

**Results of the 11th Annual
“Questionnaire on Environmental Problems and the Survival of Humankind”**

REPORT

THE ASAHI GLASS FOUNDATION

September 2002

Contents

Foreword	1
I. Facts about the 11th Annual "Questionnaire on Environmental Problems and the Survival of Humankind"	2
II. Summary of Questionnaire Results	3
III. Questionnaire Results	
•Awareness of the Crisis Facing Human Survival	
Environmental Doomsday Clock	5
I. Main Focus of the Current Year's Questionnaire	
1. Global Warming Countermeasures	6
2. Free Trade and Environmental Problems	10
3. Water Problems	11
4. For Global Environmental Conservation (Expectations for the Johannesburg Summit)	13
II. Repeat Topics	
1. Progress Toward Agenda 21	14
2. Changes in Lifestyle	16
IV. Comments from Respondents	21
V. Questionnaire as Distributed to Respondents	26

Foreword

This report contains 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.

Ten years have passed since the United Nations Conference on Environment and Development, or Earth Summit, was held in Rio de Janeiro, and with each year the severity of global environmental problems and the importance of finding solutions grow ever greater. Last November, the Seventh Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP7) was held in Marrakech, Morocco, where final agreement was obtained regarding the main working regulations for the Kyoto Protocol. From late August to early September this year, the Johannesburg Summit commemorated the 10th anniversary of the Earth Summit and provided a forum to debate environmental conservation and the formation of a global society without poverty. Although environmental problems, including the North/South controversy and other major issues, remain severe, progress is being achieved toward the development of new energy sources with less environmental impacts, in debates about environmental taxes and in recycling, leading us to believe that awareness about environmental conservation is rising worldwide.

In this year's survey, the 11th, 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, Agenda 21 and lifestyle changes—the main questions on this year's questionnaire asked about global warming countermeasures and the conditions required to ratify the Kyoto Protocol, environmental issues related to free trade, water problems, and expectations for global environmental protection issues at the Johannesburg Summit.

Once again, the Foundation would like to thank the many environmentally conscious experts around the world that took the time to respond so carefully to the survey. In addition, we would like to express our profound appreciation to Professor Akio Morishima, chair 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.

Hikomichi Seya
Chairman
Asahi Glass Foundation
September 2002

I. Facts about the 11th Annual "Questionnaire on Environmental Problems and the Survival of Humankind"

Response period: Questionnaires were sent out in April 2002 with a return deadline of June 2002.

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: 3,986

Questionnaires returned: 639

Response rate: 16.0%

Breakdown of respondents by region, sex and occupational affiliation:

Region	Number of responses	Percent of total
Japan	303	47.4
United States & Canada	55	8.6
Western Europe	79	12.4
Asia (outside Japan)	68	10.6
Latin America	27	4.2
Africa	41	6.4
Oceania	24	3.8
Eastern Europe & former Soviet Union	29	4.5
Middle East	12	1.9
Region of respondents unknown	1	0.2
(Overseas Total)	(336)	(52.6)
Total	639	100.0

Sex

Male	530	82.9
Female	89	13.9
No response	20	3.2
Total	639	100.0

Occupational affiliation

Central government	97	15.2
Local government	79	12.4
University or research institution	128	20.0
Nongovernmental organization	138	21.6
Corporation	90	14.1
Other	96	15.0
No response	11	1.7
Total	639	100.0

- Notes: 1. This report used the 639 responses as the basis for calculating percentages, which were rounded up from the first or second decimal place.
2. Since the responses that were not attributable to a particular region were written on the overseas version (English) of the questionnaire, they were included in the "overseas total."
3. Please note that where it is marked "Percentages are based on the total number of responses," the total number of responses refers to the total number of responses to that question, not to the total number of respondents to the survey.

