

**Results of the Ninth Annual  
“Questionnaire on Environmental Problems and the Survival of Humankind”**

**REPORT**

**THE ASAHI GLASS FOUNDATION**

**September 2000**

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## Foreword

This report contains the results of the ninth annual “Questionnaire on Environmental Problems and the Survival of Humankind,” a survey conducted by the Asahi Glass Foundation since 1992.

Eight years have passed since the United Nations Conference on Environment and Development, or Earth Summit, was held in Rio de Janeiro, and with each year the severity of global environmental problems and the importance of finding solutions grow ever greater. In November 2000, an extremely important turning point in the global warming problem will be reached as the Sixth Conference of Parties to the United Nations Framework Convention on Climate Change (COP6) assembles for the scheduled meeting at the Hague, Netherlands, to debate the specific terms of the “Kyoto Mechanism” contained in the Kyoto Protocol. Moreover, we believe that environmental awareness has heightened around the world and that progress has been achieved in the development of new energy sources with lower environmental impact, the environmental tax debate and recycling.

As in past years, the questionnaire was designed to gauge the perceptions of respondents, mainly environmental experts from both governmental and private-sector organizations, regarding the progress of environmental conservation efforts and to highlight regional differences in opinion. In addition to the issues addressed in previously surveys—including queries about the Environmental Doomsday Clock, Agenda 21 and lifestyle changes—the main questions on this year’s questionnaire asked about energy-related issues, including the expectations for global warming countermeasures at COP6, environmental taxes, nuclear power and new energy sources, and about environmental education and genetically modified substances.

Once again, the Foundation would like to thank the many environmentally conscious experts around the world that took the time to respond so carefully to the survey. In addition, we would like to express our profound appreciation to Professor Akio Morishima, Chairman, Institute for Global Environmental Strategies, for continuing to provide invaluable assistance at all stages of the project from the initial survey design to the final analysis.

In closing, we appeal to anyone reading this report for advice on how to enhance the survey so that it can be made more comprehensive and relevant in future.

Hikomichi Seya  
Chairman  
Asahi Glass Foundation  
September 2000

# I. Facts about the Ninth Annual "Questionnaire on Environmental Problems and the Survival of Humankind"

**Response period:** Questionnaires were sent out in April 2000 with a return deadline of June 2000.

**Questionnaire respondent pool:** Selected from members of GOs, NGOs, academic and industrial circles in the databases of the United Nations Environment Program, United Nations Commission on Sustainable Development and Asahi Glass Foundation.

**Questionnaires mailed:** 3,431

**Questionnaires returned:** 702

**Response rate:** 20.5%

## Breakdown of respondents by region, sex and occupational affiliation:

| Region                               | Number of responses | Percent of total |
|--------------------------------------|---------------------|------------------|
| Japan                                | 311                 | 44.3             |
| United States & Canada               | 93                  | 13.3             |
| Western Europe                       | 88                  | 12.5             |
| Asia (outside Japan)                 | 81                  | 11.5             |
| Latin America                        | 26                  | 3.7              |
| Africa                               | 53                  | 7.6              |
| Oceania                              | 17                  | 2.4              |
| Eastern Europe & former Soviet Union | 19                  | 2.7              |
| Middle East                          | 11                  | 1.6              |
| No response                          | 3                   | 0.4              |
| (Overseas Total)                     | 391                 | 55.7)            |
| <b>Total</b>                         | <b>702</b>          | <b>100.0</b>     |

| Sex          | Number of responses | Percent of total |
|--------------|---------------------|------------------|
| Male         | 552                 | 78.6             |
| Female       | 126                 | 18.0             |
| No response  | 24                  | 3.4              |
| <b>Total</b> | <b>702</b>          | <b>100.0</b>     |

| Occupational affiliation           | Number of responses | Percent of total |
|------------------------------------|---------------------|------------------|
| Central government                 | 132                 | 18.8             |
| Local government                   | 105                 | 15.0             |
| University or research institution | 113                 | 16.1             |
| Nongovernmental organization       | 140                 | 19.9             |
| Corporation                        | 106                 | 15.1             |
| Other                              | 90                  | 12.8             |
| No response                        | 16                  | 2.3              |
| <b>Total</b>                       | <b>702</b>          | <b>100.0</b>     |

- Notes: 1. This report used the 702 responses as the basis for calculating percentages, which were rounded up from the first or second decimal place.
2. Since the responses that were not attributable to a particular region were written on the overseas version (English) of the questionnaire, they were included in the "overseas total."
3. Please note that where it is marked "Percentages are based on the total number of responses," the total number of responses refers to the total number of responses to that question, not to the total number of respondents to the survey.

## II. Summary of Questionnaire Results

### •Awareness of the Crisis Facing Human Survival

#### Environmental Doomsday Clock

- The average Environmental Doomsday Clock time for all respondents was 8:56, 12 minutes earlier than the previous year. This was the first year the average registered in the “fairly concerned” quadrant after four consecutive years in the “extremely concerned” quadrant, showing a general easing of the sense of crisis.
- The average times for overseas and Japanese respondents were both 8:56.
- Reviewing changes in average times since 1995, it is apparent that the hands on the clock in Japan have advanced a fair distance from 8:08 while they have fallen back from 9:22 overseas. In recent years the Japanese response had been converging with its overseas counterparts, and finally indicated the same time this year.

### I. Main Focus of the Current Year’s Questionnaire

#### 1. Global Warming Countermeasures

##### 1) Expectations for COP6

- Respondents in the developed regions, including Japan, North America and Western Europe, had strong expectations toward the first- and second-ranked “resolution of the rules of the Kyoto Mechanism...” and “resolution of the rules for observance of the Kyoto Protocol...” at COP6. In contrast, the developing regions, including Asia, Central and South America, and Africa, ranked “...support for developing countries through technical transfers and skill development...” first, revealing great expectations for technical transfers, and “resolution of the rules of the Kyoto Mechanism...” second.

##### 2) Conditions for Promoting Ratification

- The overall overseas response and the Japanese response both indicated that “progress in domestic measures aimed at achieving reduction targets, including legal frameworks” was the most important condition, but the weighting of the Japanese response toward this condition was higher than for the overseas response as a whole.

#### 2. Environmental Taxes

##### 1) Opinions on Environmental Taxes

- All regions gave an overwhelming approval of environmental taxes. Overseas, approval reached 88%, which topped out at 85% in Japan.

##### 2) Targets of Environmental Taxes

- Fossil fuels...” was the most commonly selected target of additive taxes for overseas and Japanese respondents, followed by “industrial and noxious waste.”
- Natural energy sources, such as solar power...” was the rebate tax most commonly selected overseas and in Japan.

##### 3) Conditions for Introducing Environmental Taxes

- More than half of overseas and Japanese respondents selected “...environmental taxes are clearly designated for specific uses...” as the most important condition for the introduction of environmental taxes.

#### 3. Nuclear Power and New Energy Sources

- “We should promote the development of new energy sources” instead of relying on nuclear energy, garnered the most responses at 60% overseas and 49% in Japan.
- In contrast to the 32% of developed region respondents in favor of nuclear energy (the combined “...current technology is reliable” and “okay if current technology is fundamentally revised” responses), only 13% of developing country respondents favored it. Among the developed nations, the approval rating in Japan was relatively high at 38%.

## **4. Environmental Education**

### 1) Environmental Education Practices

- Among the overseas respondents, 72% indicated that environmental education was included in the school curriculum. In Japan, this response was 46%, but as many as 42% responded that they “don’t know.”

### 2) Age at which Environmental Education Starts

- The “4-6” and “7-9” age ranges were each selected by approximately one-third of overseas respondents as the ranges at which environmental education starts. In Japan, a start from the “7-9” range was selected by 89% of respondents, which indicates a later start than many overseas countries.

### 3) Conditions Lacking for the Promotion of Environmental Education

- Overseas respondents cited “coordination of environmental and educational policies” as the condition most often missing despite its importance to the promotion of environmental education in schools. In Japan, it was the “development of curricula and teaching materials.”

### 4) Institutions for Promoting Environmental Education

- “Schools” was the response selected by the most overseas respondents, followed by “national and local governments,” “mass media” and “citizens’ groups or environmental NGOs,” as the institution most important to the promotion of environmental education and instruction activities. In Japan, “schools” and “national and local governments” were selected by the most respondents, followed by “mass media” and “individual households,” mirroring the overseas response for the first three items above.

## **5. Genetically Modified Products**

- Overseas and Japanese respondents exhibited similar responses, selecting “the effects of genetically modified substances are extremely inconclusive so we should treat them with extra caution” and “although these products are generally safe...they should be labeled” as first and second, respectively.

## **II. Repeat Topics**

### **1. Causes of Environmental Degeneration**

- Among overseas and Japanese respondents alike, “economic development that disregards the environment” was the item selected by the most respondents as having the greatest impact, followed by a small margin by “explosive population growth.”

### **2. Progress toward Agenda 21**

- The items attracting the most responses from overseas respondents in terms of the “progress” achieved in their own countries were “promotion of environmental education,” “activities by local governments and citizens’ groups” and “environmental measures by industry.” In Japan, the items were the same, but the order was different with “environmental measures by industry” coming first, “activities by local governments and citizens’ groups” second and “promotion of environmental education” third.
- The item attracting the fewest responses from overseas and Japanese respondents alike was “lifestyle alteration,” followed by “population and poverty problems.” The third place item among overseas respondents was “greenhouse gas prevention measures” and among Japanese respondents “conservation of forest resources.”

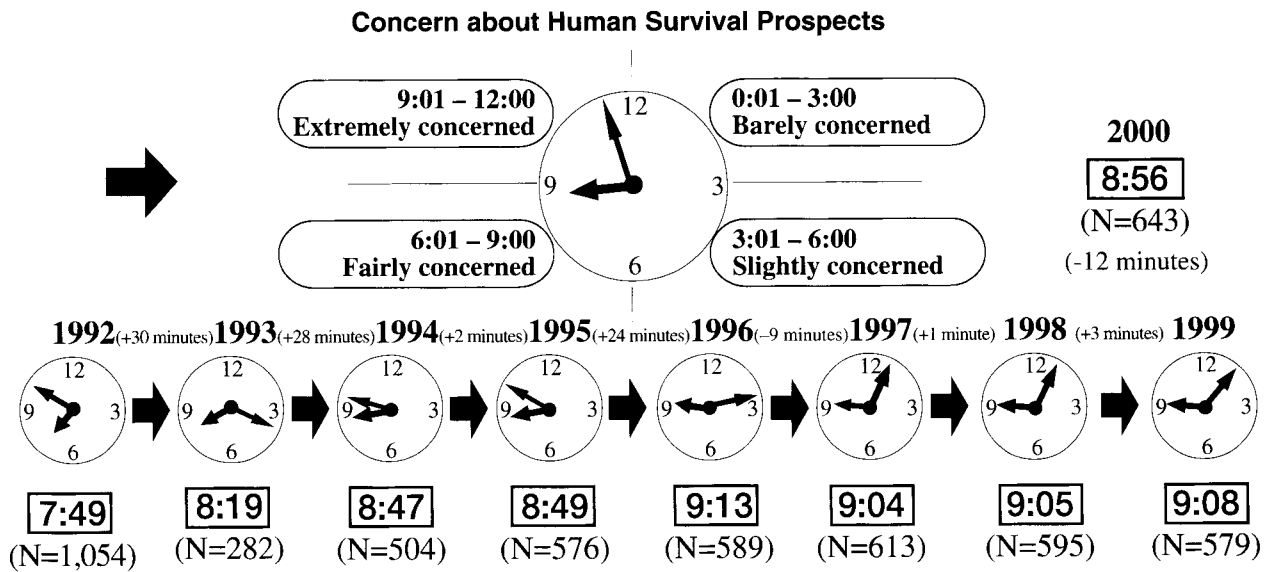
### **3. Changes in Lifestyle**

- The lifestyle item thought by the most overseas respondents to be most difficult to change was “reducing automobile usage...,” while Japanese respondents thought it to be “switching to food that does not impose a heavy environmental burden...”

