

**Results of the 13th Annual
“Questionnaire on Environmental Problems and the Survival of Humankind”**

REPORT

THE ASAHI GLASS FOUNDATION

September 2004

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Foreword

This report summarizes the results of this year's "Questionnaire on Environmental Problems and the Survival of Humankind," a survey conducted annually by the Asahi Glass Foundation since 1992.

While twelve years have already passed since the Earth Summit in Rio de Janeiro and two years since the Johannesburg Summit, the urgency and the importance of undertaking global environmental problems continues to grow ever greater. Last December, the Ninth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP9) was held in Milan, Italy, where strong support for an early implementation of the Kyoto Protocol was reflected within the President's summary of the round table discussions among ministerial level delegates. In June of this year, the International Conference for Renewable Energies was held in Bonn, Germany, where discussions took place with the recognition that the combination of increased energy efficiency and renewable forms of energy would greatly contribute to sustainable development.

In this year's survey, the 13th, 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 previous surveys, including queries about the Environmental Doomsday Clock and Agenda 21, the main questions on this year's questionnaire asked about problems arising from global population growth, the possibility of simultaneously pursuing economic growth and environmental preservation, global warming countermeasures and the Kyoto Protocol, and measures to protect the ozone layer.

Once again, the Foundation would like to thank the many environmentally conscious experts around the world who 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 of the 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.

Hironichi Seya
Chairman
Asahi Glass Foundation
September 2004

I. Facts about the 13th Annual “Questionnaire on Environmental Problems and the Survival of Humankind”

Response period: Questionnaires were sent out in April 2004 with a return deadline of June 2004.

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

Questionnaires mailed: 3,609

Questionnaires returned: 803

Response rate: 22.2%

Breakdown of respondents by region, gender and occupational affiliation:

| Region | Number of responses | Percent of total |
|---|---------------------|------------------|
| Japan | 324 | 40.3 |
| United States & Canada | 68 | 8.5 |
| Western Europe | 90 | 11.2 |
| (Asia) | (139) | (17.3) |
| Asian Four (A4) <small>(South Korea, Hong Kong, Taiwan, and Singapore)</small> | 65 | 8.1 |
| Rest of Asia (RoA) | 74 | 9.2 |
| Latin America | 40 | 5.0 |
| Africa | 44 | 5.5 |
| Oceania | 32 | 4.0 |
| Eastern Europe & former Soviet Union | 57 | 7.1 |
| Middle East | 9 | 1.1 |
| (Overseas Total) | (479) | (59.7) |
| Total | 803 | 100.0 |

| Gender | Number of responses | Percent of total |
|-------------|---------------------|------------------|
| Male | 680 | 84.7 |
| Female | 107 | 13.3 |
| No response | 16 | 2.0 |
| Total | 803 | 100.0 |

| Occupational affiliation | Number of responses | Percent of total |
|------------------------------------|---------------------|------------------|
| National government | 110 | 13.7 |
| Local government | 87 | 10.8 |
| University or research institution | 181 | 22.6 |
| Nongovernmental organization | 160 | 19.9 |
| Corporation | 136 | 16.9 |
| Other | 126 | 15.7 |
| No response | 3 | 0.4 |
| Total | 803 | 100.0 |

- Notes:
1. This report used the 803 responses as the basis for calculating percentages, which are rounded up from the first or second decimal place.
 2. In this report, “Asia” is all of Asia, except Japan. Further, South Korea, Hong Kong, Taiwan, and Singapore are classified as the “Asian Four (A4).” Other Asian countries are classified as the “Rest of Asia (RoA).”
 3. Japan, United States & Canada, Western Europe, and the Asian Four are classified as “Developed region,” while the remainder of the Rest of Asia, Latin America, and Africa are classified as “Developing region,” and all remaining countries are classified as “Other.”
 4. 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

1. Repeat Topics

1-1. Awareness of the Crisis Facing Human Survival— Environmental Doomsday Clock

- The average time on the environmental doomsday clock for all respondents retreated by seven minutes from the previous year to 9:08, which is the equivalent to the average times in 1999 and 2001.
- The average time on the doomsday clock among Japanese respondents also retreated 14 minutes to 9:06. This marked a slight decline in their sense of crisis, which had reached its peak last year.
- The overseas average also fell by 3 minutes to 9:09, the same level as 1998.
- **Environmental conditions of concern in determining the doomsday clock time:** The most frequently identified condition among respondents of developed regions including Japan, United States & Canada, Western Europe, and the Asian Four (A4) was “Global warming,” while “Deforestation/desertification/loss of biodiversity” was the most common response from developing regions including Africa, Latin America, and the Rest of Asia (RoA).

1-2. Progress Toward Agenda 21

As in previous years, the questionnaire surveyed respondents in ten of categories of the action plans outlined in Agenda 21.

- Over two-thirds of respondents from all regions including Japan, but excluding the Asian Four, indicated progress in the “Promotion of environmental education.” Progress was also extremely high in the category “Activities by local governments and citizens’ groups,” which was selected by 94% of the respondents in Oceania and 84% in United States & Canada. Over 60% of the respondents from Japan, United States & Canada, Western Europe, Eastern Europe and the former Soviet Union stated that progress had been made in “Scientific/technological contributions.”
- In the categories of “Conservation of forest resources,” “Conservation of biodiversity,” “Greenhouse gas prevention measures,” “Population/poverty problems,” and “Lifestyle alteration,” the percentage of respondents who indicated that there had been “No progress” surpassed those who stated that progress had been made.

2. Main Focus of the Current Year’s Questionnaire

2-1. Population Growth

- More than 80% of respondents from both Japan and overseas stated that population growth should be controlled. The most commonly selected measures to control population growth were “Raising the status of women by promoting education” and “Increasing assistance from developed countries to promote family planning and education in developing countries.” In a similar question in the questionnaire ten years ago, the most popular measures to alleviate the problem of population growth were “The spread of education and raising the standard of living in developing countries,” “Family planning,” and “Economic development and improving income standards in developing countries.”

2-2. Balancing Economic Growth and Environmental Preservation

Overall, respondents indicated that a balance was possible; however, there were differences by region.

- 62% of respondents from Japan and 55% from overseas indicated that it was possible to balance economic growth and environmental preservation. In the developing regions, there were more than twice as many respondents who stated that a balance between economic growth and environmental preservation was possible than those who felt that it was difficult. Respondents from Japan and the A4 expressed a similar view; however, the reverse was the case in United States & Canada and Western Europe, where respondents who felt that a balance was difficult exceeded those who stated that it was possible.

2-3. Global Warming

- More than 85% of respondents from both Japan and overseas indicated that they would feel either “Apprehensive” or “Extremely apprehensive” about future prospects for the environment in the absence of an international strategy to contend with global warming.
- Further, with the Kyoto Protocol yet to take effect, respondents most frequently cited “Countries that have ratified the Kyoto Protocol to implement measures to meet greenhouse gas reduction goals regardless of the status of the Protocol” as the measure that should be implemented. This selection was made by 44% of Japanese respondents.
- Lastly, with regards to measures that should take effect after 2013, “Policies leading to the pervasive use of the most advanced energy conservation technologies in the private and public sectors” was the most popular response.

2-4. Ozone Layer

- Whereas the most common response overall and from respondents abroad was “Effectively utilize multi-lateral funds for the implementation of the Montreal Protocol to advance regulations governing the production and use of CFCs by developing countries,” respondents in Japan most frequently selected “Requirements should be put into place for compulsory collection and destruction of used CFCs.”

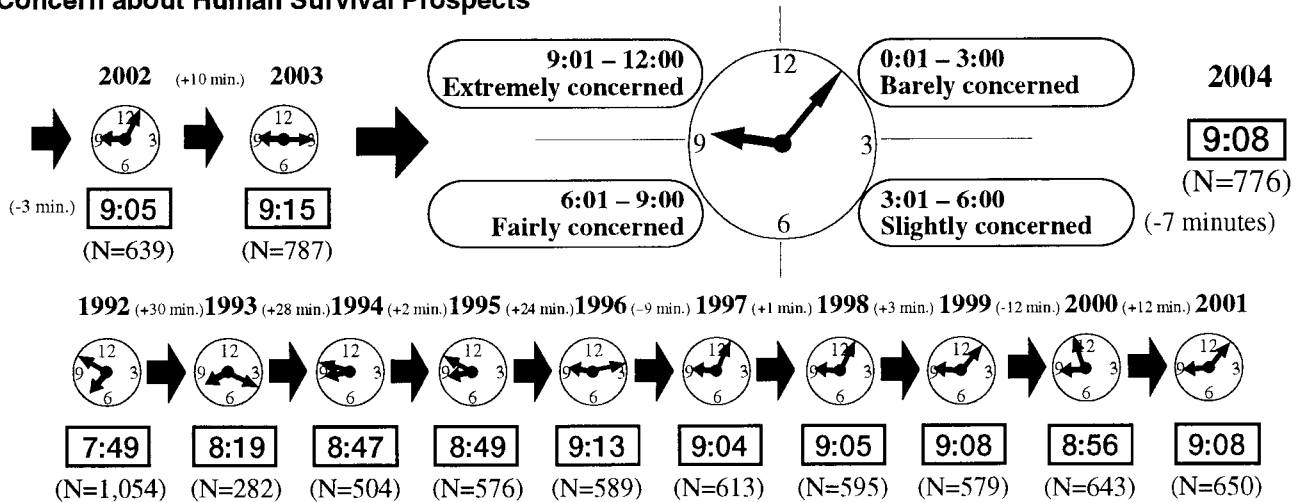
III. Questionnaire Results

1. REPEAT TOPICS

1-1. AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL — ENVIRONMENTAL DOOMSDAY CLOCK

Question (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? Write a time within the range 0:01 to 12:00 corresponding to the extent of your concern in the boxes below.

Concern about Human Survival Prospects



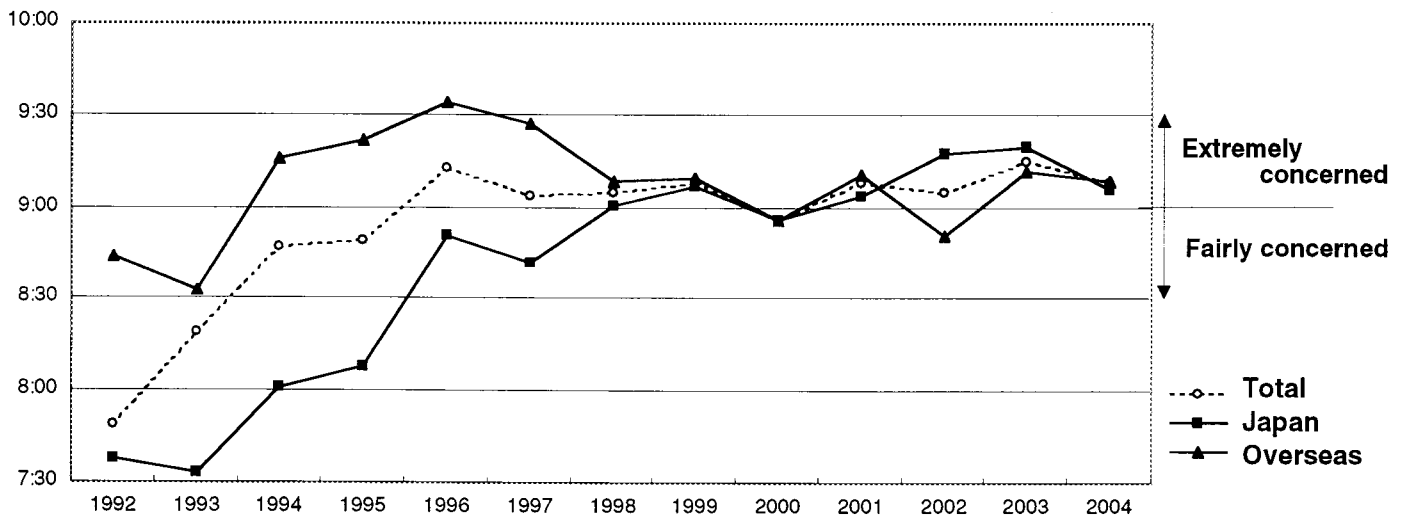
| | Number of respondents (2004) | Changes in time from year to year | | | Changes in average time by region | | | |
|--------------------------------------|------------------------------|-----------------------------------|---|------|-----------------------------------|------|-------------|-------------|
| | | 1995 | → | 2003 | → | 2004 | 1995 → 2004 | 2003 → 2004 |
| Total | 776 | 8:49 | → | 9:15 | → | 9:08 | +19 | -7 |
| Japan | 319 | 8:08 | → | 9:20 | → | 9:06 | +58 | -14 |
| United States & Canada | 66 | 8:52 | → | 9:03 | → | 9:14 | +22 | +11 |
| Western Europe | 88 | 9:02 | → | 8:52 | → | 8:56 | -6 | +4 |
| Asia | 139 | 9:41 | → | 9:41 | → | 9:32 | -9 | -9 |
| Asian Four | 65 | * | → | * | → | 9:35 | * | * |
| Rest of Asia | 70 | * | → | * | → | 9:29 | * | * |
| Latin America | 39 | 9:23 | → | 9:19 | → | 9:12 | -11 | -7 |
| Africa | 41 | 9:33 | → | 9:22 | → | 9:04 | -29 | -18 |
| Oceania | 28 | 9:44 | → | 9:37 | → | 9:08 | -36 | -29 |
| Eastern Europe & former Soviet Union | 52 | 9:29 | → | 9:02 | → | 8:30 | -59 | -32 |
| Middle East | 8 | 9:09 | → | 8:52 | → | 8:41 | -28 | -11 |
| Overseas Total | 457 | 9:22 | → | 9:12 | → | 9:09 | -13 | -3 |
| Male | 656 | 8:46 | → | 9:13 | → | 9:05 | +19 | -8 |
| Female | 106 | 8:57 | → | 9:35 | → | 9:24 | +27 | -11 |
| Developed Regions | 538 | * | → | * | → | 9:09 | * | * |
| Developing Regions | 150 | * | → | * | → | 9:18 | * | * |
| Other | 88 | * | → | * | → | 8:43 | * | * |

- The average time on the environmental doomsday clock for all respondents retreated by seven minutes from the previous year to 9:08, which is equivalent to the average times in 1999 and 2001.
- The average time for Japanese respondents retreated by 14 minutes from the previous year to 9:06, marking the largest reversal in the doomsday clock among Japanese respondents. This time was comparable to the results from 1999 and 2001.
- The overseas average also fell by 3 minutes to 9:09, the same level as 1998.