II. Summary of Questionnaire Results

•Awareness of the Crisis Facing Human Survival

Environmental Doomsday Clock

- The average time for all respondents was 9:05, a three-minute fallback from the previous year and close to the beginning of the “Extremely Concerned” quadrant.
- The sense of crisis for Japanese respondents advanced as the average time went 14 minutes ahead to 9:18, in contrast to a 20-minute retreat in the overseas average to 8:51. The Japanese average was 27 minutes ahead of the overseas average, marking the first time since the inception of this questionnaire that the perception of an environmental crisis among Japanese respondents was higher than that of the overall result overseas.

I. Main Focus of the Current Year’s Questionnaire

1. Global Warming Countermeasures

1) Evaluating COP7 Results

- More than 60% of overseas and Japanese respondents were in favor of the COP7 results. However, 16% of overseas respondents and 27% of Japanese respondents expressed opposition.
- The main reason selected by respondents from both overseas and Japan for favorable responses was “...it is the first step toward global greenhouse gas reduction measures.” Overseas, the second-most popular response was “Because it is now possible for each national government to proceed with ratification procedures for the Kyoto Protocol since the detailed working regulations were decided for flexible measures...” In Japan, it was “Because agreement was reached by every other country even though the United States didn’t participate.”

2) Conditions for Ratifying the Protocol

- Among the overseas and Japanese respondents, the condition most cited as necessary to ratify the Kyoto Protocol was “Clarification of the system and processes...for reaching reduction targets in developed countries.” Next was “Promotion of technical development and the provision of insight into the growth potential of environmental businesses” among overseas respondents and the “U.S. return to the protocol (U.S. ratification)” among Japanese respondents.
- The trend in responses from North America and Oceania differed from other regions. The condition most often cited as important was the “U.S. promise to strive to reduce domestic emissions even if it doesn’t ratify the Kyoto Protocol yet.” Very few selected “Clarification of the system and processes...for reaching reduction targets in developed countries.”

3) Timetable for Developing Country Participation

- Among respondents from the developed regions of Japan, North America and Western Europe, the most-selected period for when the developing nations should participate in the protocol’s emissions reduction framework was “Between 2013 and 2014,” which was followed in second place by “The expected start should vary by country.”
- Among respondents from the developing regions of Asia, Latin America and Africa, however, the order of these two replies was reversed, but there was only a slight difference in the numbers for both responses.

2. Free Trade and Environmental Problems

- Among all regions, excluding Western Europe but including Japan, the most anticipated influence exerted by free trade is “Promoting economic activities in developing countries without adequate environmental consideration.” The second-ranked response in these regions and first-ranked in Western Europe was “Products with pricing that does not reflect environmental costs are imported or exported.”
- The respondents from developing regions ranked “It is easier for uncontrolled harmful substances to be transported internationally” in second place.

3. Water Problems

1) Required Measures for Water Resources

- It was notable that responses to the question about the most important measures regarding water resources varied by region, reflecting the different state of water resources in each region. At 55%, a large number of Japanese respondents selected “Conserve water reserve lands,” but this response didn’t even make it to

second place in the other regions. The same can be said for the top-ranked response in Africa, which was “Expand drinking water and sewage treatment facilities,” and in the Middle East, which was “Develop technologies for water purification and the desalinization of seawater.”

- North America and Eastern Europe & the former Soviet Union ranked “Introduce economic measures, such as additive taxes, to manage water consumption” first while Western Europe and the Middle East selected “Develop technologies to raise the efficiency of water usage.”

2) Developed Country Support for Developing Countries

- Respondents from the developed regions ranked “Transferring technology, training technicians, sending technicians,” and “Providing monetary assistance for infrastructure and plant construction...” as the number one and two measures, respectively, to resolve water problems in developing regions.
- Respondents from the developing regions selected the same two responses, but in reverse order.

4. For Global Environmental Conservation (Expectations for the Johannesburg Summit)

- Different trends emerged between regions in the response to the measures selected for conservation of the global environment and development of a poverty-free global society.
- North American, Western European and Latin American respondents selected “Facilitate efforts to establish ‘good governance’...” the most.
- Among respondents from the developing regions, it was a tie between “Focused and effective distribution of official development aid from developed countries in fields in which the developing countries can be expected to help themselves” and “Encourage multistakeholder participation, such as civil society or NGOs, in policy-making decisions.”
- In Japan, “Focus on the promotion of international cooperation to raise the coping ability of developing countries” was selected the most.