### III. Questionnaire Results

#### • AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL — ENVIRONMENTAL DOOMSDAY CLOCK

**Question:** To what extent do you feel that the current deterioration of the global environment has created a crisis that will affect the continuance of the human race? Mark a time corresponding to the extent of your concern in the boxes below.



|                                      | Number of respondents | Changes in time from year to year |        |      | Changes in average time by region |             |
|--------------------------------------|-----------------------|-----------------------------------|--------|------|-----------------------------------|-------------|
|                                      |                       | 1995 →                            | 1999 → | 2000 | 1995 → 2000                       | 1999 → 2000 |
| Total                                | 643                   | 8:49 →                            | 9:08 → | 8:56 | +7                                | -12         |
| Japan                                | 309                   | 8:08 →                            | 9:07 → | 8:56 | +48                               | -11         |
| United States & Canada               | 85                    | 8:52 →                            | 9:03 → | 8:49 | -3                                | -14         |
| Western Europe                       | 80                    | 9:02 →                            | 8:46 → | 8:46 | -16                               | 0           |
| Asia                                 | 59                    | 9:41 →                            | 9:47 → | 9:16 | -25                               | -31         |
| Latin America                        | 26                    | 9:23 →                            | 9:14 → | 8:52 | -31                               | -22         |
| Africa                               | 40                    | 9:33 →                            | 9:13 → | 9:17 | -16                               | +4          |
| Oceania                              | 14                    | 9:44 →                            | 8:52 → | 8:31 | -73                               | -21         |
| Eastern Europe & former Soviet Union | 18                    | 9:29 →                            | 9:21 → | 8:21 | -68                               | -60         |
| Middle East                          | 10                    | 9:09 →                            | 9:32 → | 9:38 | +29                               | +6          |
| Overseas Total                       | 334                   | 9:22 →                            | 9:10 → | 8:56 | -26                               | -14         |
| Male                                 | 512                   | 8:46 →                            | 9:01 → | 8:52 | +6                                | -9          |
| Female                               | 114                   | 8:57 →                            | 9:35 → | 9:10 | +13                               | -25         |
| Industrialized Regions               | 474                   | 8:23 →                            | 8:59 → | 8:53 | +30                               | -6          |
| Developing Regions                   | 125                   | 9:33 →                            | 9:25 → | 9:11 | -22                               | -14         |

- The average Environmental Domsday Clock time for all respondents was 8:56, 12 minutes earlier than the previous year. This was the first year the average registered in the “fairly concerned” quadrant after four consecutive years in the “extremely concerned” quadrant, showing a general easing of the sense of crisis.
- Reviewing changes in average times since 1995, it is apparent that the hands on the clock in Japan have advanced a fair distance from 8:08 while they have fallen back from 9:22 overseas. In recent years the Japanese response had been converging with its overseas counterparts, and finally indicated the same time of 8:56 this year.
- The sense of crisis among developing regions is stronger than in the developed regions.
- As in previous years, females tended to indicate a stronger sense of crisis than males.

**I. MAIN FOCUS OF THE CURRENT YEAR'S QUESTIONNAIRE**  
**1. GLOBAL WARMING COUNTERMEASURES**

**Question (1):** A preparatory agenda for producing results at COP6 was decided at COP5 held in Bonn in November 1999. Please select one option about which you have the strongest expectations for COP6, which will meet at the Hague in November 2000.

|   | Japan (311) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) | Industrialized Regions (492) | Developing Regions (160) |
|---|-------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|------------------------------|--------------------------|
| Resolution of the rules for the Kyoto Mechanism   | 42          | 28                          | 40                  | 26        | 31                 | 17          | 35           | 37  | 9                | 29                   | 39                           | 24                       |
| Resolution of the rules for heat sinks contained in the Kyoto Protocol                        | 4           | 3                           | 3                   | 10        | 0                  | 0           | 6            | 11  | 9                | 5                    | 4                            | 5                        |
| Resolution of the rules for observance of the Kyoto Protocol (including enforcement measures) | 30          | 18                          | 24                  | 11        | 8                  | 25          | 18           | 16  | 18               | 18                   | 26                           | 15                       |
| Resolution of the support (technology transfers and skill development)                        | 12          | 18                          | 14                  | 31        | 42                 | 43          | 41           | 21  | 27               | 26                   | 13                           | 37                       |
| Resolution of developing country participation in reduction countermeasures                   | 9           | 10                          | 7                   | 10        | 4                  | 6           | 18           | 16  | 9                | 9                    | 9                            | 8                        |
| Other   | 2           | 3                           | 1                   | 7         | 0                  | 4           | 0            | 0   | 9                | 3                    | 2                            | 5                        |
| Don't know  | 3           | 19                          | 11                  | 16        | 15                 | 9           | 6            | 5   | 9                | 14                   | 8                            | 14                       |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points.  
 A single circle is used when more than one answer is closely tied for the highest number of points.

- Respondents in the developed regions had strong expectations toward the first- and second-ranked “resolution of the rules of the Kyoto Mechanism...” and “resolution of the rules for observance of the Kyoto Protocol...” at COP6. They believe that resolving the rules will encourage progress in activities aimed at the goal achievement.
- In contrast, 37% of respondents in the developing regions ranked “...support for developing countries through technical transfers and skill development...” first. This topped the 24% that selected “resolution of the rules of the Kyoto Mechanism...” revealing great expectations for technical transfers.
- The respondents in both developed and developing regions did not have high expectations for “resolution of developing country participation in the reduction countermeasures” at COP6.



**Question (2):** Political momentum to implement the Kyoto Protocol by 2002, the 10th year after the Earth Summit, was created at COP5. Although none of the developed countries have ratified it yet, please select two conditions that you think are the most important for promoting ratification in your country.

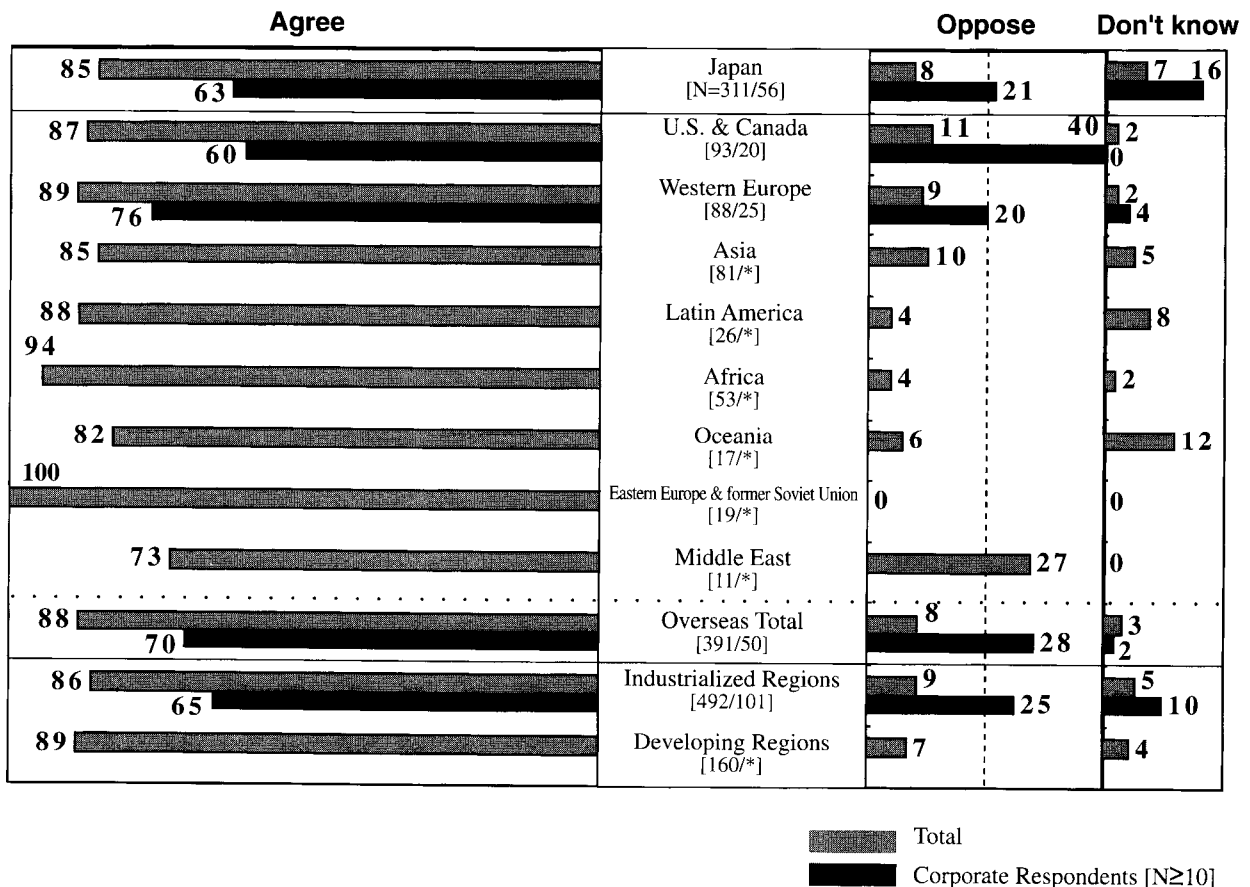
|  | Japan (311) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) |
|--|-------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|
| Specifying the working rules for "Flexible Measures"   | 28          | 20                          | 35                  | 25        | 27                 | 9           | 18           | 42  | 0                | 24                   |
| Resolution of the time frame for developing country participation                              | 12          | 24                          | 11                  | 24        | 19                 | 26          | 29           | 16  | 27               | 21                   |
| Resolution of the sanctions for non-compliance with reduction targets                          | 19          | 11                          | 30                  | 20        | 19                 | 21          | 6            | 42  | 18               | 20                   |
| Progress in domestic measures aimed at achieving reduction targets, including legal frameworks | 52          | 30                          | 28                  | 33        | 23                 | 28          | 41           | 21  | 9                | 29                   |
| Persuasion of opposed industrial organizations to accept ratification                          | 12          | 28                          | 16                  | 17        | 23                 | 21          | 24           | 5   | 9                | 20                   |
| Technological progress toward reduction target achievement                                     | 25          | 13                          | 19                  | 15        | 19                 | 15          | 29           | 26  | 9                | 17                   |
| Reinforced pressure from opinion leaders or environmental NGOs                                 | 12          | 23                          | 19                  | 16        | 15                 | 23          | 18           | 16  | 46               | 20                   |
| Public opinion arousal through the mass media  | 24          | 29                          | 22                  | 28        | 23                 | 23          | 12           | 11  | 36               | 25                   |
| Other  | 3           | 5                           | 2                   | 5         | 0                  | 2           | 12           | 5   | 18               | 4                    |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points. A single circle is used when more than one answer is closely tied for the highest number of points. Please note that the totals for the various regions should add up to 200% since respondents were asked to select two items. However, some respondents marked no items or only one item, causing the aggregate total to be less than 200%.

- Both overseas and Japanese respondents thought that “progress in domestic measures aimed at achieving reduction targets, including legal frameworks” was the most important condition for promoting ratification of the Kyoto Protocol, but the weighting of the Japanese response toward this condition was higher than for the overseas response as a whole.
- The second and third most commonly selected responses by overseas respondents were “public opinion arousal through the mass media” and “specifying the working rules for ‘Flexible Measures’” respectively. In Japan, the responses were “specifying the working rules for ‘Flexible Measures’” and “technological progress toward reduction target achievement.”
- Numerous respondents in North America selected “persuasion of opposed industrial organizations to accept ratification,” a result that stood out from the Japanese and Western European responses.

## 2. ENVIRONMENTAL TAXES

**Question (1):** Environmental taxes that either increase or reduce taxes according to the burden on the environment are currently employed in eight countries in Europe, which raises awareness about environmental conservation from the tax system perspective. Do you agree with, or oppose, the introduction of environmental taxes?