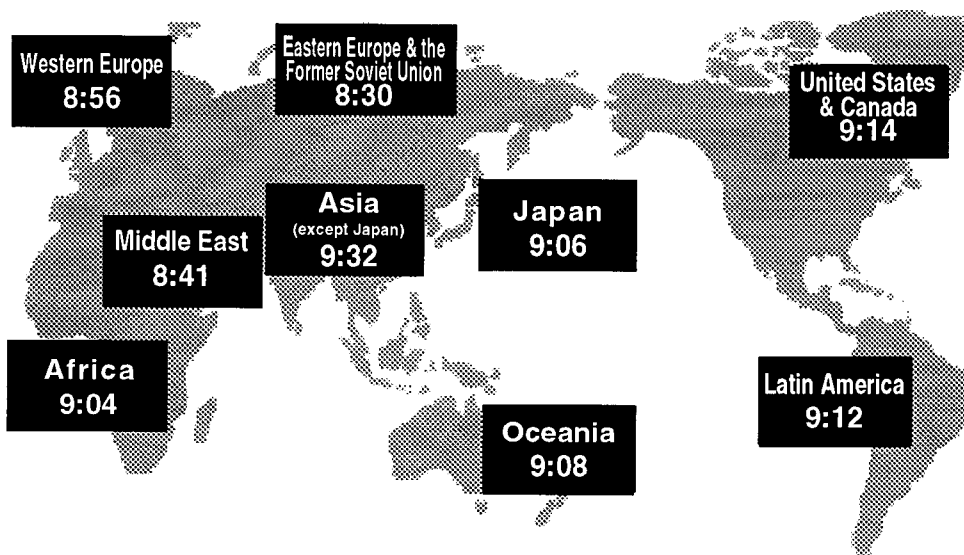
- Among overseas respondents, the sense of crisis was highest among those from Asia with average times ahead of 9:30 again this year. On the other hand, the sense of crisis among respondents from Eastern Europe and the former Soviet Union was low, at 8:30. The times on the doomsday clock fell by a greater amount compared to the previous year in Oceania, Eastern Europe and the former Soviet Union.
- While there were only minimal differences in the sense of crises between respondents of developed and developing regions, as in past years, female respondents tended to report a higher sense of crisis than their male counterparts.

Changes in the Environmental Doomsday Clock

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total | 7:49 | 8:19 | 8:47 | 8:49 | 9:13 | 9:04 | 9:05 | 9:08 | 8:56 | 9:08 | 9:05 | 9:15 | 9:08 |
| Japan | 7:38 | 7:33 | 8:01 | 8:08 | 8:51 | 8:42 | 9:01 | 9:07 | 8:56 | 9:04 | 9:18 | 9:20 | 9:06 |
| Overseas | 8:44 | 8:33 | 9:16 | 9:22 | 9:34 | 9:27 | 9:09 | 9:10 | 8:56 | 9:11 | 8:51 | 9:12 | 9:09 |
| Overseas - Japan (min.) | 66 | 60 | 75 | 74 | 43 | 45 | 8 | 3 | 0 | 7 | -27 | -8 | 3 |



Regional Times



Question (2): When you selected the time above, what were the main environmental conditions about which you were concerned? Please check up to three (3) of the following items of concern.

| | Developed Regions | | | | | Developing Regions | | | | | Other | | | | | |
|--|-------------------|-----------------------------|---------------------|---------|----------|--------------------|-------------|--------------|---------------------|--|----------------------|-------------------------|--------------------------|------------|-------------|-----|
| | Japan (N=324) | United States & Canada (68) | Western Europe (90) | A4 (65) | RoA (74) | Latin America (40) | Africa (44) | Oceania (32) | Eastern Europe (32) | Middle East & former Soviet Union (57) | Overseas Total (479) | Developed Regions (547) | Developing Regions (158) | Other (98) | Total (803) | (%) |
| General environmental problems | 28 | 16 | 23 | 38 | 16 | 25 | 25 | 22 | 30 | 33 | 24 | 27 | 21 | 28 | 26 | |
| Global warming | 65 | 54 | 62 | 60 | 30 | 40 | 32 | 53 | 35 | 78 | 48 | 63 | 33 | 45 | 55 | |
| Air pollution, water contamination, river/ocean pollution | 25 | 22 | 29 | 54 | 54 | 35 | 36 | 31 | 42 | 56 | 39 | 29 | 44 | 40 | 33 | |
| Water shortage, food problems | 39 | 35 | 39 | 28 | 43 | 25 | 36 | 47 | 30 | 33 | 35 | 37 | 37 | 36 | 37 | |
| Deforestation, desertification, loss of biodiversity | 48 | 40 | 44 | 54 | 65 | 58 | 73 | 47 | 46 | 33 | 52 | 47 | 65 | 45 | 50 | |
| Peoples' lifestyles, waste related problems | 34 | 28 | 32 | 32 | 22 | 48 | 20 | 28 | 51 | 22 | 32 | 33 | 28 | 41 | 33 | |
| Environmental problems and economic/trade related activities | 14 | 25 | 16 | 15 | 12 | 23 | 11 | 9 | 28 | 0 | 17 | 16 | 15 | 19 | 16 | |
| Population, poverty, status of women | 15 | 47 | 40 | 12 | 35 | 35 | 50 | 31 | 18 | 33 | 34 | 23 | 39 | 23 | 26 | |
| Other | 6 | 13 | 9 | 6 | 3 | 3 | 0 | 9 | 7 | 11 | 7 | 8 | 2 | 8 | 7 | |
| No response | 2 | 3 | 1 | 0 | 7 | 3 | 2 | 3 | 4 | 0 | 3 | 1 | 4 | 3 | 2 | |

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

A single circle is used for the answer with the second highest number of replies.

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 less than three items, causing the aggregate total to be less than 300%.

- In determining the time on the environmental doomsday clock, "Global warming" was most frequently cited as the issue at the forefront by respondents from developed regions including Japan. This was followed consistently across regions by "Deforestation, desertification, loss of biodiversity."
- In developing regions, "Deforestation, desertification, loss of biodiversity" was consistently the condition most frequently cited as the primary source of concern. The second condition varied from region to region, with respondents in Asia pointing to "Air pollution, water contamination, river/ocean pollution," while those in Latin America cited "People's lifestyles, waste-related problems," and those in Africa cited "Population, poverty, status of women."
- As seen last year, there were more than twice as many respondents from United States & Canada and Western Europe who cited "Population, poverty, status of women" than respondents from Japan.

1-1. PROGRESS TOWARD AGENDA 21

Question: Twelve years have passed since Agenda 21 was adopted as an “action plan for the environment and development” at the Earth Summit in 1992. Please indicate the progress made *in your country* for the following 10 categories taken from the Agenda 21 action plan by circling one (1) letter on the scale of (a) to (e) for each category.

Comparison of Perceived Progress^{*1} between 1999 and 2004

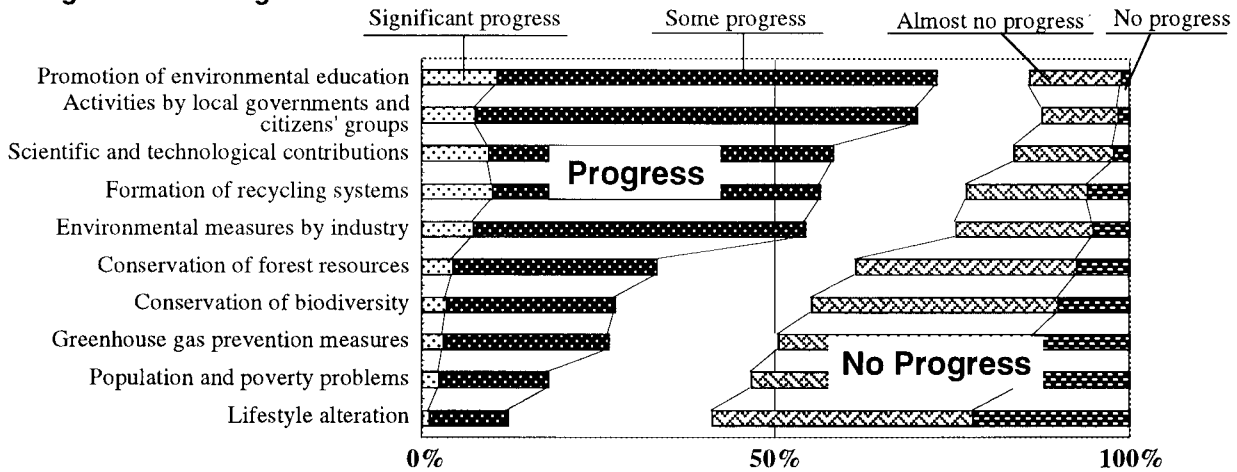
| | Japan | | United States & Canada | | Western Europe | | Asia | | Asian Four | | Rest of Asia | | Latin America | | Africa | | Oceania | | Eastern Europe & former Soviet Union | | Middle East | | Overseas | | Total | | |
|--|-------|------|------------------------|------|----------------|------|------|------|------------|------|--------------|------|---------------|------|--------|------|---------|------|--------------------------------------|------|-------------|------|----------|------|-------|------|------|
| | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 | 1999 | 2004 |
| Promotion of environmental education | 70 | 56 | 71 | 73 | 82 | 81 | 68 | 85 | 49 | * | 84 | * | 73 | 93 | 68 | 85 | 78 | 85 | 89 | 93 | 67 | 92 | 75 | 83 | 73 | 70 | |
| Activities by local governments and citizens' groups | 66 | 53 | 84 | 76 | 78 | 82 | 68 | 77 | 63 | * | 73 | * | 63 | 78 | 61 | 67 | 94 | 85 | 68 | 71 | 56 | 75 | 73 | 77 | 70 | 65 | |
| Scientific and technological contributions | 63 | 62 | 82 | 59 | 67 | 61 | 41 | 58 | 37 | * | 45 | * | 30 | 59 | 52 | 36 | 59 | 69 | 61 | 43 | 11 | 42 | 55 | 56 | 58 | 59 | |
| Formation of recycling systems | 68 | 40 | 76 | 71 | 71 | 62 | 35 | 40 | 46 | * | 26 | * | 40 | 30 | 18 | 31 | 72 | 85 | 33 | 14 | 33 | 17 | 49 | 50 | 56 | 45 | |
| Environmental measures by industry | 59 | 65 | 60 | 49 | 64 | 75 | 45 | 42 | 43 | * | 46 | * | 48 | 56 | 34 | 46 | 53 | 62 | 54 | 29 | 33 | 33 | 51 | 53 | 54 | 59 | |
| Conservation of forest resources | 15 | 10 | 38 | 44 | 57 | 34 | 42 | 43 | 28 | * | 55 | * | 40 | 52 | 52 | 51 | 56 | 46 | 44 | 29 | 11 | 42 | 46 | 42 | 33 | 26 | |
| Conservation of biodiversity | 10 | 14 | 31 | 37 | 41 | 35 | 29 | 40 | 18 | * | 39 | * | 38 | 44 | 50 | 51 | 47 | 46 | 58 | 43 | 22 | 50 | 39 | 41 | 27 | 28 | |
| Greenhouse gas prevention measures | 23 | 25 | 22 | 20 | 41 | 34 | 23 | 23 | 11 | * | 34 | * | 25 | 19 | 18 | 21 | 19 | 46 | 46 | 50 | 33 | 8 | 29 | 26 | 26 | 25 | |
| Population and poverty problems | 8 | 15 | 21 | 12 | 23 | 14 | 27 | 33 | 12 | * | 41 | * | 25 | 33 | 36 | 38 | 19 | 31 | 21 | 7 | 22 | 33 | 25 | 23 | 18 | 19 | |
| Lifestyle alteration | 10 | 9 | 4 | 15 | 10 | 8 | 19 | 17 | 15 | * | 23 | * | 18 | 7 | 14 | 15 | 6 | 8 | 21 | 0 | 0 | 33 | 14 | 13 | 12 | 11 | |

Note: ^{*1} Progress is calculated as the combined total of the ‘Significant progress’ and ‘Some progress’ categories.

As in previous years, we polled respondents about the progress they felt had been achieved in ten categories taken from the Agenda 21 action plan. The results are listed in the chart in descending order, starting with categories with the greatest number of responses indicating “Progress” (combines “Significant progress” and “Some progress”).

