

# Government Efforts for the Global Environment

By Norio Tanaka

Budgets are one indication of how a nation intends to tackle any issue. Looking at the Japanese government budgets over the years for the environment, we see ¥78.9 billion (equivalent to US\$617 million at the year's average exchange rate of ¥128/\$) in fiscal 1988 (April 1, 1988 through March 31, 1989). For fiscal 1989, the figure was ¥95.1 billion (\$670 million at the prevailing ¥142/\$). This has since shown a sharp increase to ¥452.3 billion (\$3,230 million at ¥140/\$) and, if the various government ministries and agencies involved have their way, is scheduled for another jump to ¥485.7 billion (\$3,469 million at ¥140/\$) in fiscal 1991. (Dollar equivalents given in the text and the tables are converted at the rate of ¥140/\$ unless specified.)

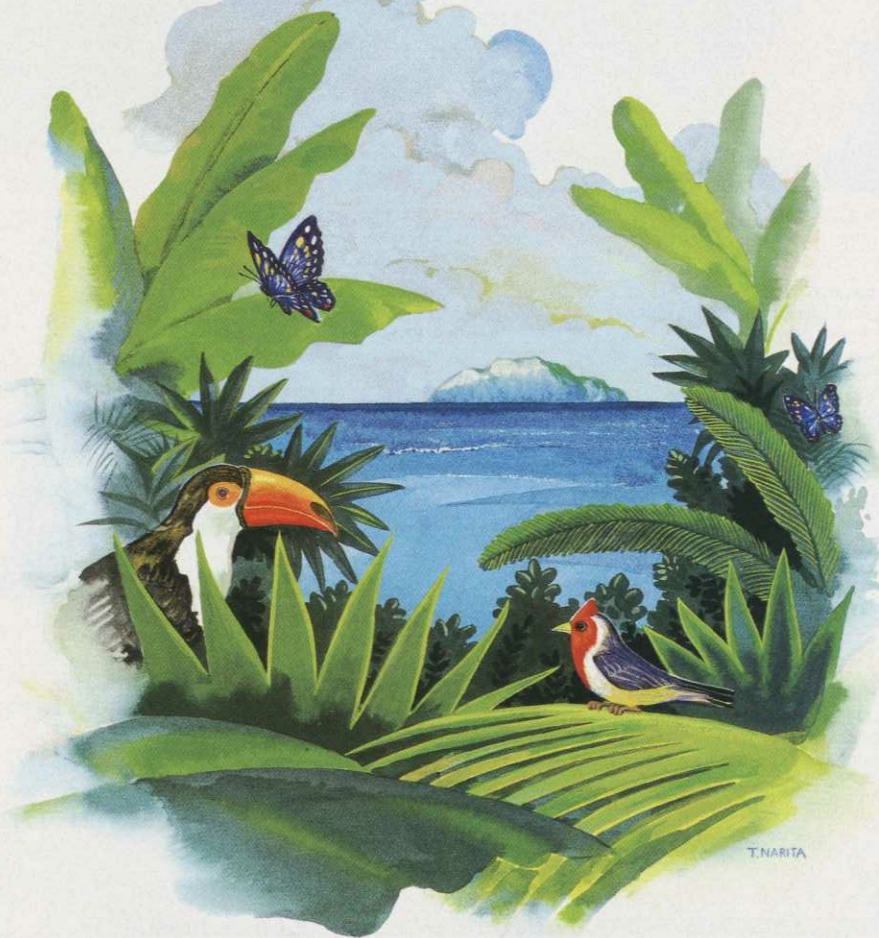
As seen in Table 1, the bulk of the money goes for energy policy, including the development of new energies, energy-conservation technology and other R&D efforts.

The policies may also be categorized by type of policy, as shown in Table 2. Here, technological development and diffusion is the largest area, with measurement, surveys and research running a distant second but still well ahead of anything else. Table 3 gives the breakdown of these fiscal 1990 funds by implementing agency.