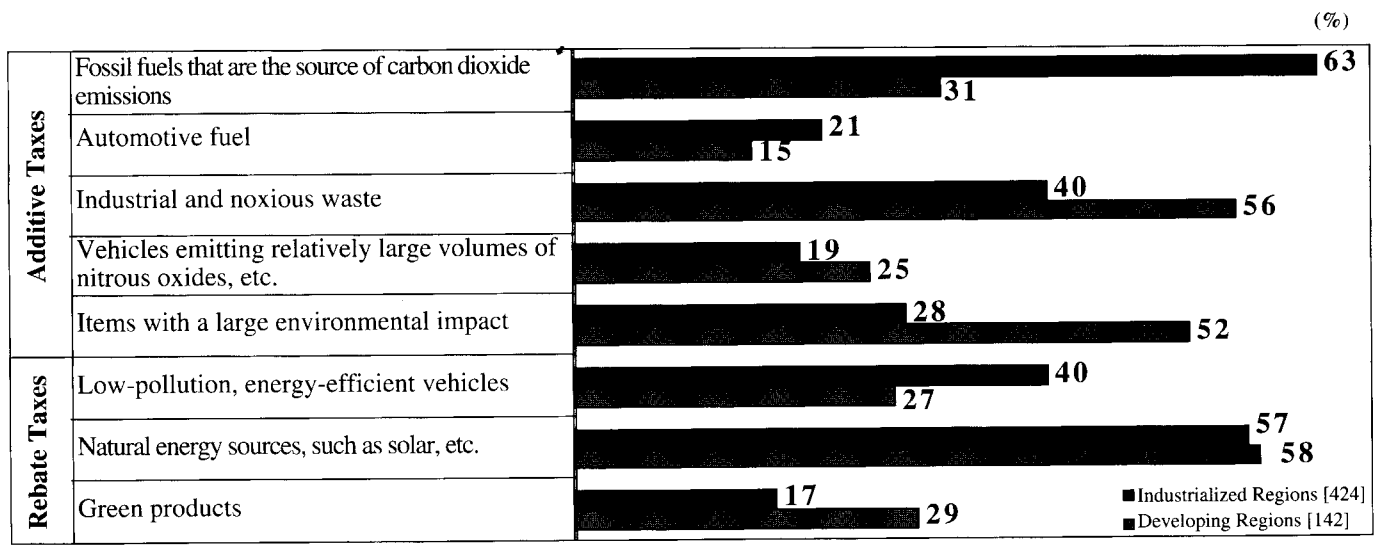
- All regions gave an overwhelming approval of environmental taxes. Overseas, approval reached 88%, which topped out at 85% in Japan. This response is higher than for the question on last year's questionnaire regarding the introduction of carbon tax (62% approval overseas, 79% in Japan).
- At 27%, opposition to environmental taxes was greater in the Middle East than other regions, showing a similar trend in responses to the prior year's carbon tax question.
- Among corporate respondents, 70% overseas were in favor and 63% in Japan, constituting a majority, but the ratio of opposed respondents was higher than for other occupations. North American opposition was particularly prominent at 40% of corporate respondents.

**Question.** (2) If you agreed with the introduction of environmental taxes, with which of the following taxes are you in agreement? Please select up to three options. If you agree with one item only, select only one item.

Japan (265)  
 United States & Canada (81)  
 Western Europe (78)  
 Asia (69)  
 Latin America (23)  
 Africa (50)  
 Oceania (14)  
 Eastern Europe & former Soviet Union (19)  
 Middle East (8)  
 Overseas Total (345)

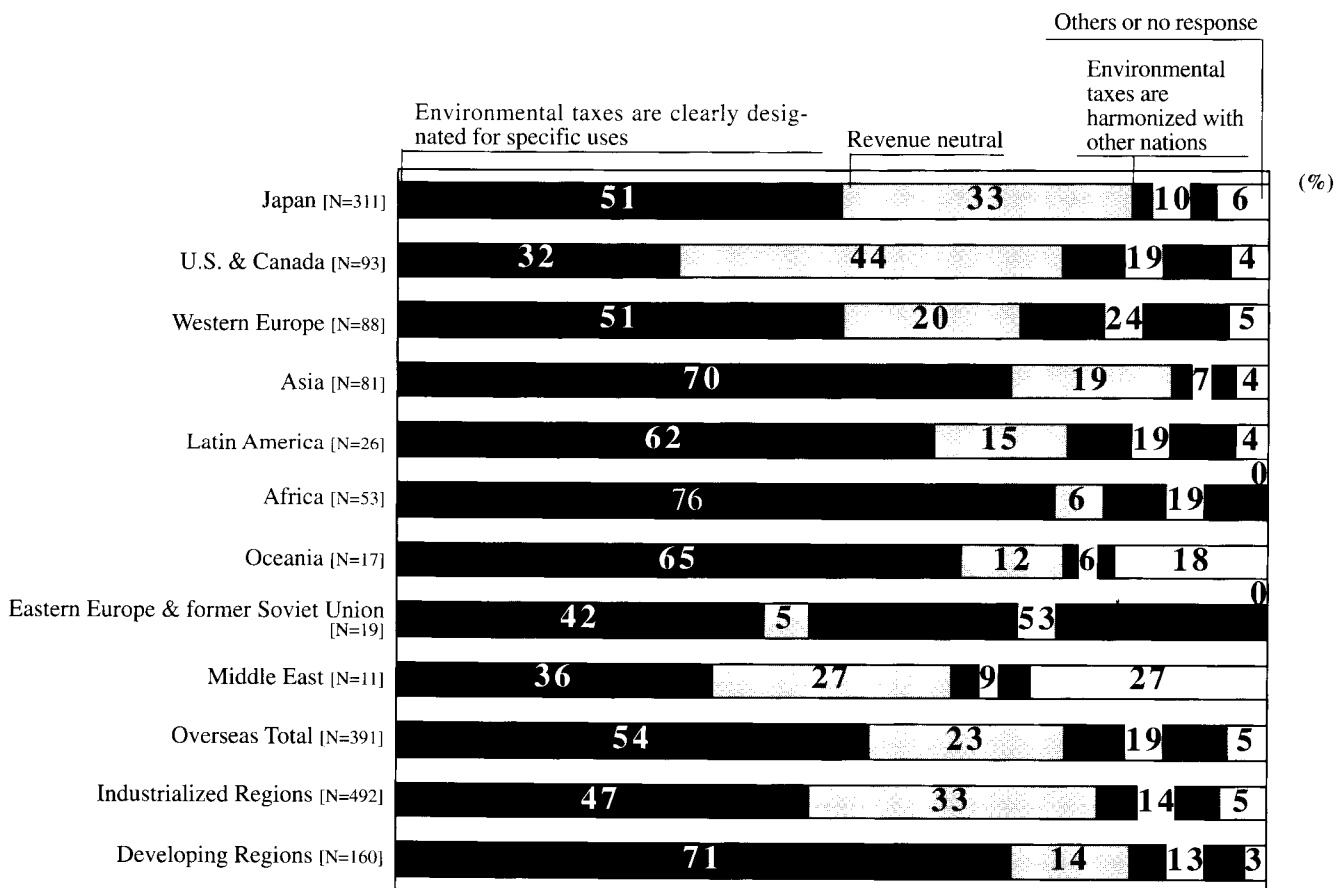
|                       | Japan (265)  | United States & Canada (81) | Western Europe (78) | Asia (69) | Latin America (23) | Africa (50) | Oceania (14) | Eastern Europe & former Soviet Union (19) | Middle East (8) | Overseas Total (345) |    |
|-----------------------|--|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|-----------------|----------------------|----|
| <b>Additive Taxes</b> | Fossil fuels that are the source of carbon dioxide emissions       | 60                          | 62                  | 74        | 30                 | 39          | 28           | 43  | 68              | 38                   | 51 |
|                       | Automotive fuel  | 19                          | 26                  | 24        | 19                 | 22          | 6            | 0   | 21              | 25                   | 20 |
|                       | Industrial and noxious waste                                       | 46                          | 35                  | 27        | 54                 | 57          | 60           | 36  | 37              | 50                   | 43 |
|                       | Vehicles emitting relatively large volumes of nitrous oxides, etc. | 19                          | 24                  | 17        | 28                 | 17          | 24           | 36  | 32              | 25                   | 23 |
|                       | Items with a large environmental impact                            | 29                          | 24                  | 27        | 54                 | 39          | 56           | 57  | 53              | 63                   | 40 |
| <b>Rebate Taxes</b>   | Low-pollution, energy-efficient vehicles                           | 39                          | 52                  | 31        | 35                 | 26          | 16           | 36  | 26              | 25                   | 34 |
|                       | Natural energy sources, such as solar, etc.                        | 50                          | 61                  | 74        | 57                 | 70          | 56           | 57  | 16              | 38                   | 60 |
|                       | Green products   | 13                          | 27                  | 23        | 35                 | 30          | 20           | 21  | 42              | 25                   | 28 |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points.  
 A single circle is used when more than one answer is closely tied for the highest number of points.  
 Please note that the totals for the various regions should add up to 300% since respondents were asked to select three items.  
 However, some respondents marked no items or only one item, causing the aggregate total to be less than 300%.



- “Fossil fuels...” was the most commonly selected target of additive taxes for overseas and Japanese respondents, followed by “industrial and noxious waste.”
- The support for additive taxes on “fossil fuels” was notable among the respondents in developed regions. Taxes on “industrial and noxious waste” came next. In developing regions, additive taxes on “industrial and noxious waste” ranked first, followed by “items with a large environmental impact...” Compared with the developed countries, support for fossil fuel taxes was weak, showing a passive or negative stance toward them.
- Natural energy sources, such as solar power...” was the rebate tax most commonly selected overseas and in Japan.

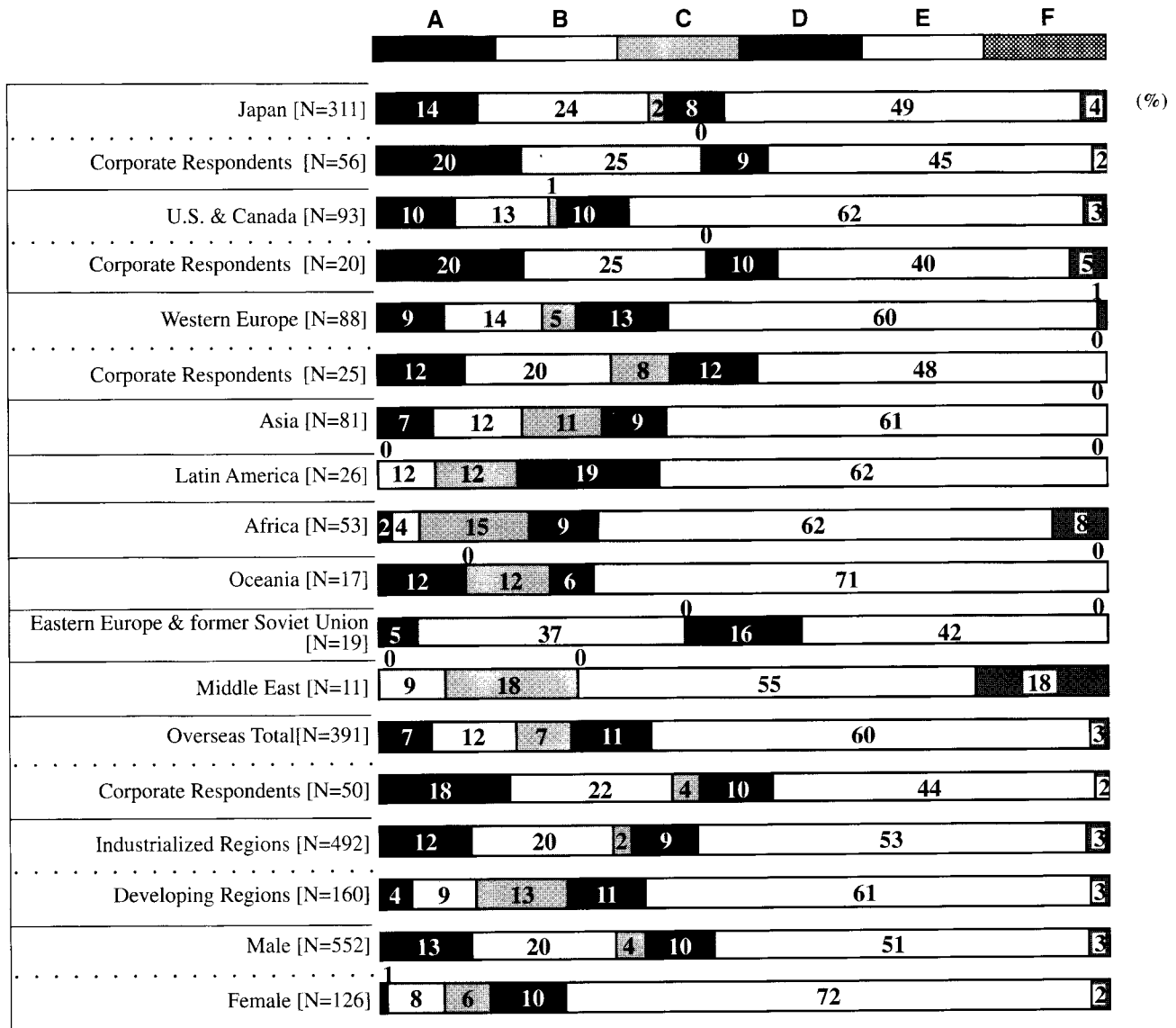
**Question (3):** The understanding of consumers and businesses must be obtained to successfully introduce environmental taxes. Which of the following conditions do you believe is the most important for introducing environmental taxes? Please select one option.