II. Repeat Topics

1. Progress toward Agenda 21

- Among overseas respondents, the responses were high, ranging from 84% to 57%, for the five categories of “Promotion of environmental education,” “Activities by local governments and citizens’ groups,” “Scientific/technological contributions,” “Formation of recycling systems” and “Environmental measures by industry.” Responses stating that progress occurred in the categories of “Lifestyle alteration” and “Population/poverty problems” remained low, at 30% or less.
- In Japan, the five top items were the same as overseas, with “Activities by local governments and citizens’ groups” and “Formation of recycling systems” at the top and all five categories being selected by 68% or more of respondents. However, responses quoting progress for “Lifestyle alteration,” “Population/poverty problems,” “Conservation of forest resources” and “Conservation of biodiversity” were low, at 20% or less.

2. Changes in Lifestyle

An overview is provided by the indicator calculated by subtracting the rate for the “Can’t reduce” responses from the “Can reduce” responses for each of the six categories: “Electric power,” “Gas/fuel oil,” “Gasoline,” “Water for daily life,” “Food” and “Paper.”

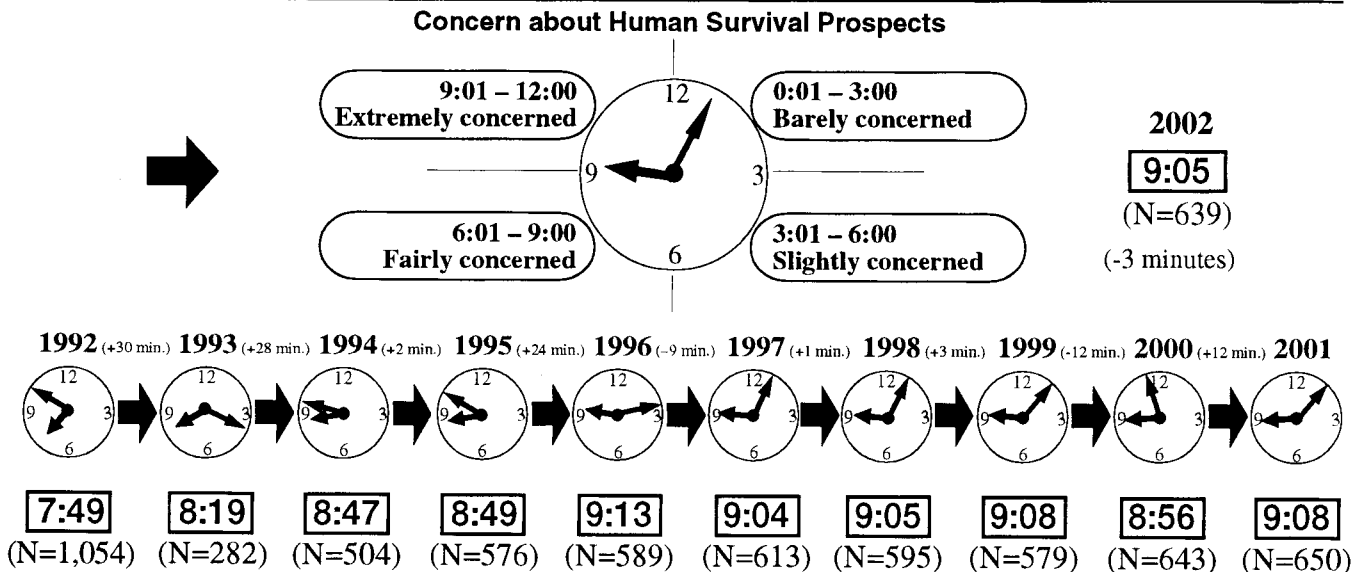
(Consumption reduction indicator = “Can reduce” rate (%) - “Can’t reduce” rate (%))