- Over two-thirds of respondents from all regions including Japan but excluding the Asian Four indicated that progress had been made in the “Promotion of environmental education.”
- The responses indicating progress in “Activities by local governments and citizens’ groups” were extremely high in Oceania and United States & Canada, at 94% and 84% respectively.
- More than 60% of respondents from Japan, United States & Canada, Western Europe, Eastern Europe and the former Soviet Union reported that progress had been made in “Scientific/technological contributions.”

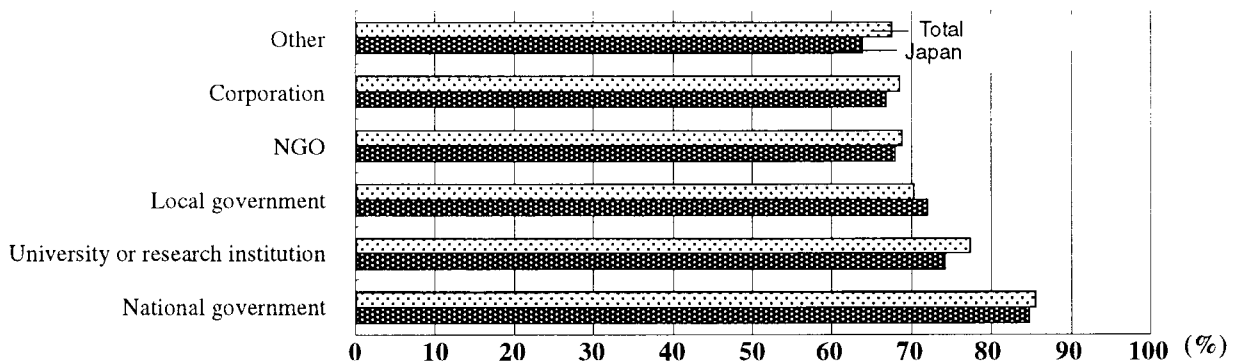
Progress toward Agenda 21



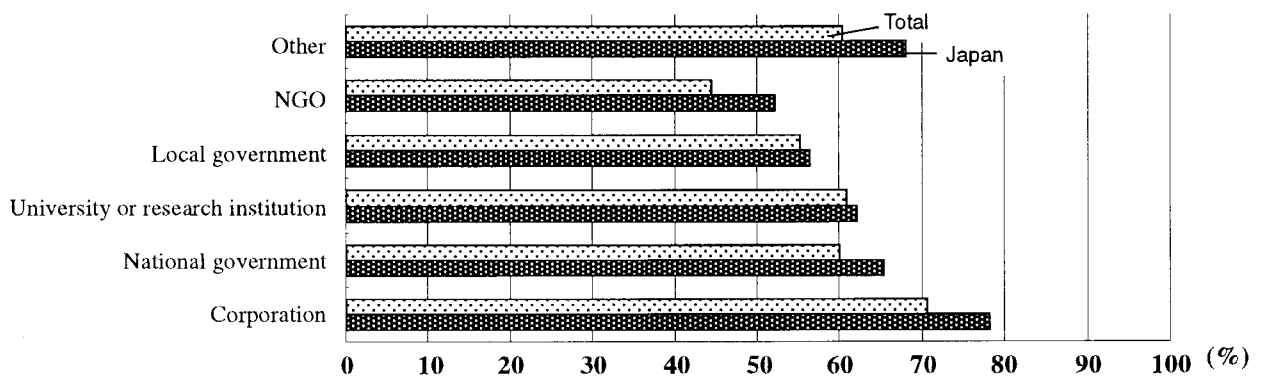
- More than 70% of respondents in United States & Canada, Western Europe, and Oceania indicated progress in “Formation of recycling systems.” On the other hand, respondents from Africa and the Rest of Asia who indicated progress in this category were limited to less than one-quarter, whereas approximately half of them expressed that there had been “No progress.”
- In the categories of “Conservation of forest resources,” “Conservation of biodiversity,” “Greenhouse gas prevention measures,” “Population/poverty problems,” and “Lifestyle alteration,” the percentage of respondents who indicated that there had been “No progress” surpassed those who stated that progress had been made. In particular, with regards to “Greenhouse gas prevention measures,” “Population/poverty problems,” and “Lifestyle alteration,” approximately 50% or more respondents responded that there had been “No progress.”

Results by the Occupation of the Respondents:

Responses indicating progress in “Promotion of environmental education”



Responses indicating progress in “Scientific/technological contributions”



- In analyzing the results by the occupation of the respondents, it was found that a high percentage of government officials and employees of universities and research institutions stated that there was progress in the “Promotion of environmental education.” On the other hand, “Scientific/technological contributions” was particularly high among employees of Japanese corporations at 78%.

Comparison of Differences between 1999 and 2004

| | Japan | United States & Canada | Western Europe | Asia | Asian Four | Rest of Asia | Latin America | Africa | Oceania | Eastern Europe & former Soviet Union | Middle East | Overseas Total | Total | (%) |
|--|-------|------------------------|----------------|------|------------|--------------|---------------|--------|---------|--------------------------------------|-------------|----------------|-------|-----|
| Promotion of environmental education | +14 | -2 | +1 | -17 | * | * | -20 | -16 | -6 | -3 | -25 | -8 | +3 | |
| Activities by local governments and citizens' groups | +13 | +8 | -5 | -8 | * | * | -15 | -5 | +9 | -3 | -19 | -4 | +5 | |
| Scientific and technological contributions | +1 | +23 | +6 | -17 | * | * | -29 | +16 | -10 | +19 | -31 | -1 | 0 | |
| Formation of recycling systems | +28 | +5 | +9 | -5 | * | * | +10 | 0 | -13 | +19 | +17 | -1 | +12 | |
| Environmental measures by industry | -7 | +11 | -10 | +3 | * | * | -8 | -12 | -8 | +26 | 0 | -2 | -5 | |
| Conservation of forest resources | +5 | -6 | +22 | -1 | * | * | -12 | +1 | +10 | +15 | -31 | +4 | +7 | |
| Conservation of biodiversity | -3 | -6 | +6 | -11 | * | * | -7 | -1 | +1 | +15 | 0 | -2 | 0 | |
| Greenhouse gas prevention measures | -1 | +2 | +7 | 0 | * | * | +6 | -2 | -27 | -4 | +25 | +2 | +1 | |
| Population and poverty problems | -8 | +9 | +9 | -6 | * | * | -8 | -2 | -12 | +14 | -11 | +1 | -1 | |
| Lifestyle alteration | +1 | -11 | +2 | +3 | * | * | +10 | -2 | -1 | +21 | -33 | +1 | +2 | |

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

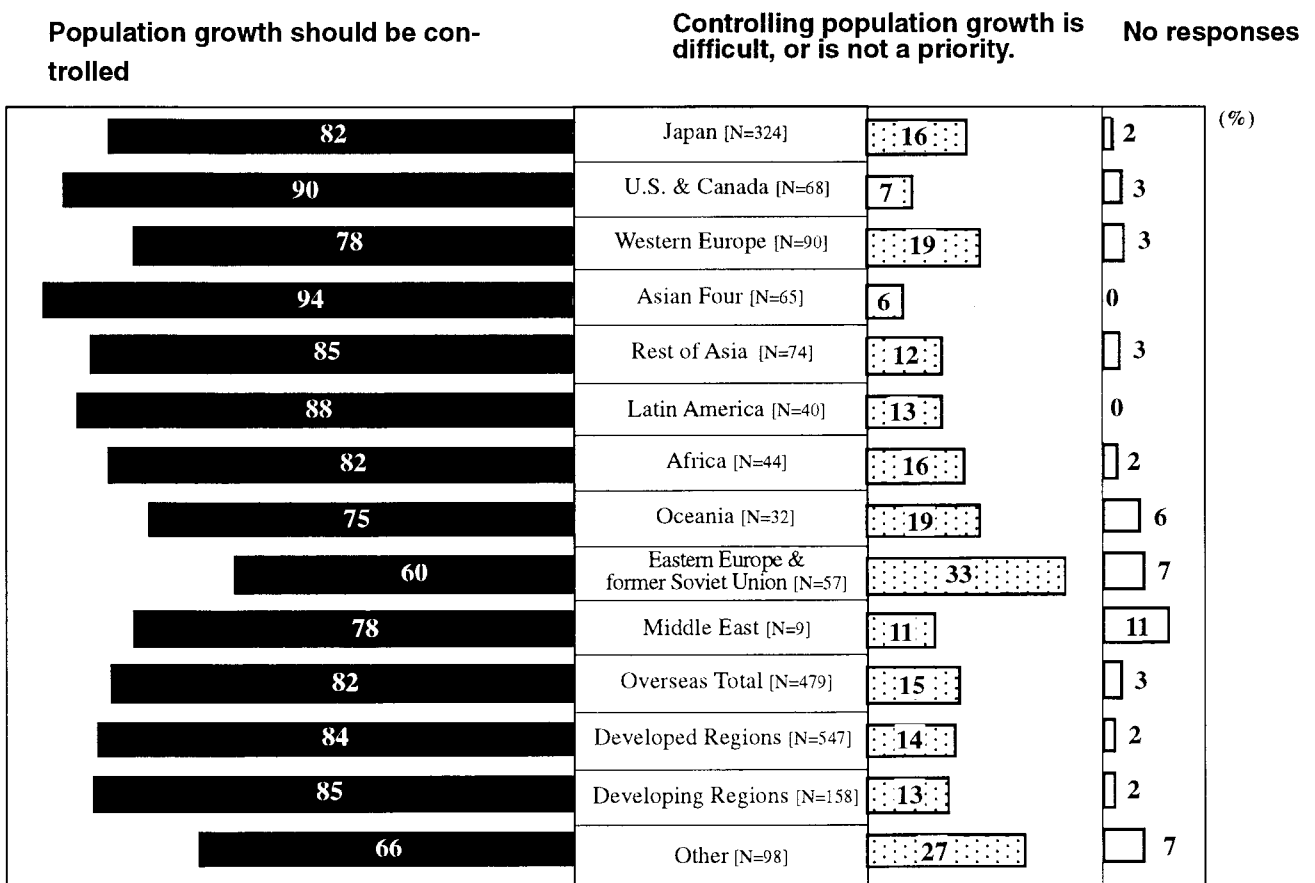
Moreover, in comparison to the results from five years ago:

- The greatest overall increase in the responses indicating “Progress” occurred in “Formation of recycling systems,” which underwent a 12 percentage point rise, followed by “Conservation of forest resources,” at a 7 percentage point rise. Nonetheless, there has been little change in the overall ranking of the categories, with the percentage of respondents indicating that there had been progress in “Population/poverty problems” and “Lifestyle alteration” remaining unchanged at below 20%.
- In comparing the results from Japan and overseas, it was found that there was a conspicuous difference in the responses to “Promotion of environmental education,” “Activities by local governments and citizens’ groups,” and “Formation of recycling systems.” Whereas there was a 10 percentage point increase in Japanese respondents who felt that progress had been made in these categories, responses from their overseas counterparts underwent no change or a slight decline.
- There was great variance by region to the category “Scientific/technological contribution.” Whereas responses from United States & Canada, Eastern Europe and the former Soviet Union indicating progress increased by 20 percentage points, there was a 29 percentage point decline among their Latin America counterparts.

2. MAIN FOCUS OF THE CURRENT YEAR'S QUESTIONNAIRE

2-1. POPULATION GROWTH

Question (1): The world population has surpassed six billion, and is estimated to grow to eight billion by 2030. It is feared that this rapid population growth will have a pronounced adverse effect on the environment, particularly in developing countries. Please select the statement that best reflects your opinion, from: "Population growth should be controlled," or "Controlling population growth is difficult or is not a priority."



- More than 80% of respondents from both Japan and overseas stated that population growth should be controlled.
- The percentage of respondents who expressed that population growth should be controlled was lowest in Eastern Europe and the former Soviet Union at 60%, where one-third of the respondents stated, "Controlling population growth is difficult, or is not a priority."