- More than half of overseas and Japanese respondents selected "...environmental taxes are clearly designated for specific uses..." as the most important condition for the introduction of environmental taxes.
- Many North American respondents thought that "...revenue neutral..." taxes were the most important condition, while many Eastern European and former Soviet Union countries selected the "environmental taxes are harmonized with other nations..." response.
- Compared with developed regions, the weighting toward the "...environmental taxes are clearly designated for specific uses..." response was markedly higher in the developing regions.

### 3. NUCLEAR POWER AND NEW ENERGY SOURCES

**Question:** Some policy initiatives promote the use of nuclear power to sever reliance on fossil fuels and prevent global warming. Please select one option below that most closely matches your stance toward this policy.



Note: Responses from corporate respondents numbering greater than 10 was included.

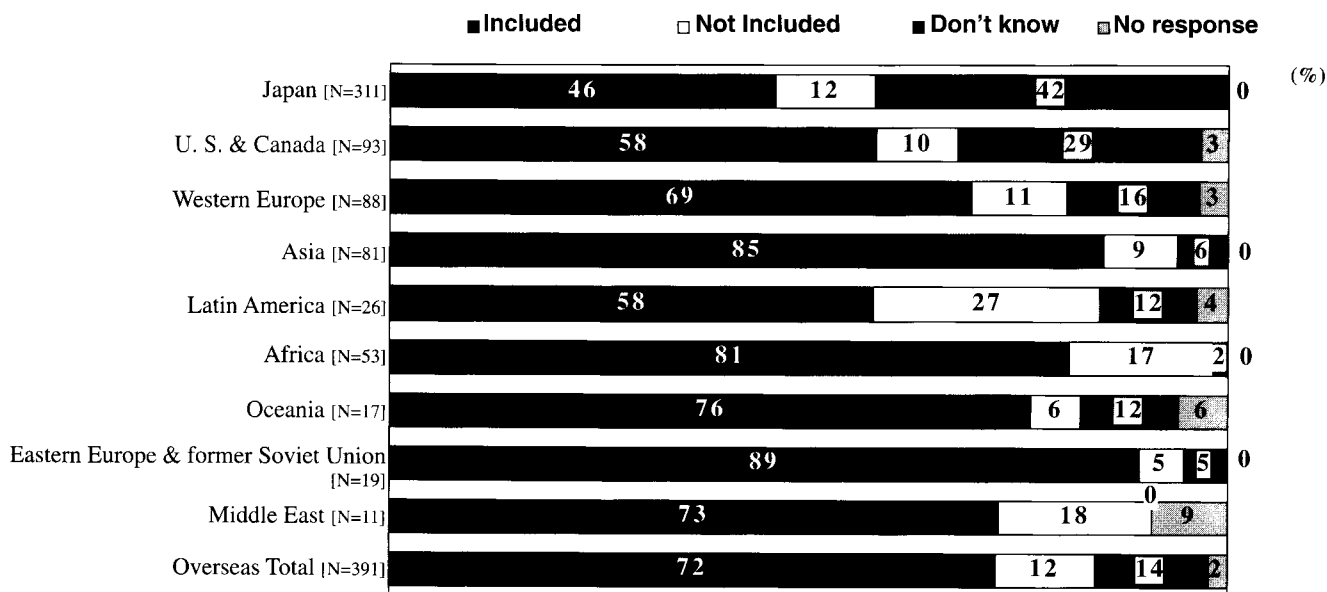
A=current technology is reliable  
 B=okay if current technology is fundamentally revised  
 C=hydroelectric power generation  
 D=should improve the energy efficiency of thermal power generation  
 E=should promote the development of new energy sources  
 F=don't know

- “We should promote the development of new energy sources” instead of relying on nuclear energy, garnered the most responses at 60% overseas and 49% in Japan.
- The response to the 1998 questionnaire question on nuclear power indicated that 34% of overseas respondents were opposed while 30% of Japanese respondents shared this view. On this year’s questionnaire, however, 78% of overseas respondents and 59% of Japanese respondents indicated that we should not rely on nuclear power (the total of the following options “...should promote... hydroelectric power generation,” “...should improve the energy efficiency of thermal power generation...” and “...should promote the development of new energy sources”). This indicates that negative opinions about nuclear power have increased over the two years.
- In contrast to the 32% of developed region respondents in favor of nuclear energy (the combined “...current technology is reliable” and “okay if current technology is fundamentally revised” responses), only 13% of developing country respondents favored it. Among the developed nations, the approval rating from Japan was relatively high at 38%.
- Among corporate respondents, 40% approved of nuclear power overseas and 45% in Japan, a higher approval rate than for all occupations (19% and 38%).
- A mere 9% of female respondents approved of nuclear power, which was extremely low in comparison to the 33% of males in favor.

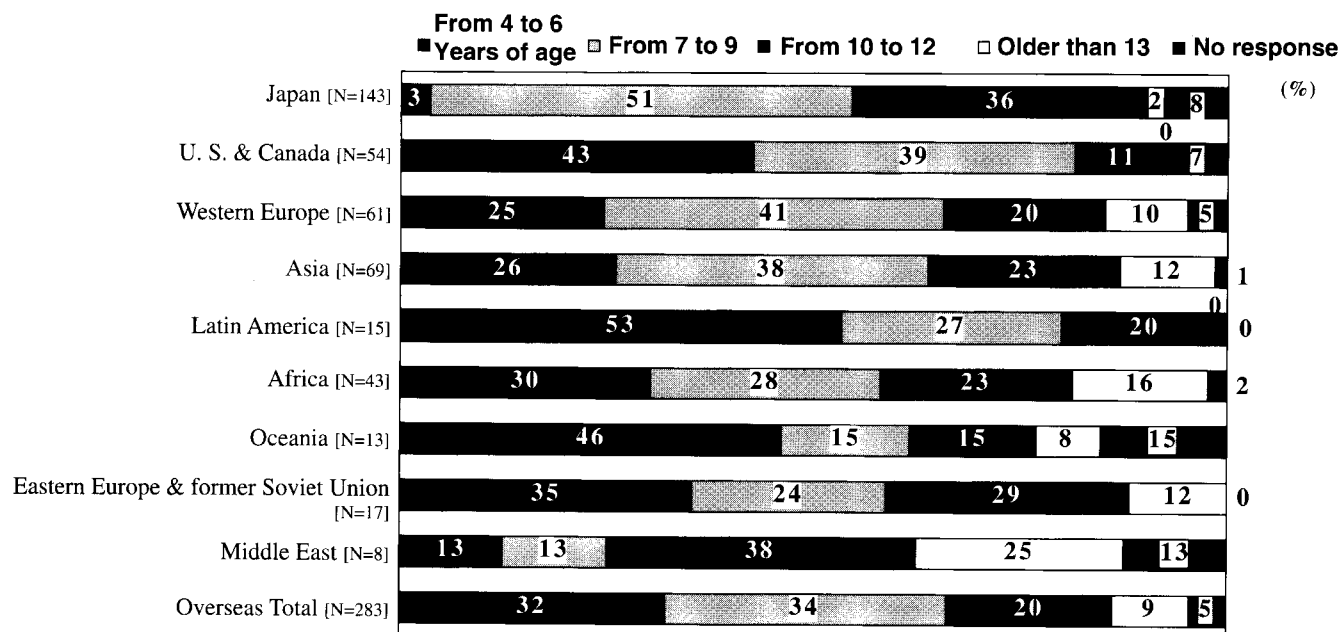
## 4. ENVIRONMENTAL EDUCATION

**Question (1):** The importance of environmental education is often pointed out. Is environmental education included in the school curriculum of your country? If so, from what age is it started?

### Inclusion in School Curriculum



### Starting Age Range for Environmental Education



- Among the overseas respondents, 72% indicated that environmental education was included in the school curriculum. In Japan, this response was 46%, but as many as 42% responded that they “don’t know.”
- An extremely high percentage of respondents from Asia, Africa, Eastern Europe and the former Soviet Union, more than 80%, indicated the inclusion of environmental education in the curricula.
- The “4-6” and “7-9” age ranges were each selected by approximately one-third of overseas respondents as the ranges at which environmental education starts. In Japan, a start from the “7-9” range was selected by 89% of respondents, which indicates a later start than many overseas countries.

**Question (2):** Please select two of the items below that you believe are missing from your country despite their importance to the promotion of environmental education.

|  | Japan (31) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) | (%) |
|--|------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|-----|
| The enthusiasm and positive attitude of teachers   | 18         | 1                           | 8                   | 20        | 4                  | 4           | 6            | 0   | 9                | 7                    |     |
| Better instructor training or retraining of existing teachers  | 34         | 28                          | 32                  | 28        | 35                 | 30          | 24           | 26  | 55               | 30                   |     |
| Development of curricula and teaching materials effective in promoting awareness   | 45         | 20                          | 26                  | 30        | 50                 | 28          | 29           | 21  | 18               | 27                   |     |
| Support of local agencies, civilian organizations and corporations for field trips and tours providing first-hand experience to students | 29         | 15                          | 16                  | 24        | 19                 | 26          | 18           | 11  | 18               | 19                   |     |
| School funding or expanded educational programs and training equipment   | 8          | 45                          | 30                  | 20        | 19                 | 23          | 29           | 32  | 27               | 29                   |     |
| Promotion of environmental education in collaboration with environmental specialists and/or households                                   | 20         | 17                          | 22                  | 15        | 15                 | 23          | 29           | 5   | 27               | 18                   |     |
| Information disseminated by public and private sectors   | 6          | 15                          | 8                   | 15        | 27                 | 19          | 6            | 37  | 9                | 15                   |     |
| Coordination of environmental and educational policies   | 39         | 34                          | 36                  | 47        | 31                 | 32          | 47           | 58  | 27               | 38                   |     |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points.  
 A single circle is used when more than one answer is closely tied for the highest number of points.  
 Please note that the totals for the various regions should add up to 200% since respondents were asked to select two items.  
 However, some respondents marked no items or only one item, causing the aggregate total to be less than 200%.

- Overseas respondents cited “coordination of environmental and educational policies” as the condition most often missing despite its importance to the promotion of environmental education in schools. This response was followed in popularity by “better instructor training or retraining of existing teachers” and “school funding or expanded educational programs and equipment.”
- In Japan, it was the “development of curricula and teaching materials effective in promoting awareness” that received the most responses, followed by “coordination of environmental and educational policies” and “school funding or expanded educational programs and equipment,” which were the same as the number one and two responses for the overseas respondents.
- The North American selection of the “school funding or expanded educational programs and equipment” response was unexpectedly high.

**Question (3):** To deepen the general understanding of environmental problems and heighten awareness in society, which institution do you think should play the key role in promoting environmental education and instruction activities? Write the four most important options in order of importance.

**Weighted Regional Results**

**\*Weighting = ((% of #1 x 4)+( % of #2 x 3)+( % of #3 x 2)+( % of #4 x 1)) ÷ 10**

|   | Japan (311) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) | (%) |
|---|-------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|-----|
| Schools                                   | 23          | 24                          | 29                  | 27        | 32                 | 27          | 28           | 32  | 27               | 27                   |     |
| National and local governments            | 23          | 18                          | 18                  | 21        | 24                 | 22          | 26           | 22  | 19               | 20                   |     |
| Corporations                              | 8           | 8                           | 5                   | 4         | 3                  | 0           | 1            | 1   | 0                | 4                    |     |
| Citizens' groups or environmental NGOs    | 10          | 9                           | 9                   | 12        | 12                 | 11          | 12           | 6   | 11               | 10                   |     |
| International environmental NGOs          | 1           | 5                           | 2                   | 3         | 2                  | 6           | 5            | 5   | 9                | 4                    |     |
| Environment-related research institutions | 2           | 7                           | 8                   | 6         | 9                  | 6           | 8            | 3   | 4                | 7                    |     |
| Mass media                                | 17          | 20                          | 22                  | 18        | 17                 | 20          | 13           | 27  | 13               | 20                   |     |
| Individual households                     | 14          | 7                           | 5                   | 6         | 2                  | 3           | 5            | 4   | 6                | 5                    |     |
| Other                                     | 0           | 1                           | 0                   | 1         | 0                  | 0           | 2            | 0   | 3                | 1                    |     |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points.  
A single circle is used when more than one answer is closely tied for the highest number of points.