- In the developed regions and Oceania, the indicator for all six categories was high, at more than 60% on average, signifying that the “Can reduce” response rate significantly outweighed the “Can’t reduce” response rate. In contrast to the high indicators recorded for Japan and Oceania, in particular, it is notable that the indicator for the “Food” category for North American and Western European respondents was low—in the 40s—compared to the other categories.
- Among the developing regions, the indicator for respondents from Asia and Latin America was low, at approximately 30 on average, and even lower for respondents from Africa, at -1. The indicators for food among African and Latin American respondents and for water among African respondents were negative numbers. Compared to the developed regions and Oceania, the indicators for “Electric power,” and “Gas/fuel oil,” were markedly low for these regions.
- Among respondents from Eastern Europe & the former Soviet Union and the Middle East, the indicators averaged 50, positioning these regions between the developed and developing regions.

III. Questionnaire Results

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

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



	Number of respondents	Changes in time from year to year			Changes in average time by region	
		1995 →	2001 →	2002	1995 → 2002	2001 → 2002
Total	639	8:49 →	9:08 →	9:05	+16	-3
Japan	303	8:08 →	9:04 →	9:18	+70	+14
United States & Canada	55	8:52 →	9:54 →	8:23	-29	-91
Western Europe	79	9:02 →	8:58 →	8:44	-18	-14
Asia	68	9:41 →	9:04 →	8:36	-65	-28
Latin America	27	9:23 →	9:00 →	9:22	-1	+22
Africa	41	9:33 →	9:37 →	9:29	-4	-8
Oceania	24	9:44 →	8:58 →	9:22	-22	+24
Eastern Europe & former Soviet Union	29	9:29 →	8:17 →	9:28	-1	+71
Middle East	12	9:09 →	9:01 →	8:02	-67	-59
Overseas Total	336	9:22 →	9:11 →	8:51	-31	-20
Male	530	8:46 →	9:05 →	9:01	+15	-4
Female	89	8:57 →	9:21 →	9:24	+27	+3
Developed Regions	437	8:23 →	9:09 →	9:05	+42	-4
Developing Regions	136	9:33 →	9:14 →	9:00	-33	-14