Question (2): The left column in the next page chart shows "Measures to control population growth" under the selection "Population growth should be controlled," and "Reasons why controlling population growth is difficult or is not a priority" for the alternate category. If you selected "Population growth should be controlled," please further indicate two of the measures from the choices below that should be employed. If you selected "Controlling population growth is difficult or is not a priority," please select one of the following reasons that best reflects your opinion.

| | Developed Regions | | | | Developing Regions | | | Other | | | | | | | |
|--|--|-----------|-----------|-----------|-----------------------------|-----------|-----------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| | Japan (N=324) | | | | United States & Canada (68) | | | Western Europe (90) | | | | | | | |
| | Asian Four (65) | | | | RoA (74) | | | Latin America (40) | | | | | | | |
| | Africa (44) | | | | Oceania (32) | | | Eastern Europe (9) | | | | | | | |
| | Middle East & former Soviet Union (57) | | | | Overseas Total (479) | | | Developed Regions (547) | | | | | | | |
| | Developing Regions (158) | | | | Other (98) | | | | | | | | | | |
| Population growth should be controlled using the following measures | 82 | 90 | 78 | 94 | 85 | 88 | 82 | 75 | 60 | 78 | 82 | 84 | 85 | 66 | (%) |
| Measures | [N=266] | [61] | [70] | [61] | [63] | [35] | [36] | [24] | [34] | [7] | [391] | [458] | [134] | [65] | |
| Raising the status of women by promoting education | 55 | 64 | 69 | 51 | 48 | 40 | 67 | 58 | 38 | 29 | 55 | 57 | 51 | 45 | |
| Family planning | 18 | 23 | 27 | 13 | 44 | 51 | 47 | 29 | 38 | 57 | 33 | 19 | 47 | 37 | |
| Increasing assistance from developed to developing countries for family planning and education | 67 | 49 | 36 | 70 | 37 | 49 | 33 | 38 | 56 | 43 | 46 | 60 | 39 | 48 | |
| Eliminate need for multiple children by enhancing welfare and health care systems | 30 | 41 | 37 | 38 | 22 | 14 | 31 | 33 | 26 | 0 | 31 | 33 | 22 | 26 | |
| Government policies to limit children | 8 | 7 | 6 | 20 | 22 | 9 | 3 | 8 | 6 | 14 | 11 | 9 | 13 | 8 | |
| Cooperation of religious leaders to provide guidance | 11 | 10 | 9 | 5 | 10 | 14 | 8 | 8 | 18 | 14 | 10 | 10 | 10 | 14 | |
| Other | 5 | 2 | 3 | 3 | 2 | 6 | 3 | 4 | 0 | 14 | 3 | 4 | 3 | 3 | |
| No responses | 1 | 0 | 4 | 0 | 5 | 3 | 0 | 8 | 6 | 14 | 3 | 1 | 3 | 8 | |
| Controlling population growth is difficult, or is not a priority | 16 | 7 | 19 | 6 | 12 | 13 | 16 | 19 | 33 | 11 | 15 | 14 | 13 | 27 | |
| Reason | [N=53] | [5] | [17] | [4] | [9] | [5] | [7] | [6] | [19] | [1] | [73] | [79] | [21] | [26] | |
| Difficult because related to religious beliefs | 11 | 60 | 12 | 0 | 22 | 0 | 14 | 0 | 5 | 100 | 14 | 14 | 14 | 8 | |
| Priority to curb mass production, consumerism and waste in developed countries | 75 | 40 | 82 | 100 | 67 | 100 | 57 | 100 | 74 | 0 | 75 | 76 | 71 | 77 | |
| Other | 13 | 0 | 6 | 0 | 0 | 0 | 29 | 0 | 16 | 0 | 8 | 10 | 10 | 12 | |
| No responses | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 5 | 4 | |
| No responses | 2 | 3 | 3 | 0 | 3 | 0 | 2 | 6 | 7 | 11 | 3 | 2 | 2 | 7 | |

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

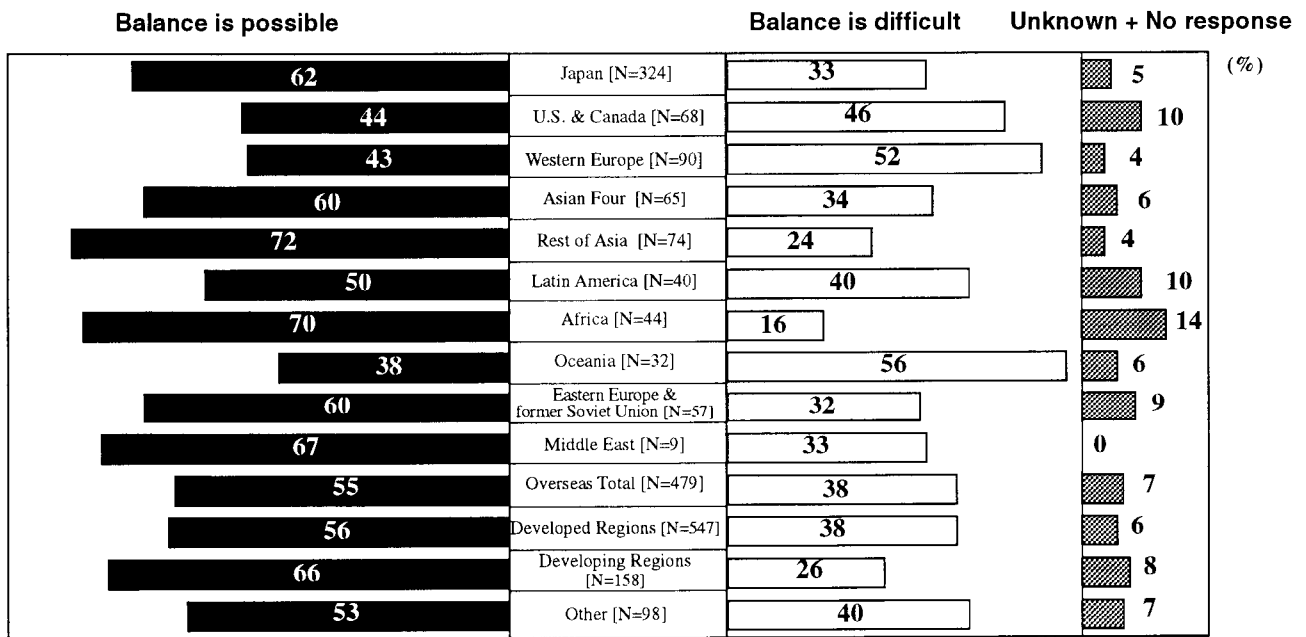
A single circle is used for the answer with the second highest number of replies.

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 less than two items, causing the aggregate total to be less than 200%.

- Of the measures to control population growth, the approaches most frequently selected were “Raising the status of women by promoting education” and “Increasing assistance from developed countries to promote family planning and education in developing countries.” In developing regions, this was followed by “Promoting family planning,” whereas respondents in Japan and Western Europe selected “Eliminating the need to have multiple children by enhancing welfare and health care systems,” marking a distinction between developed and developing regions.
- Of the respondents who expressed that controlling population growth was difficult or not a priority, 75% chose the reason, “Priority should be given to curbing mass production, consumerism, and waste in developed countries.”

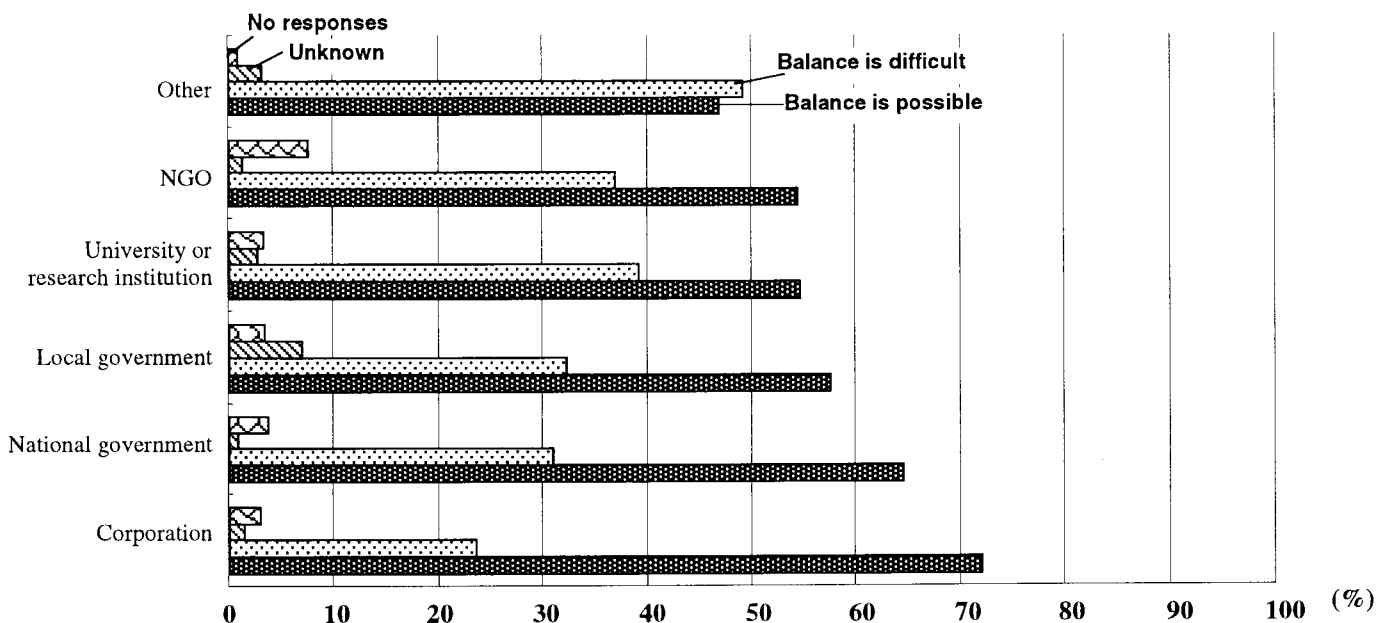
2-2. BALANCING ECONOMIC GROWTH AND ENVIRONMENTAL PRESERVATION

Question (1): Balancing economic growth and environmental preservation is an issue of paramount importance in envisioning the future of the human race. In your opinion, can this balance be achieved? Please select one statement that best reflects your opinion, from: "a balance is possible," "a balance is difficult," or "I don't know."



Results by the occupation of the respondents:

Balancing Economic Growth and Environmental Preservation



- 62% of respondents from Japan and 55% from overseas indicated that it was possible to balance economic growth and environmental preservation, whereas 33% of respondents from Japan and 38% from overseas stated that a balance was difficult to achieve.
- In the developing regions, there were more than twice as many respondents who stated that a balance between economic growth and environmental preservation was possible than those who felt that it was difficult. Respondents from Japan and the Asian Four expressed a similar view; however, the reverse was the case in United States & Canada and Western Europe, where respondents who felt that a balance was difficult exceeded those who stated that it was possible.
- Oceania had the highest percentage of respondents at 56% who felt that a balance was difficult.
- In analyzing the results by the occupation of the respondents, it was found that over 65% of government officials and corporate employees viewed that a balance between economic growth and environmental preservation was possible.

Question (2): The left column in the chart below contains reasons why “a balance is possible” or “a balance is difficult.” Please select one statement that best reflects your opinion regarding your selection in the previous page and circle your choice.

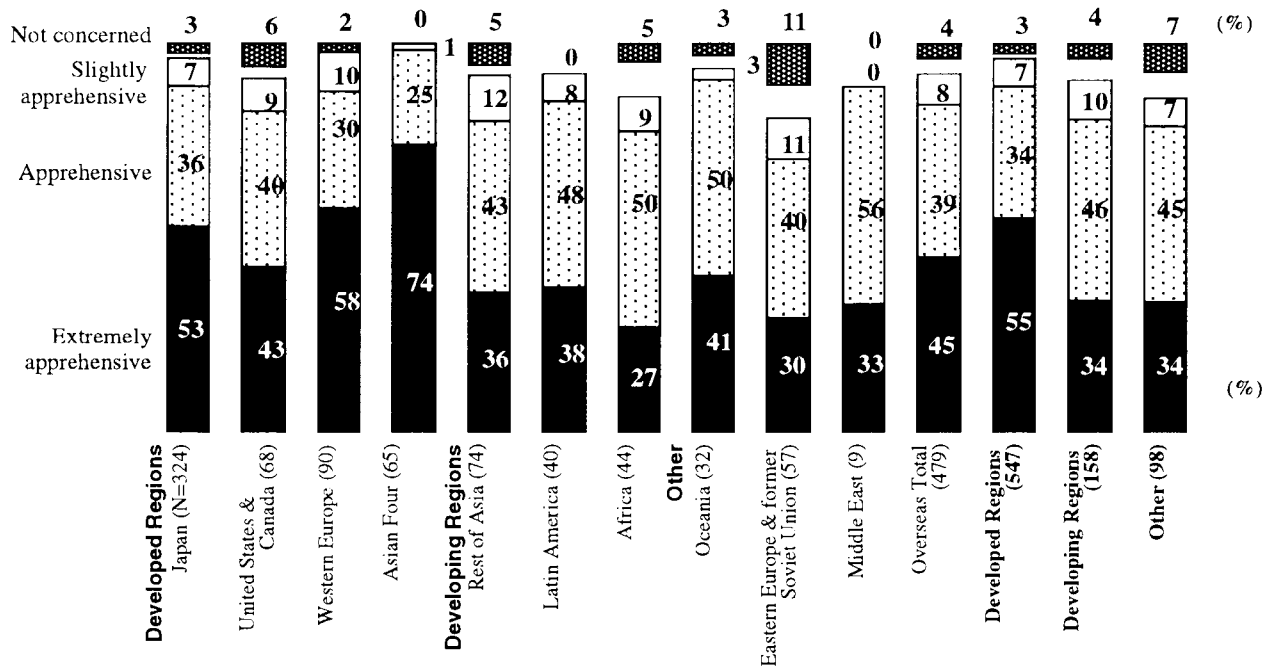
| | Developed Regions | | | | Developing Regions | | | | Other | | | | | |
|---|-------------------|-----------------------------|---------------------|-----------------|--------------------|--------------------|-------------|--------------|---------------------|--|----------------------|-------------------------|--------------------------|------------|
| | Japan (N=324) | United States & Canada (68) | Western Europe (90) | Asian Four (65) | RoA (74) | Latin America (40) | Africa (44) | Oceania (32) | Eastern Europe (32) | Middle East & former Soviet Union (57) | Overseas Total (479) | Developed Regions (547) | Developing Regions (158) | Other (98) |
| A balance is possible | 62 | 44 | 43 | 60 | 72 | 50 | 70 | 38 | 60 | 67 | 55 | 56 | 66 | 53 |
| Reason | [N=201] | [30] | [39] | [39] | [53] | [20] | [31] | [12] | [34] | [6] | [264] | [309] | [104] | [52] |
| Technologies also progress to create industries to resolve environmental problems | 21 | 33 | 10 | 8 | 6 | 15 | 10 | 17 | 21 | 33 | 14 | 19 | 9 | 21 |
| Regulations foster development, processes and mechanisms for the environment while stimulating consumption and investment | 34 | 17 | 18 | 54 | 28 | 30 | 16 | 17 | 18 | 50 | 27 | 33 | 25 | 21 |
| Information based industries balance economic growth and environmental preservation. . . | 8 | 0 | 13 | 10 | 23 | 25 | 10 | 17 | 38 | 0 | 17 | 8 | 19 | 29 |
| Developing countries provide source of growth | 6 | 0 | 0 | 8 | 2 | 0 | 6 | 0 | 0 | 17 | 3 | 5 | 3 | 2 |
| Increasing efficiency of natural resource utilization lessen environmental burden | 22 | 30 | 44 | 21 | 15 | 20 | 32 | 42 | 12 | 0 | 25 | 25 | 21 | 17 |
| Other | 6 | 13 | 5 | 0 | 2 | 5 | 0 | 0 | 3 | 0 | 3 | 6 | 2 | 2 |
| No responses | 2 | 7 | 10 | 0 | 25 | 5 | 26 | 8 | 9 | 0 | 12 | 3 | 21 | 8 |
| A balance is difficult | 33 | 46 | 52 | 34 | 24 | 40 | 16 | 56 | 32 | 33 | 38 | 38 | 26 | 40 |
| Reason | [N=107] | [31] | [47] | [22] | [18] | [16] | [7] | [18] | [18] | [3] | [180] | [207] | [41] | [39] |
| Not possible to preserve the environment if past levels of economic growth maintained | 24 | 48 | 40 | 45 | 44 | 88 | 71 | 61 | 56 | 0 | 51 | 34 | 66 | 54 |
| Relinquish economic growth. . . Instead of GDP, new measures of progress necessary | 70 | 45 | 53 | 55 | 39 | 6 | 29 | 33 | 33 | 100 | 42 | 61 | 24 | 38 |
| Other | 6 | 3 | 4 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 3 | 4 | 2 | 3 |
| No responses | 0 | 3 | 2 | 0 | 17 | 0 | 0 | 6 | 6 | 0 | 4 | 1 | 7 | 5 |
| Unknown + No responses | 5 | 10 | 4 | 6 | 4 | 10 | 14 | 6 | 9 | 0 | 7 | 6 | 8 | 7 |