- For the institution most important to the promotion of environmental education and instruction activities “schools” was the response selected by the most overseas respondents, followed by “national and local governments,” “mass media” and “citizens’ groups or environmental NGOs.”
- In Japan, “schools” and “national and local governments” were selected by the most respondents, followed by “mass media” and “individual households.”
- In contrast to the high expectations set on “national and local governments” by respondents from Japan, respondents from other parts of Asia, Central and South America, Africa and Oceania, the North American, Western European, and Eastern Europe & the former Soviet Union placed higher emphasis on the “mass media.”
- It is noteworthy that the “individual households” option received a relatively strong response in Japan, whereas it didn’t from overseas respondents.



## 5. GENETICALLY MODIFIED PRODUCTS

**Question:** Genetically altered products have been developed and introduced in recent years. These products have attracted much debate around the world. Please select one option below that most closely matches your stance toward these products.

|  | Japan (31) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) | Male (552) | Female (126) |
|--|------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|------------|--------------|
| I believe that these products are safe so it is okay to eat them as I would ordinary products                        | 2          | 11                          | 3                   | 6         | 0                  | 0           | 6            | 0   | 0                | 5                    | 5          | 1            |
| Although generally safe, they should be labeled so that consumers can decide for themselves                          | 28         | 27                          | 30                  | 40        | 15                 | 36          | 29           | 32  | 27               | 31                   | 31         | 25           |
| The effects of genetically modified substances are extremely inconclusive so we should treat them with extra caution | 44         | 42                          | 48                  | 35        | 65                 | 51          | 41           | 37  | 18               | 44                   | 42         | 50           |
| We should stop the sale and development of these products since I don't think they are safe at this stage            | 16         | 10                          | 15                  | 17        | 15                 | 9           | 24           | 32  | 36               | 15                   | 15         | 18           |
| Other  | 6          | 10                          | 3                   | 0         | 4                  | 4           | 0            | 0   | 9                | 4                    | 4          | 5            |
| Don't know   | 4          | 1                           | 1                   | 3         | 0                  | 0           | 0            | 0   | 9                | 1                    | 2          | 2            |

Notes: Circled figures represent the answer with the highest score.

- Overseas and Japanese respondents exhibited similar responses, selecting “the effects of genetically modified substances are extremely inconclusive so we should treat them with extra caution” and “although these products are generally safe...they should be labeled” as first and second, respectively.
- Among the extremely low numbers of respondents from other regions selecting the “I believe that these products are safe...” response, 11% of North Americans did.

## II. REPEAT TOPICS

### 1. CAUSES OF ENVIRONMENTAL DEGENERATION

**Question:** Please select two options from the following list you think will cause the most harm to the environment and impact significantly upon human survival.

|                         |  | Japan (31) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) |
|-------------------------|--|------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|
| <b>Human Activities</b> | Explosive population growth                          | 43         | 59                          | 49                  | 57        | 42                 | 34          | 77           | 37  | 55               | 51                   |
|                         | Economic development that disregards the environment | 46         | 47                          | 51                  | 54        | 54                 | 66          | 71           | 68  | 55               | 55                   |
|                         | Nuclear threats                                      | 11         | 3                           | 5                   | 11        | 4                  | 4           | 12           | 0   | 18               | 6                    |
|                         | Epidemics  | 0          | 7                           | 1                   | 3         | 0                  | 9           | 12           | 11  | 0                | 5                    |
|                         | Water and food shortages                             | 18         | 23                          | 18                  | 21        | 27                 | 26          | 6            | 5   | 9                | 20                   |
| <b>Atmospheric</b>      | Global warming                                       | 41         | 20                          | 36                  | 28        | 12                 | 30          | 18           | 32  | 18               | 27                   |
|                         | Abnormal climate                                     | 5          | 10                          | 5                   | 12        | 12                 | 6           | 12           | 11  | 0                | 9                    |
|                         | Air pollution and acid rain                          | 4          | 3                           | 1                   | 21        | 4                  | 6           | 6            | 5   | 9                | 7                    |
|                         | Destruction of the ozone layer                       | 8          | 3                           | 2                   | 19        | 4                  | 11          | 12           | 16  | 0                | 8                    |
| <b>Ecological</b>       | Destruction of forests and desertification           | 24         | 13                          | 19                  | 52        | 50                 | 55          | 29           | 32  | 46               | 33                   |
|                         | Reduction of genetic diversity                       | 9          | 5                           | 10                  | 16        | 8                  | 11          | 6            | 11  | 9                | 10                   |
|                         | Pollution of oceans and rivers                       | 9          | 12                          | 6                   | 19        | 27                 | 9           | 29           | 5   | 18               | 13                   |

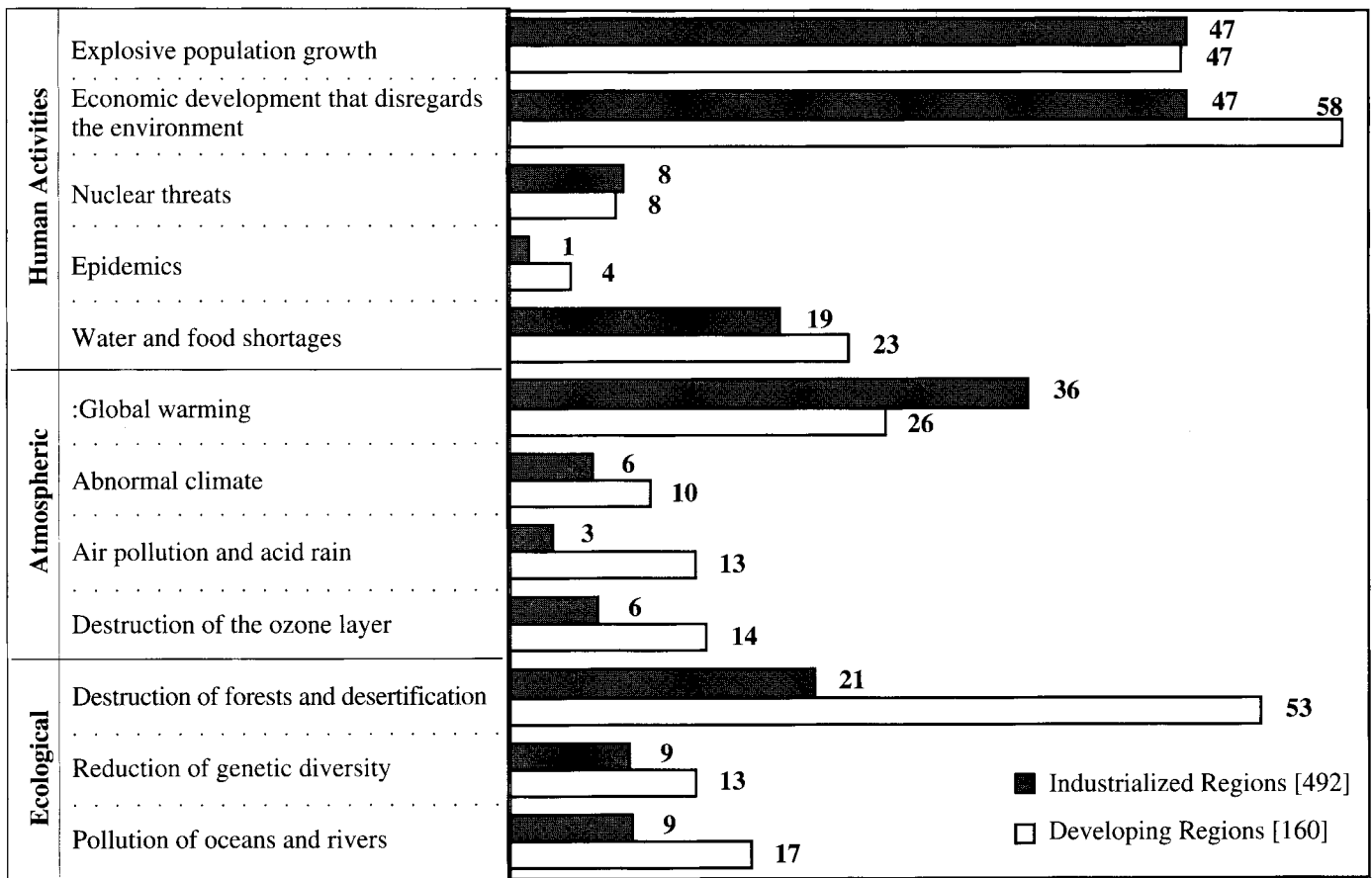
Notes: Figures enclosed by a double circle represent the answer with the highest number of points.

A single circle is used when more than one answer is closely tied for the highest number of points.

Please note that the totals for the various regions should add up to 200% since respondents were asked to select two items.

However, some respondents marked three items, causing the aggregate total to be more than 200%.

(%)



- Among overseas and Japanese respondents alike, “economic development that disregards the environment” was the item selected by the most respondents as having the greatest impact, followed by a small margin by “explosive population growth.”
- Among respondents from the developed regions, the “economic development that disregards the environment” and “explosive population growth” responses were tied for first-place. “Global warming” came next.
- Among respondents from the developing regions, “economic development that disregards the environment” came first, “destruction of forests and desertification” came second, followed by “explosive population growth” in third place. It is notable that “destruction of forests and desertification” is thought to be a major cause of environmental damage in developing countries.

## 2. PROGRESS TOWARD AGENDA 21

**Question:** Since the Earth Summit was held in Rio de Janeiro in June 1992, to what extent has progress been achieved in items (1) to (10) below? For each item, circle the best response from (a) to (e), considering the situation in your own country only.

### Comparison of Perceived Progress\* between 1995 and 2000

|  | Japan |      | United States & Canada |      | Western Europe |      | Asia |      | Latin America |      | Africa |      | Oceania |      | Eastern Europe & former Soviet Union |      | Middle East |      | Overseas Total |      | Total |      |
|--|-------|------|------------------------|------|----------------|------|------|------|---------------|------|--------|------|---------|------|--------------------------------------|------|-------------|------|----------------|------|-------|------|
|  | 2000  | 1995 | 2000                   | 1995 | 2000           | 1995 | 2000 | 1995 | 2000          | 1995 | 2000   | 1995 | 2000    | 1995 | 2000                                 | 1995 | 2000        | 1995 | 2000           | 1995 | 2000  | 1995 |
| Promotion of environmental education                 | 61    | 49   | 76                     | 72   | 76             | 56   | 90   | 90   | 73            | 85   | 81     | 77   | 94      | 77   | 100                                  | 57   | 73          | 81   | 82             | 75   | 73    | 64   |
| Activities by local governments and citizens' groups | 66    | 54   | 81                     | 68   | 80             | 67   | 74   | 69   | 77            | 67   | 70     | 65   | 82      | 82   | 84                                   | 57   | 82          | 81   | 78             | 68   | 73    | 62   |
| Environmental measures by industry                   | 71    | 55   | 76                     | 60   | 83             | 51   | 46   | 47   | 42            | 31   | 38     | 31   | 76      | 36   | 68                                   | 64   | 45          | 81   | 62             | 45   | 66    | 49   |
| Scientific and technological contributions           | 54    | 57   | 76                     | 64   | 78             | 58   | 51   | 50   | 27            | 42   | 28     | 37   | 76      | 50   | 53                                   | 57   | 45          | 50   | 60             | 50   | 57    | 53   |
| Formation of recycling systems                       | 51    | 45   | 77                     | 68   | 70             | 71   | 46   | 40   | 46            | 31   | 28     | 21   | 71      | 59   | 37                                   | 29   | 27          | 50   | 57             | 46   | 54    | 46   |
| Greenhouse gas prevention measures                   | 22    | 18   | 25                     | 60   | 49             | 33   | 32   | 29   | 27            | 25   | 26     | 27   | 59      | 36   | 47                                   | 29   | 18          | 19   | 35             | 31   | 29    | 26   |
| Conservation of forest resources                     | 10    | 19   | 38                     | 52   | 38             | 33   | 47   | 58   | 31            | 48   | 60     | 63   | 65      | 55   | 47                                   | 50   | 45          | 56   | 44             | 50   | 29    | 37   |
| Conservation of biodiversity                         | 11    | 11   | 29                     | 40   | 26             | 38   | 49   | 47   | 38            | 56   | 58     | 53   | 65      | 68   | 58                                   | 50   | 64          | 44   | 41             | 48   | 28    | 32   |
| Population and poverty problems                      | 8     | 15   | 18                     | 20   | 24             | 17   | 36   | 52   | 19            | 29   | 36     | 45   | 35      | 41   | 16                                   | 21   | 18          | 19   | 26             | 33   | 18    | 25   |
| Lifestyle alteration                                 | 7     | 20   | 17                     | 48   | 14             | 35   | 26   | 26   | 12            | 10   | 15     | 15   | 29      | 36   | 26                                   | 7    | 18          | 19   | 18             | 25   | 14    | 23   |

Note: \*Progress is calculated as the combined total of the 'Significant progress' and 'Some progress' categories.