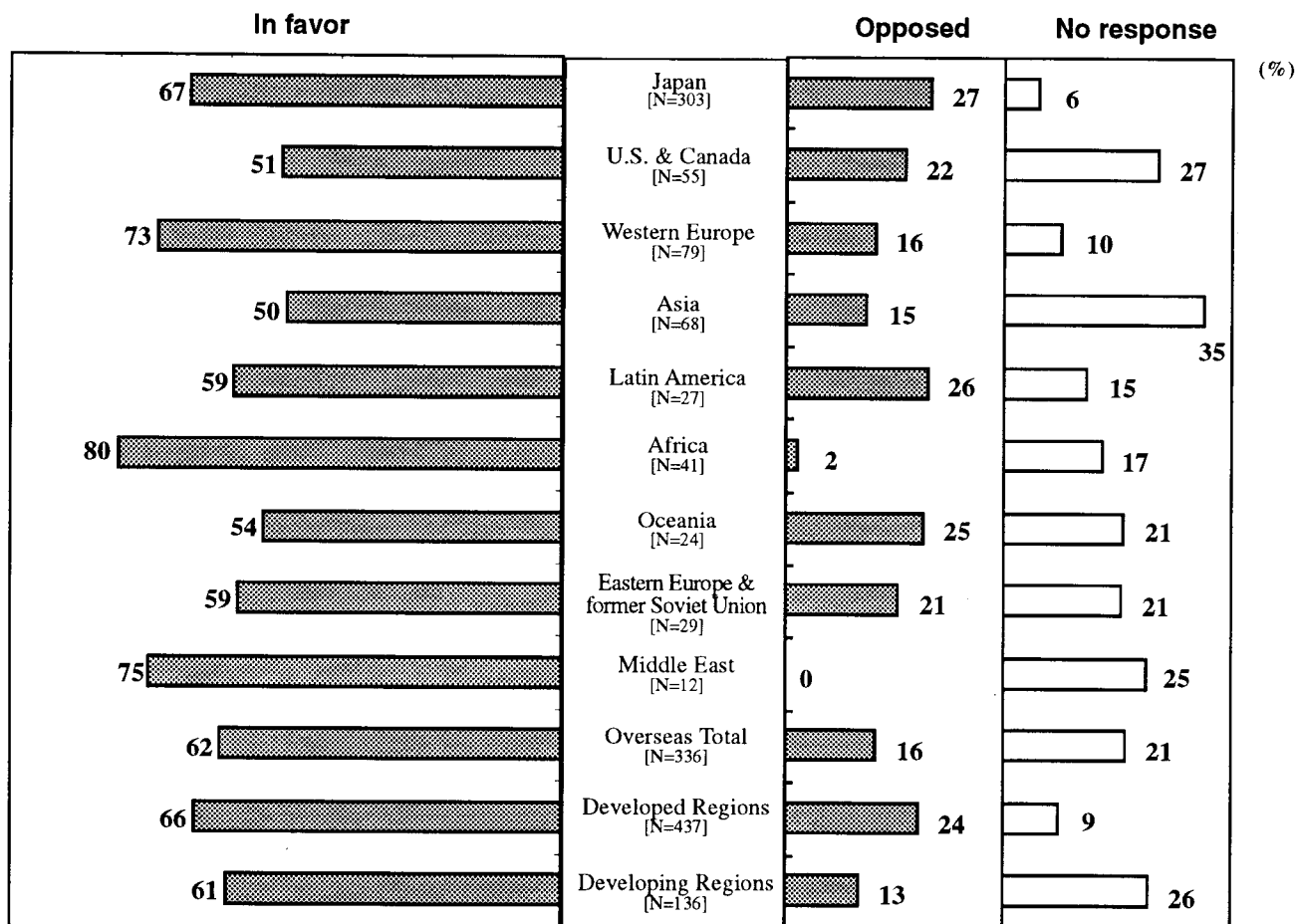
- The average time for all respondents was 9:05, a three-minute fallback from the previous year and close to the beginning of the “Extremely Concerned” quadrant.
- The sense of crisis for Japanese respondents advanced as the average time went 14 minutes ahead to 9:18, in contrast to a 20-minute retreat in the overseas average to 8:51. The Japanese average was 27 minutes ahead of the overseas average, marking the first time since the inception of this questionnaire that the perception of an environmental crisis among Japanese respondents was higher than that of the overall result overseas. (The Japanese and overseas averages were on par in the 9th questionnaire in 2000.)
- The sense of crisis among respondents from Latin America, Africa, Oceania, and Eastern Europe & the former Soviet Union was fairly high. Their average times were all ahead of 9:20. Leaning the other way, the sense of crisis among North American, Western European and Asian respondents was lower, on either side of 8:30, which indicates that the sense of crisis is even lower than the previous year in these regions.
- As in past years, females tended to report a higher sense of crisis than males.

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

Question (1): In November 2001, the Seventh Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP7) was held in Marrakech, Morocco. Representatives of 172 countries met under one roof and obtained final agreement on important working regulations for the Kyoto Protocol. How would you evaluate the COP7 results? Please indicate whether you favor or oppose them and mark the main reason for this by checking one (1) option below.