Notes: Figures enclosed by a double circle represent the answer with the highest number of replies. A single circle is used for the answer with the second highest number of replies.

- Of those who stated that a balance was possible, the main reason selected by respondents from Japan, the Asian Four, Rest of Asia, Latin America, and the Middle East was “Introduction of regulations encourage the development of products, production processes, and distribution mechanisms that take the environment into consideration while stimulating consumption and investment.”
- On the other hand, of those who expressed that a balance was difficult, approximately the same number of respondents selected the reason “It will not be possible to preserve the environment if past levels of economic growth are to be maintained,” as well as “The current form of economic growth should be relinquished, and societal progress should be evaluated on new measures such as spiritual satisfaction.”

2-3. GLOBAL WARMING

Question (1): It is forecast that global warming will cause numerous environmental problems, including the rise in sea levels, torrential rains, droughts, the intensification of typhoons and hurricanes, the destruction of species, and the expansion of regions affected by tropical infectious diseases. On the other hand, the Kyoto Protocol, which aims to preclude global warming, has not yet taken effect because the United States has withdrawn from and Russia has not yet ratified the Protocol. Please select one of the following items that reflects your opinion about future prospects for the environment in the absence of an international strategy to contend with global warming.



- More than 85% of respondents from Japan and overseas selected either “Extremely apprehensive” or “Apprehensive.”
- The highest percentage of respondents who selected either “Extremely apprehensive” or “Apprehensive” were from Asian Four, at 99%, whereas the Eastern Europe and the former Soviet Union had the lowest percentage, at 70%.
- Overall, 4% of respondents selected “Not concerned,” of which the highest percentage were from Eastern Europe and the former Soviet Union, at 11%.

Question (2): If you selected “Not concerned” in the previous question, please choose one from the following items that indicates the reason for your selection.

Reasons for “Not concerned”

The environmental problems caused by global warming will not be very severe.
 The existence of global warming has not been scientifically proven.
 Global warming is a welcome phenomenon for countries in frigid regions.
 The effects of global warming in my country are minimal.
 Damages will not occur in my generation.
 Other
 No responses

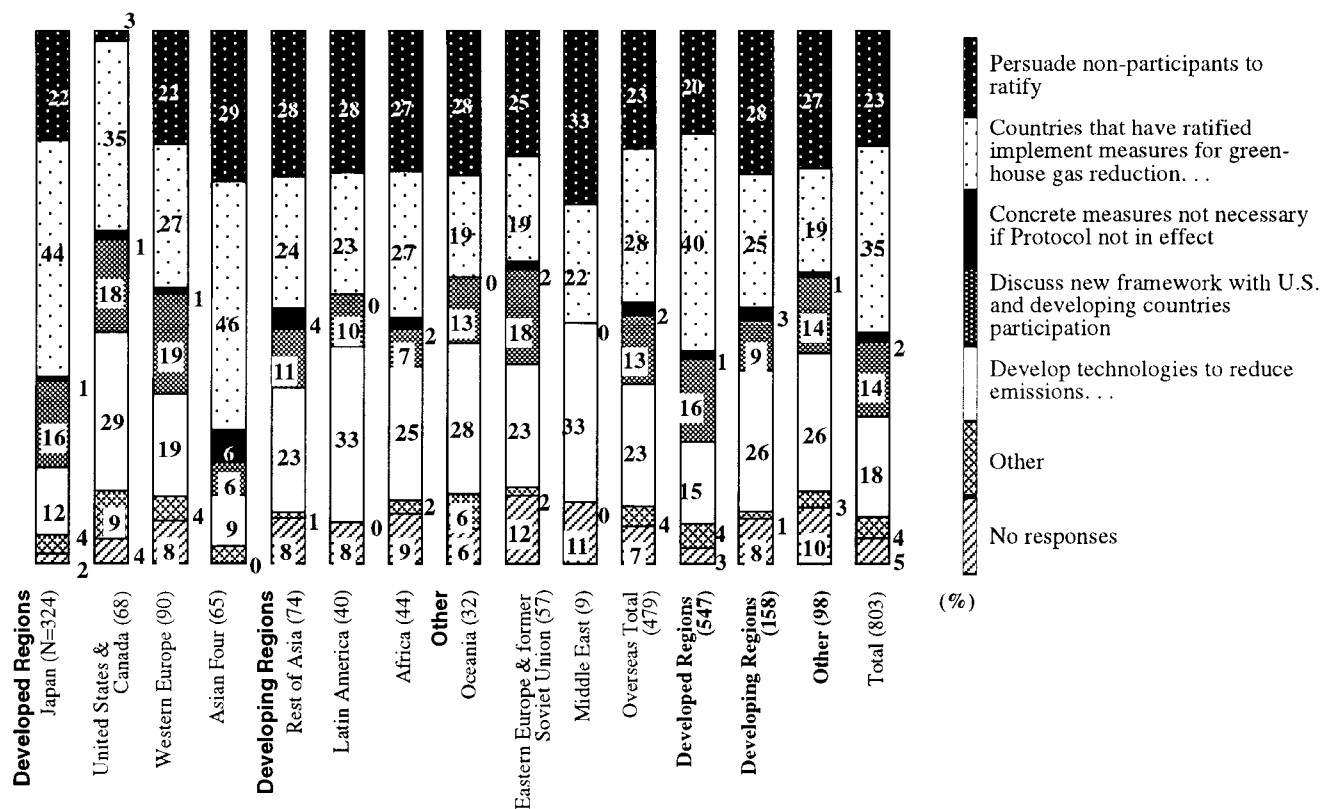
| | Total (N=28) | Japan (9) | Overseas Total (19) | Developed Regions (15) | Developing Regions (6) | Other (7) |
|--|--------------|-----------|---------------------|------------------------|------------------------|-----------|
| The environmental problems caused by global warming will not be very severe. | 21 | 33 | 16 | 27 | 17 | 14 |
| The existence of global warming has not been scientifically proven. | 29 | 33 | 26 | 40 | 0 | 29 |
| Global warming is a welcome phenomenon for countries in frigid regions. | 0 | 0 | 0 | 0 | 0 | 0 |
| The effects of global warming in my country are minimal. | 14 | 0 | 21 | 0 | 50 | 14 |
| Damages will not occur in my generation. | 7 | 0 | 11 | 0 | 33 | 0 |
| Other | 21 | 22 | 21 | 27 | 0 | 29 |
| No responses | 7 | 11 | 5 | 7 | 0 | 14 |

Question (3): With the Kyoto Protocol yet to take effect, what measure should be implemented to counter global warming? Please select one from the following items.

Measures to Counter Global Warming

| | Developed Regions | | | | | Developing Regions | | | | | Other | | | | |
|---|-------------------|-----------------------------|---------------------|-----------------|----------|--------------------|-------------|--------------|---|----------------------|-------------------------|--------------------------|------------|-------------|----|
| | Japan (N=324) | United States & Canada (68) | Western Europe (90) | Asian Four (65) | RoA (74) | Latin America (40) | Africa (44) | Oceania (32) | Eastern Europe & former Soviet Union (57) | Overseas Total (479) | Developed Regions (547) | Developing Regions (158) | Other (98) | Total (803) | |
| Persuade non-participants to ratify | 22 | 3 | 22 | 29 | 28 | 28 | 27 | 28 | 25 | 33 | 23 | 20 | 28 | 27 | 23 |
| Countries that have ratified implement measures for greenhouse gas reduction... | 44 | 35 | 27 | 46 | 24 | 23 | 27 | 19 | 19 | 22 | 28 | 40 | 25 | 19 | 35 |
| Concrete measures not necessary if Protocol not in effect | 1 | 1 | 1 | 6 | 4 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 | 1 | 2 |
| Discuss new framework with U.S. and developing countries participation | 16 | 18 | 19 | 6 | 11 | 10 | 7 | 13 | 18 | 0 | 13 | 16 | 9 | 14 | 14 |
| Develop technologies to reduce emissions... | 12 | 29 | 19 | 9 | 23 | 33 | 25 | 28 | 23 | 33 | 23 | 15 | 26 | 26 | 18 |
| Other | 4 | 9 | 4 | 3 | 1 | 0 | 2 | 6 | 2 | 0 | 4 | 4 | 1 | 3 | 4 |
| No responses | 2 | 4 | 8 | 0 | 8 | 8 | 9 | 6 | 12 | 11 | 7 | 3 | 8 | 10 | 5 |

- The measure most frequently identified by respondents overall, at 35% was “Countries that have ratified the Kyoto Protocol implement measures to meet greenhouse gas reduction goals.” This measure was selected by 40% of respondents in developed regions, with Japan, at 44%.
- The second most popular measure was “Persuade non-participating countries such as Russia and the United States to ratify the Kyoto Protocol,” at 23%. However, in United States & Canada this response was cited at an extremely low rate in comparison to other regions at only 3%.
- This was followed by the measure “Develop innovative technologies with a long term perspective,” at 18%. This selection received a support at more than 25% of the respondents from United States & Canada, Latin America, Africa, Oceania, and the Middle East.



Question (4): Whereas the Kyoto Protocol governs the emissions of greenhouse gases from 2008 to 2012, international discussions regarding a framework of measures to take effect after 2013 are scheduled to begin next year. What is your opinion on the type of regulations that should be included for this timeframe? Please choose four from the following items.

Countermeasures for consideration after the year 2013

| | Developed Regions | | | | Developing Regions | | | | Other | | | | | | |
|---|-------------------|-----------------------------|---------------------|-----------------|--------------------|--------------------|-------------|--------------|---|-----------------|----------------------|-------------------------|--------------------------|-------------|--------|
| | Japan (N=324) | United States & Canada (68) | Western Europe (90) | Asian Four (65) | RoA (74) | Latin America (40) | Africa (44) | Oceania (32) | Eastern Europe & former Soviet Union (57) | Middle East (9) | Overseas Total (479) | Developed Regions (547) | Developing Regions (158) | Total (803) | |
| Extend fundamental measures established in Protocol | 26 | 9 | 23 | 22 | 24 | 18 | 30 | 25 | 21 | 44 | 22 | 23 | 24 | 24 | 23 (%) |
| Substantial revision of Protocol necessary | 16 | 44 | 47 | 28 | 14 | 20 | 14 | 44 | 23 | 11 | 30 | 26 | 15 | 29 | 24 |
| Establish target for CO ₂ in atmosphere | 49 | 34 | 24 | 26 | 43 | 28 | 36 | 47 | 23 | 44 | 32 | 41 | 37 | 33 | 39 |
| Further reductions of greenhouse gas by developed countries | 34 | 28 | 41 | 51 | 38 | 33 | 34 | 28 | 35 | 22 | 37 | 36 | 35 | 32 | 36 |
| Control developed countries' greenhouse gas level as in Protocol | 2 | 3 | 10 | 14 | 24 | 10 | 23 | 6 | 25 | 22 | 15 | 5 | 20 | 18 | 9 |
| Reduce (high-emission level) developing countries' greenhouse gas | 33 | 26 | 26 | 35 | 16 | 28 | 16 | 31 | 23 | 11 | 25 | 31 | 19 | 24 | 28 |
| Ceiling for emission levels also applied to (low-emission level) developing countries | 21 | 7 | 14 | 18 | 11 | 3 | 20 | 16 | 11 | 11 | 13 | 18 | 11 | 12 | 16 |
| No emissions regulations for developing countries | 0 | 0 | 1 | 2 | 8 | 3 | 5 | 0 | 0 | 0 | 2 | 1 | 6 | 0 | 2 |
| Regulate maximum emissions level for both developed and developing countries | 36 | 35 | 26 | 49 | 36 | 35 | 36 | 53 | 33 | 33 | 37 | 36 | 36 | 40 | 36 |
| Regulate assistance from developed countries and conditions for receiving funds at developing countries | 16 | 24 | 12 | 55 | 15 | 23 | 14 | 16 | 28 | 0 | 23 | 21 | 16 | 21 | 20 |
| Continue mechanisms in Protocol (emissions trading, implementation and clean development) | 30 | 41 | 34 | 28 | 36 | 40 | 39 | 25 | 32 | 44 | 35 | 32 | 38 | 31 | 33 |
| Developed countries required to employ new technologies to reduce emissions | 28 | 26 | 26 | 38 | 36 | 50 | 45 | 22 | 33 | 22 | 34 | 29 | 42 | 29 | 31 |
| Policies for advanced energy conservation | 46 | 57 | 52 | 31 | 36 | 33 | 20 | 28 | 37 | 11 | 39 | 47 | 31 | 32 | 42 |
| Establish reusable energy quota within total energy consumption for all countries | 30 | 24 | 23 | 3 | 30 | 18 | 23 | 22 | 21 | 33 | 21 | 25 | 25 | 22 | 24 |
| Other | 6 | 7 | 10 | 0 | 5 | 0 | 2 | 6 | 0 | 0 | 4 | 6 | 3 | 2 | 5 |
| No responses | 2 | 3 | 1 | 0 | 3 | 13 | 7 | 3 | 12 | 11 | 5 | 2 | 6 | 9 | 4 |

Notes: In Japan, Overseas Total and Total, figures enclosed by a double circle represent the answer with the highest number of replies. A single circle is used for the answer with the second highest number of replies, a square for the third highest and a triangle for the fourth highest. Figures enclosed by a bold circle represent the answer with the number of more than 40 replies.