## Who Uses How Much and How

### Science and Technology Agency

This agency accounts for fully 62% of the global environmental policy budget. This heavy percentage is because the STA is responsible for research on improving the safety of nuclear power plants and other new technologies. Such research accounts for ¥254.8 billion (\$1,820 million) or 90% of the agency's total environmental budget. This alone is 56% of the total funds budgeted for global environmental policy, and it is a clear statement of the importance of nuclear power





and other nonfossil fuels in holding down emissions of the so-called greenhouse gases.

The next-biggest item in the STA budget is the development of an earth-surveillance satellite, coming in at ¥11.5 billion (\$82 million), and this is supplemented by efforts to provide technological assistance to the development of the earth surveillance platform (¥1.7 billion), to take part in the earth surveillance plan and earth monitoring data network (approximately ¥1.9 billion), to develop Japan's fifth geostationary weather satellite (approximately ¥1.1 billion), to do research on the Asian monsoon phenomenon and other projects.

#### Ministry of International Trade and Industry

The next-biggest player is the Ministry of International Trade and Industry, with about one-quarter of the total. Here too,

efforts to promote the diffusion of nuclear power and natural gas get ¥45.6 billion (\$325.7 million), new energy development and diffusion gets ¥36.1 billion (\$257.9 million), and efforts to improve energy efficiency get ¥23.8 billion (\$170 million). This is a total of ¥105.5 billion (\$753.6 million) and accounts for about 90% of MITI's environmental policy spending. In addition, there is another ¥2.2 billion (\$15.7 million) for research on fixing carbon dioxide and other policies, making it clear that the priority is on preventing global warming.

In the area of preventing atmospheric pollution, ¥4.1 billion (\$29.3 million) has been budgeted for developing technologies to reduce emissions of nitrogen oxides and sulfur oxides and ¥1.4 billion (\$10 million) earmarked to develop alternatives to the CFCs that are banned or due to be phased out under various international protocols. Maritime pollu-

tion gets another ¥1.1 billion (\$7.9 million) and surveys to assist in environmental protection in the developing and poorer countries another ¥400 million (\$2.9 million).

#### Ministry of Education

The main focus of the efforts by the Ministry of Education is on enhancing global environmental research at universities and other institutions, and this accounts for ¥20 billion (\$142.8 million). Next come research on alternative energies at ¥8.9 billion (\$63.6 million), Antarctic observations at ¥2.8 billion (\$20 million), and the World Climate Research Program at ¥200 million (\$1.4 million). In addition, the ministry also funds participation in cooperative research on climatic change in the Arctic, takes part in research under the International Geosphere-Biosphere Program, and is active in other international cooperative programs.

#### Ministry of Transport

The biggest item in this ministry's budget is the operation of the geostationary meteorological satellite (GMS), for which ¥5.4 billion (\$38.6 million) has been allocated. Other major items are ¥500 million (\$3.6 million) for cooperation with the World Meteorological Organization and the International Maritime Organization and ¥100 million (\$700,000) for maritime pollution policies. In addition, the ministry also operates a maritime data center, conducts ongoing measurements of atmospheric and maritime pollution, monitors the ozone layer and ultraviolet penetration rates, maintains a greenhouse information center, and is otherwise active in collecting data so that policies can be knowledgeably formulated.

#### Ministry of Foreign Affairs

The Ministry of Foreign Affairs handles disbursements to the United Nations Environment Program (UNEP), including approximately ¥1 billion (\$7.1 million) to the environmental fund itself, ¥47 million (\$340,000) to the Convention on International Trade in Endangered Species of Wild Fauna and Flora

Table 1 FY 1990 Global Environmental Budget by Category

	Budget allocation (¥ billion)	Dollar equivalent (\$ million)	Percent of total (%)
Global environmental protection	60.0	428.57	13
Satellites and other R&D	21.9	156.43	5
Energy policy	369.3	2,637.86	82
Others	1.1	7.85	—
Total	452.3	3,230.71	100