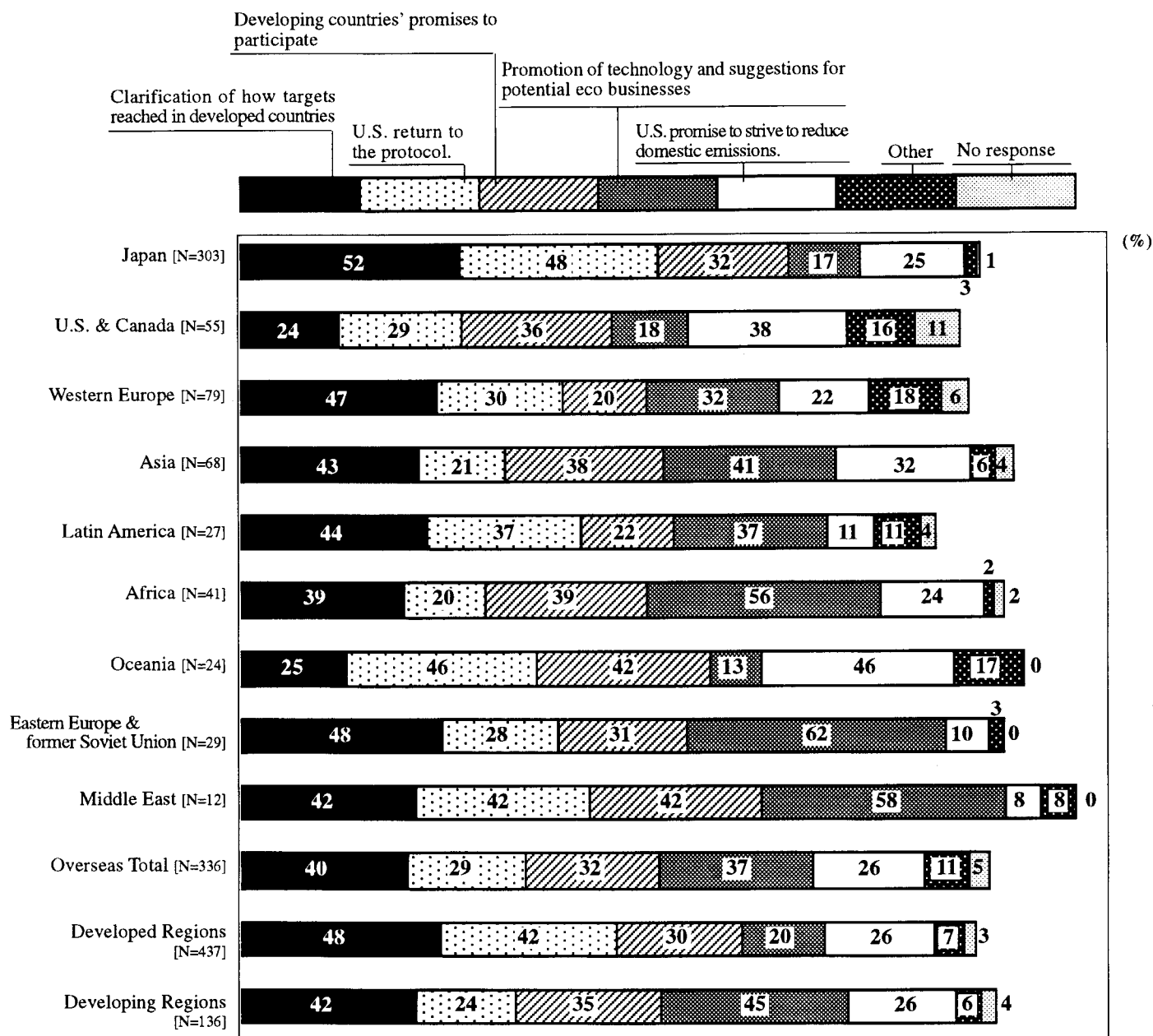
		Japan (30)	United States & Canada (55)	Western Europe (79)	Asia (68)	Latin America (27)	Africa (41)	Oceania (24)	Eastern Europe & former Soviet Union (29)	Middle East (12)	Overseas Total (336)	Developed Regions (437)	Developing Regions (136)
In favor		67	51	73	50	59	80	54	59	75	62	66	61
Reason	Because it is the first step toward greenhouse gas reductions although it is weakened by compromises	36	57	50	38	44	42	69	29	22	46	41	41
	Because agreement was reached by every other country even though the United States didn't participate.	35	18	24	18	13	9	15	18	33	18	31	13
	Because governments can now proceed with ratification since the detailed working regulations were decided	24	18	21	32	31	9	8	29	33	22	22	23
	Because technical assistance for climate change and three endowment funds were established to support developing countries.	4	0	0	6	6	36	0	24	11	10	3	18
	Because concrete measures were decided upon if the targets are not met.	0	4	3	3	0	0	8	0	0	2	1	1
	Other	1	4	2	3	6	3	0	0	0	2	1	4
Opposed		27	22	16	15	26	2	25	21	0	16	24	13
Reason	Because the United States hasn't changed its stance toward non-support of the protocol.	62	33	46	50	57	0	33	83	0	47	57	50
	Because reduction results will be weakened as a result of compromises	22	8	23	20	29	0	33	17	0	20	21	22
	Because no quantitative cap was set on emissions trading reductions and it does not differentiate between real and traded emissions reductions	11	8	8	10	14	0	0	0	0	7	10	11
	Because the developing countries' reduction obligations weren't debated and there was no consensus on future approaches.	2	42	8	20	0	0	33	0	0	18	8	11
	Because legally binding compliance was deferred until after the protocol has come into effect	0	0	8	0	0	100	0	0	0	4	1	6
	Other	2	8	8	0	0	0	0	0	0	4	4	0
No response		6	27	10	35	15	17	21	21	25	21	9	26