- The most frequently cited response among Japanese respondents was “Establish target for CO₂ in atmosphere,” followed by “Policies for advanced energy conservation.”
- “Policies for advanced energy conservation” was the most popular measure among overseas respondents, followed by “Further reductions of greenhouse gas by developed countries” and “Regulate maximum emissions level for both developed and developing countries.”
- Respondents in developed regions most frequently selected “Policies for advanced energy conservation,” followed by “Establish target for CO₂ in atmosphere.” On the other hand, the most popular response from developing regions was “Developed countries required to employ new technologies to reduce emissions,” followed by “Continue mechanisms in Protocol (emissions trading, implementation and clean development).”
- By region, “Policies for advanced energy conservation” was the most frequently cited response in United States & Canada and Western Europe with more than 50% of the respondents making the selection, followed by “Substantial revision of Protocol necessary.” On the other hand, the most common response from Latin America and Africa was “Developed countries required to employ new technologies to reduce emissions.”

2-4. OZONE LAYER

Question: The hole in the ozone layer above the South Pole expanded to its largest size in history last year. In addition, the depletion of the ozone layer has also been detected throughout the earth's frigid to temperate zones. Meanwhile, measures taken under the Montreal Protocol (MP) have resulted in a trend showing the reduction of CFCs atmospheric content. Please select one from the following items that most closely resembles your opinion on this issue.

| | Developed Regions | | | | Developing Regions | | | | Other | | | | | | |
|--|-------------------|-----------------------------|---------------------|-----------------|--------------------|--------------------|-------------|--------------|--------------------|--|----------------------|-------------------------|--------------------------|------------|-------------|
| | Japan (N=324) | United States & Canada (68) | Western Europe (90) | Asian Four (65) | RoA (74) | Latin America (40) | Africa (44) | Oceania (32) | Eastern Europe (9) | Middle East & former Soviet Union (57) | Overseas Total (479) | Developed Regions (547) | Developing Regions (158) | Other (98) | Total (803) |
| Abide by 1999 MP adjustments for exports of Cl and Br by developed countries | 11 | 7 | 8 | 6 | 8 | 10 | 2 | 3 | 12 | 11 | 8 | 10 | 7 | 9 | 9 |
| Accelerate phase-out of HCFCs for developed countries | 22 | 25 | 21 | 23 | 23 | 20 | 32 | 34 | 21 | 33 | 24 | 22 | 25 | 27 | 23 |
| Review phase-out for developing countries to accelerate | 13 | 15 | 14 | 17 | 8 | 8 | 11 | 19 | 5 | 0 | 12 | 14 | 9 | 9 | 12 |
| Compulsory collection and destruction of used CFCs | 30 | 9 | 12 | 17 | 19 | 13 | 16 | 13 | 21 | 11 | 15 | 23 | 16 | 17 | 21 |
| Use funds for MP implementation to advance regulations of CFCs by developing countries | 19 | 31 | 32 | 31 | 27 | 40 | 32 | 31 | 23 | 33 | 30 | 24 | 32 | 27 | 26 |
| Other | 3 | 10 | 1 | 3 | 8 | 0 | 2 | 0 | 11 | 11 | 5 | 3 | 4 | 7 | 4 |
| No responses | 3 | 3 | 11 | 3 | 7 | 10 | 5 | 0 | 7 | 0 | 6 | 4 | 7 | 4 | 5 |

Notes: Figures enclosed by a double circle represent the answer with the highest number of replies.
A single circle is used for the answer with the second highest number of replies.

- In Japan, "Requirements should be put into place for the compulsory collection and destruction of CFCs" was the most popular response at 30%, followed by "The phase-out schedule of HCFCs for developed countries should be further accelerated."
- The most frequently selected measure overseas, at 30%, was "Effectively utilize multilateral funds to advance regulations governing the production and use of CFCs by developing countries," followed by "The phase-out schedule of HCFCs for developed countries should be further accelerated."

IV. Comments from Respondents

This year's questionnaire elicited a total of 297 free comments, including 171 from 65 countries outside Japan and 126 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 51 representing 25 countries and 24 from Japan. 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

I don't think the human species is really threatened by the current environmental problems. I do think that non-human species – many of the things that make life interesting – are seriously, perhaps catastrophically threatened.

M, U.S.A. 133

The new challenges now are 1) depletion of biodiversity and 2) global warming. The single largest answer, which can override other remedial measures, is protection of natural habitat with green vegetation which serves as carbon sink and gene bank.

Dr. S. N. Patro, House of Nature, Environment and Society Trust, INDIA 196

The Cartagena Protocol on Biosafety serves as an encouraging example of engaging developing countries in ambitious environmental policies. It deserves higher visibility.

Ernst von Weizsacker, German Parliament, GERMANY 153

In Africa it is very difficult to separate economic debt and poverty alleviation from environmental concerns. For most of the people in Africa biodiversity issues are a secondary matter to issues as survival and general well-being of the family.

Gregory Nyaciuse, National Parks & Wildlife Mat. Organization, ZIMBABWE 404

Global warming is one of the consequences of the fake life-style culture, which is best represented by the consumerism and throwaway behavior. It is the winning of the "rebellion of the masses" as Ortega y Gasset wrote once. It's what is more important. Is the TV more important than a good encyclopedia? Is the wedding of a celebrity more important than the number of people dying every day for the lack of food? No protocol will work until people – the consumers – feel there is a severe threat to their life. The majority of the citizens of the world will stay looking at the TV while the ozone layer decreases dramatically. It is not visible for them.

Dabid Ascanio, VENEZUELA 293

There is vital need for lifestyle changes in developed countries, curbing greed and consumerism and corresponding ethics must follow in developing countries, with austerity the true key word – thus conserving natural resources for future generations and ensuring survival of our planet.

N.D. Jayal, The Himalaya Trust, INDIA 304

As Gandhi had said, "Earth has enough for everybody's needs, but not for anybody's greed." Therefore, limiting human needs by changing our life-styles is the only real way to preserve our deteriorating environment. All other effort is peripheral to this central remedy.

Rajesh Bhat, Ahmedabad Study Action Group, INDIA 402

Problem is less from the developing countries than from the all-consuming 'developed' countries especially the United States. We in the West have to realize we are all at fault, however some emergent countries will soon be a big problem too – e.g. China.

Diana Mellor, Nelson Marlborough Inst. of Technology, NEW ZEALAND 327

Developed countries must abide by the Kyoto Protocol, etc. Developing countries must be assisted by foreign investment especially payment of a fair amount of money for their products. Dumping of western products even accompanied by aid is unacceptable.

J.L. Cloudsley-Thompson, University of London, U.K. 064

Environmental sciences should be included in the curriculum of graduate and post graduate classes in developing countries to increase awareness about the environmental issues. Regulations should be prepared to stop developed countries from dumping their waste in developing countries. Developed countries like America and

Russia should be made to sign the Kyoto Protocol first as they are the ones emitting high levels of CO₂.
Hina Rizvi, National Environmental Consulting Pvt. Ltd., PAKISTAN 281

The major problem is to change attitudes in developed countries + China –then, the rest might follow!
Sir John Burvett, Holial Biodiversity Network Trust, U.K. 186

On the global scope, the programmes of international assistance to the developing countries have to heed much more profoundly the environmental issues – in association and coupling with economic objectives to be achieved.

Jaroslav Machasek, Czech Academy of Sciences, CZECH 310

Disparities between developed and developing countries are growing and environmental degrading, species and habitat loss and population growth are increasing. Ineffective government and war/terrorism are diverting us from sustainable development. Globalization must be accelerated. We don't have any more earth to exploit.
F, International Finance Corporation, CANADA 144

Steps toward meaningful and frequent dialogues between developing and developed world, as equal partners.
P.S. Ramakrishnan, Jawaharcal Nehru University, INDIA 303

We need to put many resources on environmental education at all levels: school; TV; politicians; etc. Only when we all feel and understand the real connections between our daily life and environment will we be in conditions to take seriously this problem.

Jose Luis Vargas Poncini, Ministry of Environment, SPAIN 018

The Asahi Glass Foundation is one example of an important activity to promote raised awareness on environmental problems and possible solution. The latest years have showed the extreme importance of the impact (or missing impact) in relation to environmental concerns balanced with the economical concerns expressed by leaders of countries. The most important issue could therefore be to find new ways to raise awareness and consciousness among their leaders to change development and decisions. One aspect is of course to express the public concern like the Asahi Glass Foundation is supporting, but additional possibilities should be tried.

Claus Goldberg, Kvistgaard Consult, DENMARK 038

If progress is to be made, it is essential that education at all age levels be a cornerstone to helping us change our value systems and related human behavior so that sustainable communities and a sustainable planet are the long term results. I am not particularly worried during my lifetime (age 65) but do fear for my children and more so for my grandchildren. Unfortunately, the dysfunction of many societies in the world and the war on terrorism are diverting our attention from fighting our long term enemy when it comes to human survival – ourselves!

Paul M. Koch, P.Eng., City of Ottawa, CANADA 044

I have recently moved (temporarily) to a small island in Europe. I now face a community that has barely begun to confront environmental issues. It makes me realize that the wider world has a long way to go in bringing its citizens up to speed on issues of lifestyle choices that ultimately affect the continuation of our shared global environment. Governments cannot act unless their citizens are informed and citizens cannot be informed unless their governments take strong action. It is a two way process in which education plays the major role.

Carole Douglas, Ethico Pty Ltd., AUSTRALIA 213

Factors affecting population size, lifestyles and the responsibility of the rich and the middle class in both developed and developing countries are deeply connected with cultural change. This cannot simply be negotiated, but needs broad attention from trendsetters and teachers. Not easy to devise a movement that can achieve this, but some attempts exist.

M, Ministry of the Environment, NORWAY 241

Very few people in developing countries know what is contained in the Kyoto Protocol. There is the need to increase awareness.

Dr. J.B. Naab, Savanna Agricultural Research Institute, GHANA 410

An international awareness campaign on environmental problems should be sponsored by major advertising agencies and industry and carried out by UNEP. Environmental education in schools must be intensified and curricula strengthened. Main targets: young people, youth.

Tore J. Brevik, Vingthor, NORWAY 096

Fresh water supplies, utilization and conservation are more immediate problems than global warming.

Robert. L. Randall, The Rainforest Regeneration Institute, U.S.A. 063

Fresh water availability is the most pressing problem. This is primarily a man-made problem and can be solved if rainwater is harvested adequately and if water utilization pattern is more conservative.

Senoo Rawat, Social Centre for Rural Initiative and Advancement, INDIA 149

Loss of trees from forests and over plantation on plains will raise another new environmental problem in Bangladesh in future.

Tapas R. Chakraborty, Bangladesh Centre for Advanced Studies, BANGLADESH 171

There is an urgent need to develop an integrated approach to land management in dry rural areas in the Third World in order to ensure food safety and responsible management of fresh water resources.

Bent Anker Nielsen, Ministry of Environment, DENMARK 345

The phased approach as adapted (phased-out schedule) in the Kyoto Protocol is a good precedent, and this mechanism ought to be used and applied to other natural resource and environment issues such as forest management certification in the tropics, where some NGO's are advocating for a type of certification or no trade in tropical forest products.

E. Siisi-Wilson, African Timber Organization, GABON 408

Irrespective of whose history has been responsible for the present climate status, it is the global problem affecting everyone without discrimination. Then, why should there be a problem for all the nations to sit together and evolve a common strategy to protect themselves, and enjoy a cleaner present and leave a better planet for the future generation?