### Comparison of Differences between 1995 and 2000

|  | Japan | United States & Canada | Western Europe | Asia | Latin America | Africa | Oceania | Eastern Europe & former Soviet Union | Middle East | Overseas Total | Total | (%) |
|--|-------|------------------------|----------------|------|---------------|--------|---------|--------------------------------------|-------------|----------------|-------|-----|
| Promotion of environmental education                 | +12   | +4                     | +20            | 0    | -12           | +4     | +17     | +43                                  | -9          | +7             | +9    |     |
| Activities by local governments and citizens' groups | +12   | +13                    | +12            | +5   | +10           | +5     | +1      | +27                                  | +1          | +9             | +11   |     |
| Environmental measures by industry                   | +16   | +16                    | +32            | -1   | +11           | +7     | +40     | +4                                   | -36         | +17            | +17   |     |
| Scientific and technological contributions           | -3    | +12                    | +20            | +1   | -15           | -9     | +26     | -4                                   | -5          | +10            | +4    |     |
| Formation of recycling systems                       | +6    | +9                     | 0              | +5   | +15           | +7     | +11     | +8                                   | -23         | +11            | +8    |     |
| Greenhouse gas prevention measures                   | +4    | -35                    | +16            | +3   | +2            | -1     | +22     | +19                                  | -1          | +4             | +3    |     |
| Conservation of forest resources                     | -9    | -14                    | +5             | -11  | -17           | -3     | +10     | -3                                   | -11         | -6             | -8    |     |
| Conservation of biodiversity                         | 0     | -11                    | -12            | +3   | -18           | +5     | -3      | +8                                   | +20         | -7             | -4    |     |
| Population and poverty problems                      | -7    | -2                     | +7             | -16  | -10           | -9     | -6      | -6                                   | -1          | -6             | -7    |     |
| Lifestyle alteration                                 | -12   | -31                    | -22            | 0    | +1            | +1     | -7      | +19                                  | -1          | -7             | -9    |     |

Note: Differences are calculated at the first decimal place. Thus, the differences may differ from those in the previous page which are rounded to the nearest integer.

We included 10 items from the Agenda 21 Action Plan on the survey and placed them in order according to the respondents' opinions about the progress that had been achieved with each item. We then compared the results with those from the 1995 questionnaire five years ago.

- The items attracting the most responses from overseas respondents in terms of the “progress” achieved in their own countries were “promotion of environmental education,” “activities by local governments and citizens’ groups” and “environmental measures by industry.” In Japan “environmental measures by industry” came first, “activities by local governments and citizens’ groups” came second and “promotion of environmental education” was third.
- As in the prior year’s questionnaire results, the item attracting the fewest responses from overseas and Japanese respondents alike was “lifestyle alteration.” “Population and poverty problems” received the second fewest votes. The third place item among overseas respondents was “greenhouse gas prevention measures” and among Japanese respondents “conservation of forest resources.”
- Compared with five years ago, “environmental activities by industry” was the item for which the perception of “progress” has increased notably by both overseas and Japanese respondents. This was followed among overseas respondents by “formation of recycling systems,” “scientific and technological contributions,” and among Japanese respondents by “promotion of environmental education” and “activities by local governments and citizens’ groups.” There was a trend for items that received favorable ratings 5 years ago to have been judged to have made even more progress.
- The four items that received low evaluations five years ago—including “lifestyle alteration,” “population and poverty problems,” in addition to “conservation of forest resources” and “conservation of biodiversity”—were judged even more harshly this year. Although the progress rating for “greenhouse gas prevention measures” was low, the numbers of respondents thinking that progress is being made has increased from five years ago among overseas respondents, excluding North Americans, and Japanese.

### 3. CHANGES IN LIFESTYLE

**Question:** To establish a sustainable society, it is seen as desirable to change and simplify our lifestyles. Please select two options below that you feel will be the most difficult to change in your lifestyle.

|   | Japan (311) | United States & Canada (93) | Western Europe (88) | Asia (81) | Latin America (26) | Africa (53) | Oceania (17) | Eastern Europe & former Soviet Union (19) | Middle East (11) | Overseas Total (391) | (%) |
|---|-------------|-----------------------------|---------------------|-----------|--------------------|-------------|--------------|---|------------------|----------------------|-----|
| Eliminating food wastage and leftovers, and reducing drinking water and other water usage                                     | 10          | 11                          | 23                  | 24        | 19                 | 32          | 0            | 37  | 46               | 21                   |     |
| Switching to food that does not impose a heavy environmental burden   | 51          | 32                          | 30                  | 27        | 31                 | 23          | 71           | 16  | 36               | 30                   |     |
| Reducing garbage output and recycling   | 26          | 11                          | 9                   | 32        | 15                 | 25          | 12           | 26  | 9                | 18                   |     |
| Reducing energy consumption and electricity use, including the use of air conditioners  | 27          | 55                          | 43                  | 21        | 46                 | 34          | 24           | 21  | 36               | 38                   |     |
| Reducing automobile usage to the greatest possible extent, using public transport and riding a bicycle or walking             | 29          | 59                          | 63                  | 43        | 58                 | 36          | 53           | 63  | 55               | 53                   |     |
| Treating possessions well and rethinking the "throwaway" lifestyle  | 19          | 10                          | 15                  | 15        | 8                  | 4           | 12           | 21  | 9                | 12                   |     |
| Direct participation in regional environmental conservation activities or support of environmental conservation organizations | 31          | 11                          | 10                  | 10        | 12                 | 21          | 12           | 16  | 9                | 12                   |     |

Notes: Figures enclosed by a double circle represent the answer with the highest number of points.

A single circle is used when more than one answer is closely tied for the highest number of points.

Please note that the totals for the various regions should add up to 200% since respondents were asked to select two items. However, some respondents marked no items or only one item, causing the aggregate total to be less than 200%.

- The lifestyle item thought by the most overseas respondents to be most difficult to change was “reducing automobile usage...,” followed by “reducing energy consumption...” and “switching to food that does not impose a heavy environmental burden...”
- Japanese respondents felt “switching to food that does not impose a heavy environmental burden...” to be the most problematic, followed by “participation in...environmental conservation activities...” and “reducing automobile usage...” This is an expression of the different societal characteristics between Japan and other countries.

## IV. Comments from Respondents

This year's questionnaire elicited a total of 267 free comments, including 130 from 44 countries outside Japan and 137 from Japan. The respondents kindly commented on the state of environmental problems in various regions worldwide and thought of policies and ideas for alleviating environmental problems. The themes touched upon in the comments varied widely. We attempted to group them according to topic, but this was difficult because some addressed more than one topic. Some comments also contained suggestions and requests for future survey questions, which we will gratefully take into consideration in designing the next questionnaire. Owing to space considerations, we are only able to list a portion of the comments, including 24 from Japan and 34 representing 30 other countries. The name (excluding title), organization, country and processing number of the respondent is included with the comment. Comments from respondents requesting anonymity are marked with an M or F to denote male or female.

### Comments from overseas

Clearing of large forested areas for agricultural production industrialization and other land uses has resulted into serious environmental problems which have severe impact on present and future human survival. In developing countries, especially in African, proper management of trees and forests owned by public bodies and the private sector should be given more emphasis in consideration of the role and functions of trees and forests in environment protection, e.g. climate mitigation, stabilizing soils, etc. In addition, the multiplier effect of forests and forest based industries should be fully appreciated in poverty, alleviation/eradication, as poverty is generally the cause and effect of deforestation.

*Michael E. Sizomu-Lagolo, Forestry Department, UGANDA 281*

From more than 10 years of living in developing countries such as India, East Africa I am shocked by the general disrespect and disregard for the environment, partly as a result of ignorance and poverty, of greed and carelessness, and partly as a result of armed conflict and protracted war. Furthermore, an uncritical aping of "western civilization" and the abandoning of ethical and religious values, which are common to most societies and civilizations yet conspicuously absent in the questionnaire, are reducing our planet Earth to a resource, whose exploitation is to be regulated by largely unenforceable and thus controversial global mechanisms.

*M, Austrian Embassy Nairobi Kenya, AUSTRIA 099*

The current deterioration of the global environment has created a crisis that will affect the continuance of our modern industrial society. The transition from a highly exploitative society into one that lives in better balance with the available resources is likely to be a painful one, and it is conceivable that such a transition may in fact lead to the extinction of our species. But it seems more likely that some pockets of humanity will survive and again repopulate the earth, though perhaps taking a rather different approach to the available resources. It is important to keep in mind the historical perspective over the long sweep of civilizations in the past 4,000 years or so.

*M(American), IUCN-The World Conservation Union, SWITZERLAND 050*

Environmental problem is closely connected with domestic and international policy, economy and also philosophy. So, environmental improvement implies the change of human social system, vice versa.

*M, Center for Sustainable Systems, University of Michigan, KOREA 212*

It is time for a change of paradigm, i.e. to switch our negative attitude when we talk about sustainability (less of this and less of that) to treating sustainability as a challenge for mankind of achieving more with less resources with a lot of business opportunities! The capital market has already checked it; there is a Dow Jones Global Sustainability Index since September 1999.

*Alexander J. B. Zehnder, EAWAG, SWITZERLAND 218*

We largely have the technical information and the legislative framework for the protection of bio-diversity and the environment; what we are lacking is the social, political, ethical and intellectual will to complete the work. The fight for the environment and bio-diversity is a fight for life; ours, our descendants, and that of countless other species. It is not sufficient that the environment is on the list of the factors to be taken into account in decisions, it must be pre-eminent.

*Lily Venizelos, Mediterranean Association to Save the Sea Turtles – MEDASSET, GREECE 034*

It is necessary to transfer urgently great investment from armament and consumption into science and education and to see to it that the investments are got to responsible persons.

*Yuly Schipakin, Perm Department of the Social Ecological Union International, RUSSIA 269*

The need for care taking and daily feeding of topsoil as well as creating topsoil production centers from our leaves in each population of 1 million is left out of this questionnaire and most environmental actions for the planet. (see Agenda 21, Chapter 14). All of our abundance on this planet is a result of our relationship to the topsoil. We can ill afford to forget to feed the soil life daily. The best system we have found for sustainable food production at the village level is in Bali. It is currently threatened (though basically intact) by the cargo culture of tourists. We have a program to help villagers in Bali maintain sustainable food production practices

called “Bali Tree Ecosystem” tree planting and topsoil production for sustainable food. The survival of plants, animals and humans can be based on “When you feed the Earth daily, the earth feeds you.”

*F, Bali Tree Ecosystem, Abundant Village Tree Ecosystem, U.S.A. 279*

Environment becomes popular issue in Thailand. The issue can be used to ask for budget distribution effectively but the result (in my view) is not so good. I think it still lost of real consciousness or awareness in the heart from politicians to citizen.

*F, National Economic & Social Development Board, THAILAND 288*

Significant Progress in addressing environmental problems in developing countries, particularly Small Island Developing States until the developing countries begin implementing the commitments made at UNCED.

*M, Caribbean Community Secretariat, GUYANA 373*

In regions where people are undernourished, electricity, phone, water lack seriously, it is quite impossible to simplify lifestyle.

*Badjagou O. Pascal, Association Orukutuku, REPUBLIC OF BENIN 245*

We have made great progress in public understanding that there is a problem but now we face the much harder challenge of dramatically changing individual and collective life styles to reduce consumption, population and ultimately environmental impact.

*David Wanless, The Wilderness Society Inc., AUSTRALIA 260*

I feel that the consumerist life – style of western/northern society is unsustainable and silly. Inner values and spiritual growth would help to overcome this and be far more healthy – yet materialism makes it more and more difficult to listen to the inner voice, to nature, to soul.

*Lothar Luken, Editor, FoE-Ireland, GERMANY 291*

In Peru, it is necessary to define the environmental problems, causes, effects, solutions alternatives related with population. Extremely poverty in Peru origins some environmental problems and others are caused by International Corporations (exploit: petrol, mine, fishery and sale pesticides).

*Maria Rodriguez A., APECO and National University of Education, PERU 357*

The development of human being is based on the use of electricity. The living and development of people in desert environment is based on the use of electricity. Kuwait is a desert environment with high temperature and no fresh water resources. Fresh water is provided by desalination plants which produce electricity. Transportation by automobile is needed to survive the hot environment.