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



- More than 60% of overseas and Japanese respondents were in favor of the COP7 results. However, 16% of overseas respondents and 27% of Japanese respondents were opposed.
- The regions in which more than 73% reported being in favor included Africa, the Middle East and Western Europe. There was relatively less enthusiasm among Asian and North American respondents, where only approximately 50% responded favorably.
- The main reason selected by respondents from both overseas and Japan for favorable responses was "...it is the first step toward global greenhouse gas reduction measures." Overseas, the second-most popular response was "Because it is now possible for each national government to proceed with ratification procedures for the Kyoto Protocol since the detailed working regulations were decided for flexible measures..." In Japan, it was "Because agreement was reached by every other country even though the United States didn't participate."
- The top reason for opposing the results overseas and in Japan was "Because the United States hasn't changed its stance toward non-support of the protocol." In second place was "Because the actual reduction results will be weakened as a result of compromises taken..."

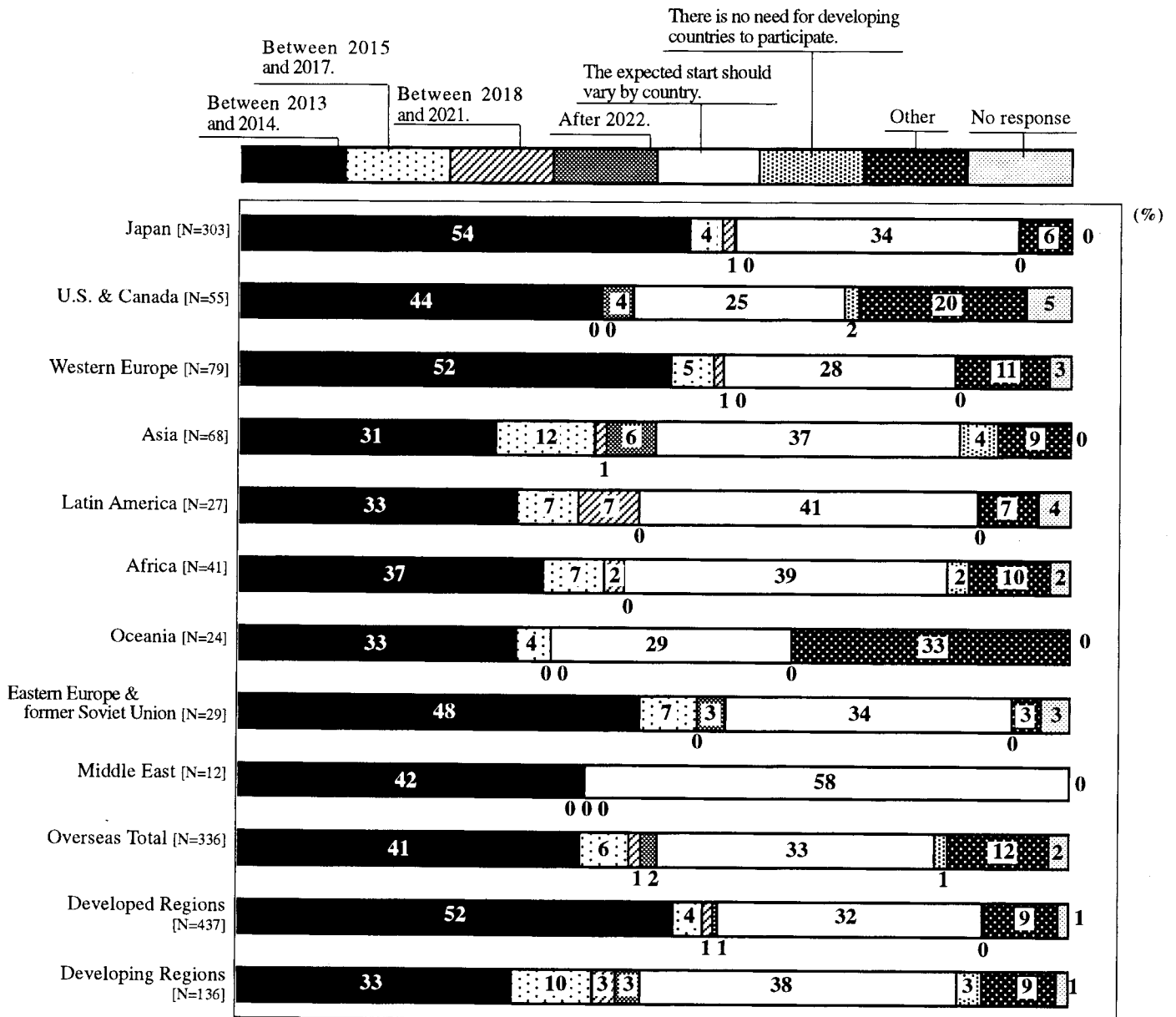
Question (2): The conditions for each country to ratify the Kyoto Protocol were arranged with the agreements reached at COP7. As it will be each country's own decision whether or not to ratify the protocol, please indicate which of the following items you think will be important for facilitating ratification *in your country*. Please check the two (2) items you consider the most important.



Notes: 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 only one item or did not mark any items, causing the aggregate total to be less than 200%.