Dr. V.K. Banakar, Nat. Institute Oceanography, INDIA 002

Ozonation is the newest frontier in the effort to improve the human environment.

Carios R. Aguillon Castillo, Ministry of Planning & Development, VENEZUELA 336

Runaway population growth is the principal problem. As people in developing countries aim naturally to reach the economic level (and the associated consumption) of developed ones, the Earth will not support the pressure on its natural resources that will be depleted quickly. The global climate change and the beginning of a great episode of extinction of living species are other consequences of the human activities...

Bernardo Alvera, Institute Pirenaico de Ecologia, SPAIN 354

Solution of environmental problems must take into account particularity like poverty alleviation because poverty is the focus of deforestation, desertification, loss of biodiversity and so forth in the developing world. Lifestyle alteration also is a very important aspect of this issue, because this can determine economic growth. Economic growth can be achieved through lifestyle alteration, increasing financial, technical, and human resource assistance and consequently population.

Aderito Santana, National Institute of Meteorology, SAO TOME AND PRINCIPE 268

Soil pollution in China, also throughout the world, is serious. We should pay more attention to studies of environmental soil chemistry and remediable techniques of contaminated soil as soon as possible.

M, Institute of Soil Science, Chinese Academy of Sciences, CHINA 182

Dumping of waste – to get highlighted. Especially, hazardous wastes for developing countries.

Restrictions on trade if nations do not abide by ratified protocols.

Foundations of a central pool of appropriate technology for easy access by developing nations.

Establish regional chapters of Asahi Glass Foundation in various countries including India for a close interaction via workshops, seminars and conferences.

Gagan Dhir, M/S Rites Ltd, INDIA 130

Chemical contamination is an extremely serious threat to human health, wildlife, and the environment, and urgent measures are needed to better protect and redress the growing evidence of harm. The proposed new EU chemical policy reforms, while not perfect, offer the best new international approaches to addressing these critical issues for substance of priority concern. For more detailed information, see WWF's website focused on our campaign in support of an effective EU chemical policy, at www.pand.org/detox.

Clifton Curtis, WWF, U.S.A. 263

International financial resources should be much more efficiently used in order to meet the final goal of international dialogue: to cause a positive impact for the conservation of the planet and the increase of the welfare of the human being.

Soledad Bastidas, Carles Darwin Foundation, ECUADOR 355

The marginal cost for repairing the continuous environmental damages is higher and higher. If appropriate and early measures will not be taken at regional and global levels, then – over a not too long period of time – all the money in the world will not be enough to save the environment.

Paduraru Dan, National Research and Development Institute for Environment Protection, ROMANIA 391

Global "Eco-Army" has to be created which should be funded by UNEP. In this army all those new breed of students who have got special training in environmental conservation should be given job opportunity.

Dr. Anil Kumar Towari, National Forum for Environmental Studies & Conservation Research, INDIA 412

Progress in environmental protection can be achieved if the world's geopolitical situation is stabilized. Competition for essential natural resources will accelerate as economic conditions improve. We must strengthen international organizations, such as the UN to promote and enforce peace and cooperation – particularly in the Middle East.

Janusz Bajsarowicz, U.S.COPE, U.S.A. 277

Working in over 30 countries on environmental issues, it is clear to me that human effects are pervasive. Even in the most remote locations the impacts are measurable. The only effective solution will be to provide improved technologies to all (below production cost if necessary to ensure that they are used to benefit all) – and to make certain that the programs and policies of governments do not act as a barrier to the adoption of lower impact technologies and approaches which are likely to reduce consumption. It will not be easy to alter long term frameworks which favor consumption and growth but a necessary step to a sustainable planet. Means must be found to mobilize those with resources to invest in their own and the planet's future – in partnership with those who face problems on a daily basis. There is a great deal of discretionary income at the global scale – imagine if it were invested in the top ten areas where there are environmental payoffs to the benefit of all. The challenge is to find ways to make that attractive to the potential investors.

Dr. Ted Manning, Tourisk Inc.—Sustainable Destinations, CANADA 219

Integration of environmental policy goals into all other policy areas / “market forces” are often detrimental to the solution of environmental problems. Therefore economic driving forces have to be controlled by legal instruments. e.g. WTO agreement should support and not counteract environmental goals.

M, Federal Ministry for Agriculture, Forestry, Environment and Water Management, AUSTRIA 290

At all levels of government, environmental issues should be taken seriously. Central, regional and local governments should make adequate provisions for managing wastes in communities and make rules for sustainable use of environmental resources. Economic growth and development should not be at the expense of the physical environment.

Redeemer Kowu, Environmental Protection Agency, GHANA 291

Governments are too obsessed with their short-term survival to make the changes needed to protect the global environment. Individuals must make the change.

David Vernon, Recycle Australia Project, AUSTRALIA 148

Human rights, fair trade on the national and international levels as well as democracy, public awareness and others make the communities more positive and / active for environment conservation. The environmental leaders especially in third world countries must depend on their own qualifications but not on their relations to the governmental people and decision-makers who are unfair in many cases.

Prof. Dr. Ibrahim Moh. Kilany, Zagazig University, EGYPT 385

Environmental governance and local/grass root communities should be strengthened in order for the decision making processes at these basic levels of society to effectively enhance ordinary individual and family efforts to reduce wastes (which include wastage of energy and resources), wisely use resources, and improve lifestyles that are more environmentally sound and sustainable. It is largely the efforts at this level that will contribute to radical changes longed for at the national and international levels. However the way the decision making processes is in most developing countries and some developed countries to support these efforts are largely unattended to by most development / environment projects and programmes.

M, Ministry of Natural Resources & Environment, SAMOA 396

I don't think regulations and protocols will work. Man is basically self-interested and is happy to apply these to others but not to himself. The fundamental issue is consumption and use of resources, perhaps not in this generation but the next.

M, Environment Agency, U.K.058

The need of the present time on environmental problems is an international environment court.

C.M. Jariwala, National Law Institute University, INDIA 201

The Global Environment Facility needs a boost equivalent or better than the annual increase in expenditure in weapons. In addition, a convention is required to provide technical, business and financial support at the national level for countries to focus on ecological footprint reduction technologies and practices. The “laissez-faire” approach taken since 1980 by the G-8 has harmed innovation and progress in finding new ways and means to deal with the threat to our ecological health. We need another “Johannesburg” conference to develop an instrument to commit, through the leadership of G-8, national governments to developing policies and adequate funding support for, for example, moving more quickly from “internal combustion” vehicles to hybrids and hydrogen cell technology.

Arthur Goldsmith, EcoRail, CANADA 226

Real time monitoring of both flash and attrition (points and areas) needs to become much more systematic and demonstrable. i.e. Global Environmental Monitoring Systems need a lot of development and action oriented integration.

Tony Cullen, Enviro Report, AUSTRALIA 128

The ozone layer, global warming, loss of forests and biological diversity, desert formation, overpopulation and Malthus; these were warnings issued in the early 1970s. We failed to take the approaching environmental crisis seriously: today the palliatives abound, to resolve problems that need never have arisen. The global environment that we share, in terms of its ability to endure, is close to midnight now: do we have another 30 years to become aware of this?

David Black, Oxleas Wood Challenge Fund, U.K. 178

There must be a recognition that, in the future, there is a high likelihood that environmental problems will become causes of conflict between countries. It is very probable that countries that share water resources will become entangled in diplomatic confrontation, and further, possibly in physical conflict. The issue that most directly affects us is China, which continues its economic development at an incredible pace. There may be a situation where, because of the needs of the economy and commerce, we are unable to speak out about problems even as we become showered with pollutants from China. There needs to be a pursuit for a rational solution at the diplomatic and commercial level before such a crisis is reached. In addition, a powerful international organization specializing in environmental problems at the global scale is necessary. This may be made possible if the United Nations is able to contend with environmental problems from a much more powerful position, or there could be the creation of an international environmental organization that surpasses the U.N. but operates in partnership with it.

Jae Chun Choe, School of Biological Sciences, Seoul National University, KOREA 419

Considering the drying up of sources of fossil fuels and international conflict over oil, the domestic conservation of energy and the development of renewable energies are urgent issues, even today. In particular, we need to execute long-term research with regards to global warming and climate change, as well as public relations activities about global environmental problems aimed at the general public.

M, Korea National Open University, KOREA 449

Environmental problems are a necessary evil. It is extremely difficult to lower today's standards of consumption given the capitalistic economic system and the true nature of human beings. As a result, the mining and the use of resources will continuously increase. However, I also believe that it would be possible to direct people's desires towards science, technology, and the economy for the advancement of environmental conservation and the efficient use of resources.

M, Eco-Frontier Company, KOREA 479

Comments from Japan

It is essential to develop mutual understanding and exchanges between developing and developed countries. Rather than having developed countries merely transfer technology to developing countries, it is important that transfers take place while taking into consideration existing conditions in the developing countries as well as the lessons learned in the developed countries.

M, Aichi Prefecture, JAPAN 063J

I believe it is necessary for developed countries to take leadership in advancing environmental strategies, thereby appealing to the developing countries. While there are numerous theories on how best to proceed, in my opinion the most urgent issue at this stage is to formulate a strategy to cope with the mass transfer of resources from developing countries to developed countries. It is essential to advance measures to reduce the environmental burden on developing countries by imposing conditions on imports by developed countries, such as only permitting the purchase of goods that have been produced under environmentally sound conditions.

M, Hokkaido Environment Foundation, JAPAN 278J

Similar to problems of poverty, energy, water, and food security, many environmental issues are global scale problems, such that it is not possible to develop an understanding or formulate strategies at the country level. Moving forward, I think that the importance of international cooperation will grow ever greater. Perhaps a solution may be found in the Buddhist spirit of peace, which surpasses human words and strives to live in harmony with the natural world.

M, Japan External Trade Organization, JAPAN 087J

Not one good thing happened for the state of the global environment this past year.

M, Yomiuri Shimbun, Tokyo Headquarters, JAPAN 107J

Global environmental problems should be undertaken with the United Nations at the center, where there should be a development of international rules that comprehensively grapples with the issues rather than merely imposing regulations. These rules should be put into place starting with those issues that both developing and developed countries are able to contend with. Naturally, environmental education should be included, but additionally, it is necessary for the United Nations to employ every method to communicate the world's environmental conditions to citizens of each country on a real time basis.

Naotsumi Yokoyama, Commission on Environmental and Economic Policy, JAPAN 124J

It is difficult to imagine that humanity will cease to exist, but beyond that, the Earth not to exist. As human beings, we need to humbly accept this fact and deliberate on a framework in which all people are able to sustain and live, in a way as optimal for all as possible. Depending on who the subject is—I, my countrymen, or the people of the world—the answer to this question can change dramatically.

Hiroyuki Sakuragi, Green Consumer Research Group, JAPAN 249J

Kyoto Protocol

Ratification by all countries is not the objective of the Kyoto Protocol. What is important is for each country to implement specific measures. It is unfortunate that even in our country, there are those who find ratification the goal, while many others continue just to debate the Protocol.

Hiroshi Nasu, JAPAN 096J

The withdrawal by the United States from the Kyoto Protocol and the delay in ratification by Russia has produced a lingering helplessness in Japan towards the development of global environmental strategies. Foremost, it is important internationally to take an assertive position in criticizing the error of the two countries and to encourage them to return to the protocol. Domestically, it is necessary to rouse a nationwide discussion in order to revitalize efforts towards global warming countermeasures, which is currently riddled with sluggishness. For example, measures can be taken such as imposing environmental taxes limited to consumer use of electricity, gas, and gasoline, and implementing a ban on late night television broadcast and the use of neon lights.

Tsutomu Yamaguchi, Japan Regional Development Corporation, JAPAN 141J

* Note: Because of an organizational restructuring in June, the respondent's affiliation and position are unknown.

China is facing difficult environmental problems that results from multiple types of global environmental issues combined. It is not an overstatement to say that whether or not these issues are overcome will determine the possibilities and directions for new and sustainable ways for the human being. Japan should contend with China not as an object of overseas development assistance, but squarely as a part of the development and implementation of an environmental strategy for Northeast Asia.

Masaharu Yagishita, Graduate School of Environmental Studies, Nagoya University, JAPAN 144J

Each individual should put into practice and contribute in any way that they can, regardless of whether they are in a developed or developing country.

Seiji Matsumoto, Energy Technology Research Institute Thermal Energy Applications Group, National Institute of Advanced Industrial Science and Technology, JAPAN 244J

While it is said that general public awareness for the environment has been rising, it cannot be said that the rise has been accompanied by action, such as the purchase of environmentally friendly products. Measures to improve the situation need to be taken, by making available numerous systems to illustrate the direct relationship between daily life and global environmental problems. For example, carbon dioxide emission levels can be printed on receipts next to the price to show the environmental cost of shopping. Otherwise, we will not be able to reverse the needle on the environmental doomsday clock.

Hironari Goto, Glo-cal Neighborhood, JAPAN 323J

In order to solve global environmental problems, there needs to be a transformation in the quality of current economic activity. The strategic goal of every environmental issue is a substantial reduction of burden on the environment, with the guiding principle behind policy-making being the question of how this reduction can be made possible. The process should not depend only on technological solutions, but rather, it is essential to also include the suppression of demand as a viable alternative policy.

Masatake Uezono, Faculty of Law and Literature, Shimane University, JAPAN 083J

It seems that there is a need to implement shock therapy-like measures to enable the general public to personally feel the effects, such as the removal of vending machines and the shutting off of neon lights after nine o'clock in the evening. Some sacrifice is necessary for the good of the overall environment. What measures to choose is a decision responsible for the government and the politicians to make.