*Dr. Mohammed A. Al-Sarawi, Environment Public Authority, KUWAIT 346*

In Nigeria, waste disposal is a major environmental problem. Every street is filled with refuse dumps that present ugly sight and smell. We need training on waste management.

*Dr. Damian Medioha, Nigerian Environmental Study/Action Team (NEST), NIGERIA 392*

International recycling second hand materials from developed countries to developing countries solves a lot problems for equipment-poverty and employment.

*Diallo Abdolaye S., V.G.E. “ECOMISSION”, GUINEA-CONAKRY 157*

Improve people’s quality is one of the most important thing for environmental problem and it is also the basic decisive element to many confronting problems. More environmental funds are needed for education esp. in developing countries.

*F, Environmental Protection & Resources Conservation Committee, CHINA 112*

Speaking about environmental education, I think corporations world-wide should make substantial long-term, unbiased, non-public relation contributions to environmental education processes in both developed and developing nations, including through independent organizations. So far, most of corporations’ contributions are only public relation propaganda, not genuine support to sustainability objectives.

*OVIEBO, Gonzalo, WWF-International, ECUADOR 149*

As environmental education is concerning, much more important issue seems to be environmental democracy/ people participation in environmental decisions.

*Sarul Jarostow, Ministry of Environment, POLAND 197*

Information technology should be made available world wide so that people could assess the gravity of the environmental problems.

*M, NESCO (Extension Section), INDIA 257*

Public education through an informed & empowered. Free media is the key to public debate that will resolve these complex issues.

*Mark Harvey, Television Trust for the Environment (TVE), U.K. 380*

The Society for the Protection of Nature in Israel (SPNI) has a number of environmental education programs, some are conducted during school hours, but most are extracurricular. In order to broaden environmental.



education, the Ministry of Education must adapt three activities on a national level.  
*F, The Society for the Protection of Nature in Israel (SPNI), ISRAEL 390*

I do feel some taxes should be devoted to creating new jobs over the internet or in high unemployment/resident areas to reduce commuting over longer distances.  
*Roger A. Kief, Carrier Manager of a Telecom Company, GERMANY 150*

Political will is the most important factor in developing countries to control environmental degradation.  
*M, Arab Fund, JORDAN 342*

Meeting on specific/local environmental problem must start with the lowest organizational structure in the concerned community, say, village level or women's group.  
*Alejandrino R. Baloloy, Deputy Director, Dept. of Agriculture, Bureau of Soils & Water Management, PHILIPPINES 018*

A focus on education to influence individual or community behavior is useful, but will not significantly address the major environmental pressures and trends such as water availability and quality, soil loss, salinisation, and loss of biodiversity. These are "big ticket" issues which require a well coordinated and well funded approach which can only come from government. But well-funded and managed approaches are incompatible with the preferences of today's governments in many western countries which are trying to operate more like the private sector and which attempt to reduce the value of any activity (such as scientific research) to one of short-term dollar value only. More strategic vision is needed to address the long term problems, and decision-making powers should be less influenced by political considerations.  
*M, Science & Environment, Environment Australia, AUSTRALIA 028*

Nearly almost all developing African countries depend heavily on imported goods and services from the developed countries. The few industries are owned and controlled by her governments. What we eat is a reflection of what they produce. If our governments will be sincerely committed, our life style could be easily changed to solve whatever environmental problems are at stake. The hungry months will continue to strive to survive regardless to any environmental education if the current cost of living is not controlled. What is needed now is to address good governance; one that ensures practical democracy, efficient marketing strategies, employment avenues, health services, stability of her currency among others at the grass root.  
*M, Kindness Club of Africa (Giraffe), GHANA 227*

Control population growth & strict implementation of environmental legislation coupled with strong G.D.P. & increase in economic growth can help improve environmental condition in Pakistan.  
*M, Pakistan Environmental Protection Agency, PAKISTAN 049*

When animal populations have uncontrolled exponential growth, the population either exceeds food/water resources available and mass starvation ensues or massive, uncontrollable plagues/disease sweep through the society. Either mechanism severely reduces the population pressure on the available resources. Such a scenario is not out of the realm of feasibility for the human population.  
*M, Raytheon, U.S.A. 004*

Population growth vs limited natural resources is evident in the island situation. Also unsustainable utilization of the available resources due to lack of technology. As well as poverty vs. population growth – need assistance.  
*M, Dept. of Lands and Environment, SAMOA 214*

Desertification continues to progress at an alarming speed in Chad, despite efforts done by local groups, NGOs and the GOVERNMENT to restore ecological stability. I pray the economically developed countries to support my country to destroy this phenomenon. Now there is National Program to combat desertification in Chad.  
*Baulmbaye Ngaraud, Ministère de la Promotion Economique & du Développement, CHAD 358*

Egypt is reformulating in 2000 her environmental strategy of 1995. Factories disposing waste water into the Nile have now stopped doing that and Nile water is cleaner, but its biodiversity is still suffering.  
*M, Dept. of Natural Resources, Inst. of African Research and Studies, Cairo University, EGYPT 267*

Rain-fed oil palm production in the oil palm industry in Ghana is under threat of decline and damage in the next 50 – 75 years unless efforts are made to fundamentally reforest the forest zone and improve rainfall and reduce the rising water deficit in the forest zone. This is my research finding in 1999.  
*Ketiboa K. Blay, NAAS, GHANA 128*

### **Comments from Japan**

When forests are viewed from a global perspective, I don't think that they are valued appropriately by societies, governments, and cultures in the various countries. I believe is that there are many cases in which their value is only understood in terms of their short-term economic merits. Since forests are of great import in many aspects, in terms of water, biodiversity, CO<sub>2</sub> absorption, providing materials for society and as a leisure resource, I think that it important for us to give forests higher priority in future.  
*M, Japan International Forestry Promotion and Cooperation Center, JAPAN 211J*

I can't say that the average consumer is provided with consumption choices in everyday life that pose a low environmental burden. We cannot help relying on governments that apply proactive guidance, environmental taxes, tax system incentives or legal requirements to businesses, which are the primary providers of resources for daily living in modern society. Although the current trend is toward economic liberalization, it should not run counter to economic liberalization if we develop an economy that poses a low environmental burden as a system, rather than leaving it to the whims of a few corporations or the bureaucracy.

*Hidehiko Kishi, JAPAN 283J*

Reporting by the media is characteristically transient and temporary. Although there was concentrated reporting on the global warming issue before COP3 in Kyoto, interest in the topic has been extremely low recently. Can we not step up the efforts of environmental NGOs and specialized institutions to respond to the media?

*Tsutomu Yamaguchi, Research Institute of Innovative Technology for the Earth, JAPAN 016J*

When one lives in a developed nation such as Japan, the circumstances of the even greater environmental destruction in developing countries are not readily conveyed. The public should be made aware that environmental problems are also a North-South problem, and the media should report the true condition of the people harmed the most.

*F, The Tokio Marine and Fire Insurance co. Ltd., JAPAN 100J*

The importance of environmental education is a problem. I think it is necessary for districts, PTAs and corporations to come together to create environmental education programs at the junior high school level (teachers and PTAs of junior high or elementary schools as nucleus.) Rather than having national or regional governments determine the programs, I would like to see organizations such as yours designate model districts and provide a set amount of funding for them.

*Nobutoshi Sakae, Health Policy Section, Welfare and Health Department, Nagasaki Prefectural Office, JAPAN 021J*

I would like children in future to be raised with a sensitivity that allows them to relate not just to humankind, but to various living entities as well. To accomplish this, I think that environmental education should be rigorously implemented. I want to bring about a time when global environmental problems can be discussed in family conversations.

*Keiko Ikemoto, The Association of National Trust in Japan, JAPAN 053J*

The current situation is that people are polarized between those who are deeply interested and those who have absolutely no interest. Since it is a problem that requires urgency, I would like them to hurry with the legal framework including punitive regulations (although they are primitive). At the same time, I think that cooperation must continue at the citizen level.

*F, Nippon Cultural Broadcasting (Bunka Hoso), JAPAN 293J*

I think that the current tax system must be revised from the bottom up to accommodate the introduction of environmental taxes. I am definitely opposed to simply tacking the environmental taxes onto the existing tax structure.

*Katsuaki Kitajima, Nippon Mitsubishi Oil Corporation, JAPAN 240J*

I would like to see the "technology leadership" espoused by Japan to be directed toward (1) improving the security and peace of mind of individuals and (2) resolving global environmental problems. I believe it to be our responsibility as a developed nation to develop technologies ahead of other countries to make an international contribution.

*Katsuhiko Hayashi, NHK Enterprise 21, JAPAN 195J*

I think that there is an adverse effect on global environmental problems if you look over the long-term at the loss of confidence in nuclear power because of the JCO accident at Tokaimura. Setting aside the question of recycling atomic fuel, I think that, as the world population surges, it is necessary to have nuclear power as an option.

*Hiroshi Nagano, Science and Technology Promotion Bureau, Science and Technology Agency, JAPAN 173J*

To achieve progress in global environmental problems, above all, it is necessary for the United States and Canada to ratify the Kyoto Protocol. If ratification of this were to fail, all of the responses to global environmental problems will fail to achieve promotion (implementation).

*Yutaka Sawada, Japan Chemical Industry Association, JAPAN 113J*

Global environmental problems are problems in which early measures are being urged while there is still a state of uncertainty about them. In this situation, I think it is more effective to support measures converging in those directions to the greatest extent possible rather than enforcing strict conditions. In this sense, the debate surrounding the prevention of global warming has gone too far in the direction of legalistic, systematic debate, and I am concerned that attaching too many conditions to the CDM and other such things will make them useless when realized despite their comprehensiveness as a system. If this happens, I think the results will be completely opposite to the requirements of the times.

*Keiichi Yokohori, Asia Pacific Energy Resource Centre, The Institute of Energy Resources, Japan, JAPAN 121J*

A change in consciousness is required at every level of society. Administrative measures must not be imposed vertically, rather policies must be correlated horizontally. It is necessary to clarify the role and relative positions of the Environmental Agency and the Environmental Counselors and to make good use of them.

*Zenichi Isoya, Chubu Electric Power Inc., JAPAN 285J*

This is a rather specific comment, but the riot of automated vending machines is an eyesore. I am not saying that all should be eliminated, but if they are forced inside and generally prohibited from outside placement, the number of machines would decrease. I think that this would alleviate a number of environmental problems, such as their high power consumption, unsightliness, and container litter.

*Kzumitsu Matsuo, Japan Association of Environment and Society for the 21st Century, JAPAN 232J*

How about disclosing all the environmental costs on a product-by-product basis from the raw materials to manufacturing, distribution, use and disposal. I think that it is important to make people understand that the costs are several times the purchase price.

*Sadamune Hojo, Kubota Corp., JAPAN 138J*

Start thinking of the global environment in local terms. It will be easy to carry out measures to clean it up if we start with the priority of old and young, male and female to restore this country to one in which fireflies, cyprinodonts (killifish), and loach are seen all around the country.

*Ichiro Sano, JAPAN 170J*

At the present time, I think it is important to prepare the legal system in every country to accommodate the Kyoto Protocol. In that process, I think progress will be made in the technology for heightening natural and environmental effectiveness, and we can set our sights on establishing the social and economic systems.

*Seiji Ippoi, Global Environmental Division, Environmental Agency, JAPAN 220J*

(1) Since global environmental problems have arisen from compound effects, before we attempt to resolve them through political or administrative measures, it is necessary to strive to understand the problems with thorough research at research institutions, etcetera. (2) Although it is often said that environmental education is required, the debate should be deepened, and the reasons about what kind of environmental education is required and why it is required must be clarified.

*Masahiro Takahashi, Institute for Global Environmental Strategies, JAPAN 221J*

An international environmental conservation organization, such as WTO and APEC, is required.

*Kenichi Miyamoto, JAPAN 248J*

There is a need to proactively support policies (incentives) that induce behaviors (corporate activities and human actions) with low environmental impact.

How about if we try setting targets internationally for some kind of permissible environmental impact on a per person basis, which would provide an objective toward which we can strive as well as provide a means that is fair for all the people in the world.

*M, Environmental Lifestyles Department, Gunma Prefectural Office, JAPAN 276*

We should use various ways to appraise the developing countries that are actively formulating policies to reduce greenhouse gases. (2) I think that there are problems with the way in which current genetically modified products are modified. I think we should create markets with a value set that does not accept products that are created with only economic effects in mind and that upset peoples' standards of health and decision-making.