Source: Environment Agency

Table 2 FY 1990 Global Environmental Budget by Type of Policy

	Budget allocation (¥ billion)	Dollar equivalent (\$ million)	Percent of total (%)
International cooperation	2.4	17.14	1
Measurement, surveys and research	60.2	430.00	13
Technological development and diffusion	384.8	2,748.57	85
Overseas environmental assistance	2.1	15.00	1
Environmental policies within Japan	2.6	18.57	1
Energy conservation education, etc.	0.2	1.43	—
Total	452.3	3,230.71	100

Source: Environment Agency



(the Washington Convention), and ¥40 million (\$290,000) to the Vienna Convention for the Protection of the Ozone Layer and the Convention on Wetlands of International Importance especially as water fowl habitat. In addition, it handles such other international funding as the ¥3.3 billion (\$23.6 million) to the Consultative Group on International Agricultural Research and ¥700 million (\$4.9 million) to the International Tropical Timber Organization.

#### Ministry of Finance

The ministry disburses ¥2.6 billion (\$18.6 million) in technological assistance for environmental purposes under Japan's official development assistance (ODA) program.

#### Ministry of Agriculture, Forestry and Fisheries

In addition to ¥300 million (\$2.1 million) for the tropical forest management information system and ¥100 million



A research team checks on damage from acid rain on plants as part of government efforts to curb environmental damage.

(¥710,000) for basic research on policies to prevent desertification, this ministry is also active in a wide range of ODA programs including surveys on technology to renew tropical forests, surveys on the changing ecological function of tropical forests, surveys on and the development of policies to counter the erosion and depletion of tropical agrarian land, agricultural resources management planning, efforts to reverse the devastation of tropical forests, surveys on preserving and planting mangrove forests, and surveys on the changing African savanna and other arid grassland regions.

In addition, the ministry conducts

assessments on the impact of toxic substances on fisheries, is working on developing a model house for the global environment, surveys the ecological impact of global environmental change on agricultural, forestry and fisheries, and performs other environmental studies.

#### Environment Agency

Among the many projects under this agency's auspices are global environmental research (¥1.2 billion or \$8.6 million), partial funding for the Center for Global Environmental Research (¥300 million or \$2.1 million), instrumentation for the meteorological satellite, surveys of pollution in Japanese waters, migratory bird protection, and acid rain monitoring and surveys. In addition, the agency also handles ¥200 million (\$1.4 million) in ODA money to support environmental protection planning in the developing and poorer countries, to protect wildlife, and to cooperate with other international policies.

#### Ministry of Health and Welfare

This ministry disburses ¥200 million (\$1.4 million) in ODA to cooperate with the World Health Organization (WHO) in such areas as preserving the global environment and studying the impact of chemical substances on human health.

Much of this international effort is conducted as part of Japan's ODA, and it is significant that the fiscal 1991 ODA budget has been increased 8.0%, much of this increased budget doubtless going for environmental policies.

Table 3 Global Environmental Budget by Implementing Agency

	Budget allocation (¥ billion)	Dollar equivalent (\$ million)	Percent of total (%)
Science & Technology Agency	281.0	2,007.10	62
Ministry of International Trade & Industry	117.6	840.00	26
Ministry of Education	34.0	242.80	8
Ministry of Transport	6.7	47.80	1
Ministry of Foreign Affairs	5.1	36.40	—
Ministry of Finance	2.6	18.60	—
Ministry of Agriculture, Forestry & Fisheries	2.3	16.40	—
Environment Agency	2.2	15.70	—
Ministry of Health & Welfare	0.46	3.28	—
Ministry of Construction	0.12	0.86	—
Ministry of Posts & Telecommunications	0.11	0.78	—
Economic Planning Agency	0.11	0.78	—
National Policy Agency, Hokkaido Development Agency, National Land Agency, Ministry of Home Affairs, etc.	0.029	0.21	—
<b>Total</b>	<b>452.3</b>	<b>3,230.71</b>	<b>100</b>

Source: Environment Agency

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