Kazuo Abe, JAPAN 112J

While various opinion polls consistently indicate high environmental awareness among the general public, it is difficult to state that these are sound results given that they continue to fluctuate based on the economic and

political underpinnings of the time, such as the war in Iraq and the deployment of the Self-Defense Forces. In addition, there are several issues at the heart of global warming countermeasures and the question of whether there should be an extension or a fundamental revision to the Kyoto Protocol. Ultimately, there is a need to clarify, both scientifically and politically, what levels of atmospheric GHG concentration and temperature rise are acceptable to the world, as well as determining how the world will aim to suppress the speed of temperature rise.

Hisakazu Kato, Graduate School of Law, Nagoya University, JAPAN 170J

Regional activities to cope with environmental problems have become very active recently. Among these efforts are effective endeavors that are rooted in the local community. The starting point of global warming lies in the regions. I believe policies to support such efforts will increase in importance, although they will need to value the autonomy of the regions.

Akira Morishima, Department of Human Environmental Studies, Hiroshima Shudo University, JAPAN 282J

It is essential to strongly educate and enlighten people so that their recognition that we are in an extremely critical situation is shared much more broadly. Societal systems need to employ every means available to increase sustainability.

M, Kajima Corporation, JAPAN 091J

What is necessary at the moment is to transform the awareness of each individual person. Environmental education needs to be exhaustive, starting from elementary school and continuing on to educate the society.

Kiyoshi Koike, Kix, JAPAN 146J

For the purposes of conserving the global environment and securing sources of energy, I believe the world needs to proceed at the earliest opportunity to replace fossil fuels with renewable sources of energy. Immediate utilization of existing human knowledge and sense of responsibility is necessary to prevent simultaneous occurrence of an environmental disaster and energy shortage, a situation where human suffering cannot be overcome.

M, Kochi Prefecture, JAPAN 061J

I would like for there to be more frequent use of the media, such as television, for the government to air public service announcements. Additionally, it is my hope that media organizations take more initiative in administering educational campaigns.

M, Oita Prefecture, JAPAN 235J

Recently, the worsening of the global environment has undergone a change to affect our lives at a more intimate level, beginning with such phenomena as the increased violence in the weather caused by global warming and rising incidences of cancer in people, animals, and plants caused by harmful ultraviolet rays. I believe that the looming problem of the global environment has shifted from a stage of prevention, and has advanced to a stage of thinking about how to sustain our own lives, and further onto challenging the ability to survive, and lastly, towards losing ability for species to survive. It is essential to display our wisdom and strength in full while we still have people who can think and act, and have the human society.

Michiko Imai, Le Verseau, JAPAN 051J

When we stop thinking through conceptual prisms of the twentieth century such as civilization being based on science and technology, and economic growth, I believe that we will be able to see a different set of ideas. War remains the greatest problem, which destroys nature, people, and culture. Trying to develop environmental strategies while accepting this seems meaningless.

Keiko Nakamura, JT Biohistory Research Hall, JAPAN 130J

Instead of implementing stopgap measures that are limited to specific environmental conditions, strategies to contend with global environmental problems should be developed within the context of larger issues such as food and energy security.

Hiroshi Nakamura, JAPAN 202J

It seems unlikely that the human desire to improve their own lives can be interrupted. Therefore, it does not seem possible to avoid the long-term deterioration of the global environment by human hands. However, witnessing the discovery of the ozone hole over Antarctica and the response to it, I believe there is hope in the short-term. Perhaps the only thing that we can do is to learn from these lessons and strive to improve the situation.

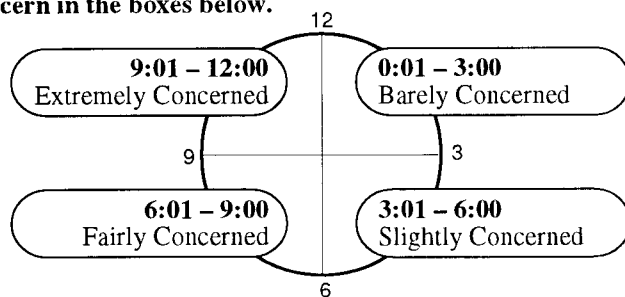
Yoshio Yoshida, JAPAN 299J

From the standpoint of corporations, it seems clear what needs be accomplished regardless of the status of the Kyoto Protocol. My understanding is that how quickly and how efficiently companies undertake these strategies will eventually determine their continued existence.

Hiromi Asahi, Department of Environment and Safety Technology, Nissan Motor Company, JAPAN 314J

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? Write a time within the range 0:01 to 12:00 corresponding to the extent of your concern in the boxes below.



Please write your time here.

:

(Example :)

1-2. When you selected the time above, what were the main environmental conditions about which you were concerned? Please check up to three (3) of the following items of concern.

- | | |
|--|---|
| <input type="checkbox"/> ⁽¹⁾ General environmental problems | <input type="checkbox"/> ⁽²⁾ Global warming |
| <input type="checkbox"/> ⁽³⁾ Air pollution, water contamination, river/ocean pollution | <input type="checkbox"/> ⁽⁴⁾ Water shortage, food problems |
| <input type="checkbox"/> ⁽⁵⁾ Deforestation, desertification, loss of biodiversity | |
| <input type="checkbox"/> ⁽⁶⁾ Peoples' lifestyles, waste related problems | |
| <input type="checkbox"/> ⁽⁷⁾ Environmental problems and economic/trade related activities | |
| <input type="checkbox"/> ⁽⁸⁾ Population, poverty, status of women | |
| <input type="checkbox"/> ⁽⁹⁾ Other: _____ | |

2. Twelve years have passed since Agenda 21 was adopted as an "action plan for the environment and development" at the Earth Summit in 1992. Please indicate the progress made in your country for the following 10 categories taken from the Agenda 21 action plan by circling one (1) letter on the scale of (a) to (e) for each category.

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

Significant progress
Some progress
Cannot determine
Almost no progress
No progress

3. The world population has surpassed six billion, and is estimated to grow to eight billion by 2030. It is feared that this rapid population growth will have a pronounced adverse effect on the environment, particularly in developing countries. Please indicate your opinion on this issue by first selecting statement A or B. If you select statement A, please then choose two further items that support your opinion. If you select statement B, please choose one further item.

- A. Population growth should be controlled using the following measures.
- ⁽¹⁾ Raising the status of women by promoting education.
 - ⁽²⁾ Promoting family planning.
 - ⁽³⁾ Increasing financial, technical, and human resource assistance from developed countries to promote family planning and education in developing countries.
 - ⁽⁴⁾ Eliminating the need to have multiple children by enhancing welfare and health care systems.
 - ⁽⁵⁾ Creating government policies to limit the number of children a family is permitted to have.
 - ⁽⁶⁾ Controlling population growth by gaining the cooperation of religious leaders to provide guidance.
 - ⁽⁷⁾ Other: _____
- B. Controlling population growth is difficult, or is not a priority.
- ⁽¹⁾ Controlling population growth is difficult because it is closely related to religious beliefs.

- ⁽²⁾ Priority should be given to curbing mass production, consumerism, and waste in developed countries. Controlling population growth is a secondary priority.
- ⁽³⁾ Other: _____

4. Balancing economic growth and environmental preservation is an issue of paramount importance in envisioning the future of the human race. In your opinion, can this balance be achieved? Please indicate your opinion by selecting a statement from A, B, or C, and if you choose A or B, please further select one item that most closely reflects your thinking.

- A. A balance is possible.
 - ⁽¹⁾ When environmental problems surface due to continued economic growth, technologies also make progress to create new industries to resolve those problems.
 - ⁽²⁾ Introduction of regulations encourage the development of products, production processes, and distribution mechanisms that take the environment into consideration while stimulating consumption and investment.
 - ⁽³⁾ The development of knowledge and information based industries will make it possible to balance economic growth and environmental preservation without mass production and the consumption of natural resources.
 - ⁽⁴⁾ Although economic growth for developed countries has reached its limit, a balance is possible because developing countries will provide the source of growth.
 - ⁽⁵⁾ Increasing the efficiency by which natural resources are used in economic activities can lessen the burden on the environment.
 - ⁽⁶⁾ Other: _____

- B. A balance is difficult.
 - ⁽¹⁾ Economic growth has traditionally been accompanied by mass production, consumption, and waste disposal. It will not be possible to preserve the environment if past levels of economic growth are to be maintained.
 - ⁽²⁾ The current form of economic growth should be relinquished considering the state of the environment and the level of natural resources that remain. Societal progress should be evaluated based on new measures such as spiritual satisfaction instead of the traditional gross domestic product.
 - ⁽³⁾ Other: _____

C. I don't know.

5-1. It is forecast that global warming will cause numerous environmental problems, including the rise in sea levels, torrential rains, droughts, the intensification of typhoons and hurricanes, the destruction of species, and the expansion of regions affected by tropical infectious diseases. On the other hand, the Kyoto Protocol, which aims to preclude global warming, has not yet taken effect because the United States has withdrawn from and Russia has not yet ratified the Protocol. Please select one of the following items that reflects your opinion about future prospects for the environment in the absence of an international strategy to contend with global warming.

- ^(A) Extremely apprehensive ^(B) Apprehensive ^(C) Slightly apprehensive ^(D) Not concerned

If you selected item D in the previous question, please choose one from the following items that indicates the reason for your selection.

- ⁽¹⁾ The environmental problems caused by global warming will not be very severe.
- ⁽²⁾ The existence of global warming has not been scientifically proven.
- ⁽³⁾ Global warming is a welcome phenomenon for countries in frigid regions.
- ⁽⁴⁾ The effects of global warming in my country are minimal.
- ⁽⁵⁾ Damages will not occur in my generation.
- ⁽⁶⁾ Other: _____

5-2. With the Kyoto Protocol yet to take effect, what measure should be implemented to counter global warming? Please select one from the following items.

- ⁽¹⁾ Persuade non-participating countries such as Russia and the United States to ratify the Kyoto Protocol.
- ⁽²⁾ Countries that have ratified the Kyoto Protocol implement measures to meet green house gas reduction goals, regardless of the status of the Protocol.

- ⁽³⁾ Concrete measures are not necessary if the Kyoto Protocol does not take effect.
- ⁽⁴⁾ Begin international discussions for a new framework with the participation of the United States and developing countries.
- ⁽⁵⁾ Develop innovative technologies that would lead to substantial reductions in emissions, taking a perspective that is more long term than the Kyoto Protocol.
- ⁽⁶⁾ Other: _____

5-3. Whereas the Kyoto Protocol governs the emissions of green house gases from 2008 to 2012, international discussions regarding a framework of measures to take effect after 2013 are scheduled to begin next year. What is your opinion on the type of regulations that should be included for this timeframe? Please choose four from the following items.

- ⁽¹⁾ An extension of the fundamental measures established in the Kyoto Protocol.
- ⁽²⁾ A substantial revision of the Kyoto Protocol that addresses its numerous problems.
- ⁽³⁾ The establishment of a targeted value for carbon dioxide concentration in the atmosphere leading to the stabilization of its level globally.
- ⁽⁴⁾ Further reductions of green house gas emissions by developed countries (Annex I Countries).
- ⁽⁵⁾ Control of green house gas emissions by developed countries at similar levels as in the Kyoto Protocol.
- ⁽⁶⁾ Regulations requiring a reduction in green house gas emissions by developing countries (Non-Annex I Countries) with high emission levels.
- ⁽⁷⁾ Regulations establishing a ceiling in emission levels that are also applied to developing countries with low emission levels.
- ⁽⁸⁾ There should be no emissions regulations for developing countries.
- ⁽⁹⁾ The establishment of regulations specifying maximum emissions levels that can be applied to both developed and developing countries.
- ⁽¹⁰⁾ Regulations governing donations and financial assistance by developed countries and the conditions under which developing countries receive funds.
- ⁽¹¹⁾ The continuation of mechanisms established in the Kyoto Protocol including emissions trading, joint implementation, and clean development mechanisms.
- ⁽¹²⁾ Regulations requiring developed countries to implement innovative new technologies to realize emissions reduction.
- ⁽¹³⁾ Policies leading to the pervasive use of the most advanced energy conservation technologies in the private and public sectors.
- ⁽¹⁴⁾ Regulations establishing the percentage that reusable energy must comprise within the total energy consumption for all countries.
- ⁽¹⁵⁾ Other: _____

6. The hole in the ozone layer above the South Pole expanded to its largest size in history last year. In addition, the depletion of the ozone layer has also been detected throughout the earth's frigid to temperate zones. Meanwhile, measures taken under the Montreal Protocol (MP) have resulted in a trend showing the reduction of CFCs atmospheric content. Please select one from the following items that most closely resembles your opinion on this issue.

- ⁽¹⁾ It is expected that the chlorine and bromine content in the stratosphere will reach its peak before long, followed by a gradual reduction. Therefore, it is sufficient for countries to abide by the 1999 MP adjustments regulating the production and exports by developed countries of these materials.
- ⁽²⁾ The phase-out schedule of HCFCs for developed countries should be further accelerated.
- ⁽³⁾ Review the current relaxed phase-out schedule for developing countries to accelerate it.
- ⁽⁴⁾ Requirements should be put into place for compulsory collection and destruction of used CFCs.
- ⁽⁵⁾ Effectively utilize multi-lateral funds for the implementation of the Montreal Protocol to advance regulations governing the production and use of CFCs by developing countries.
- ⁽⁶⁾ Other: _____

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

**Results of the 13th Annual
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REPORT

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