*Michiko Imai, President, Le Verseau Inc., JAPAN 250J*

I have the impression that "recycling" as it is currently carried out consumes a large amount of energy while doing no more than modestly prolonging product life. I think there is a particular need to research the costs and benefits of recycling products for which petroleum is the raw material.

*Hideyuki Nakayama, Environmental Center, Saga Prefectural Office, JAPAN 189J*

It is all very well to strive to create a sustainable society, but when one considers recycling, aren't we using resources wastefully? I understand the convenience of PET bottles, etcetera, but too many are consumed. There is a need to make the producers responsible and raise the environmental awareness of consumers at the same time. In addition, we should not think exclusively of our own country, which faces the prospects of a population weighted heavily toward youths and old age pensioners, but also carry out technical cooperation in consideration of the conditions of other countries experiencing the ongoing population explosion. We should not provide assistance in the name of development that prioritizes the economy and invites natural destruction. Moreover, we should do away with the ownership of cars and household appliances, creating a society in which it is better to have a pleasant "lease" lifestyle. We should prepare the legal framework for this so that our limited resources can be used effectively.

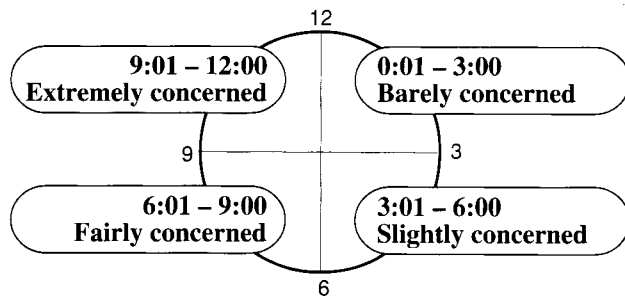
*Saeko Takahashi, Nippon Cultural Broadcasting (Bunka Hoso), JAPAN 292J*

Speaking from the experience of my involvement in planning and drafting regional tax systems, I think that the time has come for politicians to actively debate the introduction of environmental taxes that would accompany the re-vamping of the road resources. (This would be difficult at present though) In addition, with regard to problems with garbage, there is research to the effect that high-temperature incineration has less environmental impact than recycling, and as a consumer, I would like to see correct and objective information provided from suitable institutions.

*M, Planning Department, Chiba Prefectural Office, JAPAN 123J*

## V. Questionnaire as Distributed to Respondents

1-1. To what extent do you feel that the current deterioration of the global environment has created a crisis that will affect the continuance of the human race? Mark a time corresponding to the extent of your concern in the boxes below.



Please write your time here.

:

1-2. Please select two options from the following list you think will cause the most harm to the environment and impact significantly upon human survival.

- Human Activities: <sup>(1)</sup> Explosive population growth <sup>(2)</sup> Economic development that disregards the environment  
<sup>(3)</sup> Nuclear threats <sup>(4)</sup> Epidemics <sup>(5)</sup> Water and food shortages
- Atmospheric: <sup>(6)</sup> Global warming <sup>(7)</sup> Abnormal climate <sup>(8)</sup> Air pollution and acid rain  
<sup>(9)</sup> Destruction of the ozone layer
- Ecological: <sup>(10)</sup> Destruction of forests and desertification <sup>(11)</sup> Reduction of genetic diversity  
<sup>(12)</sup> Pollution of oceans and rivers

2-1. A preparatory agenda for producing results at COP6 was decided at COP5 held in Bonn in November 1999. Please select one option about which you have the strongest expectations for COP6, which will meet at the Hague in November 2000.

- <sup>(1)</sup> Resolution of the rules for the Kyoto Mechanism (emissions trading, clean development mechanisms and joint implementation) that can be implemented by every country
- <sup>(2)</sup> Resolution of the rules for heat sinks contained in the Kyoto Protocol that can be implemented by every country
- <sup>(3)</sup> Resolution of the rules for observance of the Kyoto Protocol (including enforcement measures) that can be implemented by every country
- <sup>(4)</sup> Resolution of the support that developed countries will provide to developing countries in the form of technology transfers and skill development
- <sup>(5)</sup> Resolution of developing country participation in the reduction countermeasures
- <sup>(6)</sup> Other:
- <sup>(7)</sup> Don't know

2-2. Political momentum to implement the Kyoto Protocol by 2002, the 10th year after the Earth Summit, was created at COP5. Although none of the developed countries have ratified it yet, please select two conditions that you think are the most important for promoting ratification in your country.

- <sup>(1)</sup> Specifying the working rules for "Flexible Measures"
- <sup>(2)</sup> Resolution of the time frame for developing country participation
- <sup>(3)</sup> Resolution of the sanctions for non-compliance with reduction targets
- <sup>(4)</sup> Progress in domestic measures aimed at achieving reduction targets, including legal frameworks
- <sup>(5)</sup> Persuasion of opposed industrial organizations to accept ratification
- <sup>(6)</sup> Technological progress toward reduction target achievement
- <sup>(7)</sup> Reinforced pressure from opinion leaders or environmental NGOs
- <sup>(8)</sup> Public opinion arousal through the mass media
- <sup>(9)</sup> Other:

3-1. Environmental taxes that either increase or reduce taxes according to the burden on the environment are currently employed in eight countries in Europe, which raises awareness about environmental conservation from the tax system perspective. Do you agree with, or oppose, the introduction of environmental taxes?

- <sup>(1)</sup> Agree <sup>(2)</sup> Oppose <sup>(3)</sup> Don't Know

3-2. If you agreed with the introduction of environmental taxes, with which of the following taxes are you in agreement? Please select up to three options. If you agree with one item only, select only one item.

- Additive Taxes: <sup>(1)</sup> Fossil fuels that are the source of carbon dioxide emissions  
<sup>(2)</sup> Automotive fuel  
<sup>(3)</sup> Industrial and noxious waste  
<sup>(4)</sup> Vehicles emitting relatively large volumes of nitrous oxides, etc.  
<sup>(5)</sup> Items with a large environmental impact (batteries, plastic bags, pesticides, etc.)

- Rebate Taxes: <sup>(6)</sup> Low-pollution, energy-efficient vehicles, such as electric and hybrid vehicles  
<sup>(7)</sup> Natural energy sources, such as solar, wind and biomass power generation  
<sup>(8)</sup> Green products, such as power-saving residential electronics and building materials

**3-3. The understanding of consumers and businesses must be obtained to successfully introduce environmental taxes. Which of the following conditions do you believe is the most important for introducing environmental taxes? Please select one option.**

- <sup>(1)</sup> Funds collected as environmental taxes are clearly designated for specific uses, such as the development of technology for preventing global warming  
<sup>(2)</sup> Environmental taxes are made revenue neutral and offset by reductions in other taxes to avoid imposing additional burdens on corporations or individuals  
<sup>(3)</sup> Environmental taxes are harmonized with other nations to avoid a decline in your own country's international competitiveness  
<sup>(4)</sup> Other:

**4. Some policy initiatives promote the use of nuclear power to sever reliance on fossil fuels and prevent global warming. Please select one option below that most closely matches your stance toward this policy.**

- <sup>(1)</sup> It is okay to continue to operate and build new facilities because the current technology is reliable  
<sup>(2)</sup> It is okay to employ nuclear power if the current technology is fundamentally revised and made safer  
<sup>(3)</sup> Rather than relying on nuclear power, we should promote the use of the much safer hydroelectric power generation  
<sup>(4)</sup> Rather than relying on nuclear power, we should improve the energy efficiency of thermal power generation or switch from coal to natural gas  
<sup>(5)</sup> Rather than relying on nuclear power, we should promote the development of new energy sources, such as solar and wind power generation  
<sup>(6)</sup> Don't know

**5. Genetically altered products have been developed and introduced in recent years. These products have attracted much debate around the world. Please select one option below that most closely matches your stance toward these products.**

- <sup>(1)</sup> I believe that these products are safe so it is okay to eat them as I would ordinary products  
<sup>(2)</sup> Although I believe that these products are generally safe, I think that they should be labeled as genetically modified so that consumers can decide for themselves  
<sup>(3)</sup> The effects of genetically modified substances are extremely inconclusive so we should treat them with extra caution  
<sup>(4)</sup> We should stop the sale and development of these products since I don't think they are safe at this stage  
<sup>(5)</sup> Other:  
<sup>(6)</sup> Don't know

**6. Since the Earth Summit was held in Rio de Janeiro in June 1992, to what extent has progress been achieved in items (1) to (10) below? For each item, circle the best response from (a) to (e), considering the situation in your own country only.**

Significant progress  
 Some progress  
 Cannot determine  
 Almost no progress  
 No progress

- |  |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|
| ( 1 ) Promotion of environmental education.....                  | (a) | (b) | (c) | (d) | (e) |
| ( 2 ) Activities by local governments and citizens' groups ..... | (a) | (b) | (c) | (d) | (e) |
| ( 3 ) Environmental measures by industry .....                   | (a) | (b) | (c) | (d) | (e) |
| ( 4 ) Scientific and technological contributions .....           | (a) | (b) | (c) | (d) | (e) |
| ( 5 ) Formation of recycling systems .....                       | (a) | (b) | (c) | (d) | (e) |
| ( 6 ) Conservation of forest resources .....                     | (a) | (b) | (c) | (d) | (e) |
| ( 7 ) Conservation of biodiversity .....                         | (a) | (b) | (c) | (d) | (e) |
| ( 8 ) Greenhouse gas prevention measures .....                   | (a) | (b) | (c) | (d) | (e) |
| ( 9 ) Population and poverty problems .....                      | (a) | (b) | (c) | (d) | (e) |
| (10) Lifestyle alteration .....                                  | (a) | (b) | (c) | (d) | (e) |

**7-1. The importance of environmental education is often pointed out. Is environmental education included in the school curriculum of your country? If so, from what age is it started?**

- A. Included                      <sup>(1)</sup> From 4 to 6 Years of age                      <sup>(2)</sup> From 7 to 9  
<sup>(3)</sup> From 10 to 12                      <sup>(4)</sup> Older than 13
- B. Not included  
 C. Don't know

**7-2. Please select two of the items below that you believe are missing from your country despite their importance to the promotion of environmental education.**

- <sup>(1)</sup> The enthusiasm and positive attitude of teachers  
<sup>(2)</sup> Better instructor training or retraining of existing teachers  
<sup>(3)</sup> Development of curricula and teaching materials effective in promoting awareness  
<sup>(4)</sup> Support of local agencies, civilian organizations and corporations for field trips and tours providing first-hand experience to students  
<sup>(5)</sup> School funding or expanded educational programs and training equipment  
<sup>(6)</sup> Promotion of environmental education in collaboration with environmental specialists and/or households  
<sup>(7)</sup> Information disseminated by public and private sectors  
<sup>(8)</sup> Coordination of environmental and educational policies

**7-3. To deepen the general understanding of environmental problems and heighten awareness in society, which institution do you think should play the key role in promoting environmental education and instructional activities? Write the four most important options in order of importance.**

- (1) Schools      (2) National and local governments      (3) Corporations  
(4) Citizens' groups or environmental NPOs      (5) International environmental NGOs  
(6) Environment-related research institutions      (7) Mass media      (8) Individual households  
(9) Other: \_\_\_\_\_

1st (      )      2nd (      )      3rd (      )      4th (      )

**8. To establish a sustainable society, it is seen as desirable to change and simplify our lifestyles. Please select two options below that you feel will be the most difficult to change in your lifestyle.**

- <sup>(1)</sup> Eliminating food wastage and leftovers, and reducing drinking water and other water usage  
<sup>(2)</sup> Switching to food that does not impose a heavy environmental burden by reducing the use of processed, imported and hothouse-cultivated food products and meat produced with large grain consumption  
<sup>(3)</sup> Reducing garbage output and recycling  
<sup>(4)</sup> Reducing energy consumption and electricity use, including the use of air conditioners  
<sup>(5)</sup> Reducing automobile usage to the greatest possible extent, using public transport and riding a bicycle or walking  
<sup>(6)</sup> Treating possessions well and rethinking the "throwaway" lifestyle  
<sup>(7)</sup> Direct participation in regional environmental conservation activities or support of environmental conservation organizations

**9. Feel free to write comments on any topic related to environmental problems. Use additional paper if required.**

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**Results of the Ninth Annual  
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**REPORT**

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**September 2000**

**Published by the Asahi Glass Foundation**

2nd Floor, Science Plaza, 5-3, Yonbancho

Chiyoda-ku, Tokyo 102-0081, Japan

Phone +813 5275 0620

Fax +813 5275 0871

Production assisted by IRJ PR Services, Inc.

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Home Page Address: <http://www.af-info.or.jp>

Printed on recycled paper.