollution prevention, recycling, and alternative energy sources account for no more than about 10 percent of the global total, and about 12 percent of the U.S. market. (See Table 1, which provides data for the last year for which a breakdown of this sector is available.)

TABLE 1: POLLUTION CONTROL MARKET COMPANIES, 1994

COMPONENT	SPENDING (billion dollars)	SHARE ¹ (percent)
Water equipment	161.1	39
Solid waste management	132.0	32
Resource recovery (including recycling)	34.5	8
Analytical services, instruments, and consulting	34.4	8
Air pollution control equipment		6
Remediation services		4
Environmental energy ²		1
Process and prevention technology		0.5

¹ Column does not add up 100 due to rounding.

² Includes renewable energy and cogeneration.

International trade in pollution control and other environmental goods and services is rising as well, though there are few reliable figures. Based on EBI data, the global environmental export market might be on the order of \$40-45 billion a year, or about 10 percent of total industry revenue.

The environment industry is generating substantial numbers of jobs, both in traditional industries such as iron and steel and in emerging ones such as wind power and energy efficiency technologies. U.S. environment-related spending has created a rapidly growing number of jobs—rising from 700,000 in 1970 to 4.3 million in 1995, and growing to a projected 5.3 million by 2010. In Germany, a recent study found that close to 1 million jobs are supported by environmental spending.

二、請根據下文內容的提示對能源補貼政策進行分析與評估。(30分)

Government subsidies for fossil fuels—coal, oil, and natural gas—fell dramatically during the first half of the 1990s. Since fossil fuel use is by far the largest source of greenhouse gas emissions from human activities, and since it also causes other problems from acid rain to water pollution, this is a welcome development for the global environment.

Fossil fuel subsidies are aimed at two main groups: users and producers. Those for users, which work

by keeping prices artificially low, are found mainly in developing and former Eastern bloc nations, even though western industrial countries account for most fossil fuel use. In total, they slowed from roughly \$200 billion per year in the 1990-91 period to \$84 billion five years later. (See TABLE 2.) (All figures in 1997 dollars.)

Subsidies for energy use are high in developing countries too. Popular objects of subsidy include kerosene, a heat and lighting source for many people, and diesel fuel, which is used in public buses. Here too, subsidies have fallen in the 1990s, reflecting the worldwide trend toward a smaller government role in many industries. In 1996, for example, Venezuela slashed the \$500 million a year it once pumped into its popular gasoline subsidies that made gas so cheap (3.4¢ a liter or 13¢ a gallon) that buyers used it to clean floors.

TABLE 2: SUBSIDIES FOR FOSSIL FUEL CONSUMPTION, DEVELOPING AND FORMER EASTERN BLOC COUNTRIES, 1990-91 AND 1995-96

REGION/ COUNTRY	SUBSIDIES		CHANGE (percent)
	1990-91 (billion 1997 dollars per year)	1995-96	
Former Soviet Union ¹	115.3	32.8	-72
Russia	62.5	14.8	-76
Eastern Europe ¹	15.1	7.2	-52
Developing Asia	36.7	19.6	-46
China	25.7	10.8	-58
India	4.5	2.8	-37
Indonesia	1.9	1.4	-28
Middle East	17.2	13.9	-19
Iran	12.2	10.1	-17
Saudi Arabia	3.6	1.8	-50
Africa	5.4	3.9	-28
Egypt	1.9	1.4	-28
Nigeria	0.9	0.6	-28
South Africa	0.9	0.4	-58
Latin America	12.8	6.8	-47
Mexico	5.0	2.4	-53
Venezuela	3.2	2.5	-22
Total	202.5	84.2	-58

¹ Estimates for Eastern bloc nations are particularly rough because of hyperinflation in the early 1990s and because, in some of them, widespread nonpayment of energy bills creates hard-to-measure de facto subsidies.

Overall, poorer nations have seized the lead in largest source of greenhouse gases. If the global community is ever to cooperate change, western industrial nations will much progress in cutting their own subsidies.

三、請評析台灣水資源開發和利用的政府政策。(20分)

四、請論述「企業環境管理」的內容與策略。(20分)