- Among the overseas and Japanese respondents, the condition most cited as necessary to ratify the Kyoto Protocol was “Clarification of the system and processes...for reaching reduction targets in developed countries.” Next was “Promotion of technical development and the provision of insight into the growth potential of environmental businesses” among overseas respondents and the “U.S. return to the protocol (U.S. ratification)” among Japanese respondents.
- The trend in responses from North America and Oceania differed from other regions. The condition most often cited as important was the “U.S. promise to strive to reduce domestic emissions even if it doesn’t ratify the Kyoto Protocol yet.” Very few selected “Clarification of the system and processes...for reaching reduction targets in developed countries.”

Question (3): It has been forecast that developing countries, including China and India, will produce a higher share of annual world CO₂ emissions than the developed countries by 2020, and it is thought that the efforts to curb global warming will be ineffective without developing country participation. The idea that “developing countries should participate in the protocol’s emissions reduction framework starting from the second commitment period (2013 onward)” has been put forward. When do you think developing countries should start participating? Please check one (1) item.



- Among respondents from developed regions, the most-selected period for when the developing countries should participate in the protocol’s emissions reduction framework was “Between 2013 and 2014,” which was followed in second place by “The expected start should vary by country.”
- Among developing region respondents, however, the order of these two replies was reversed, but there was only a slight difference in the numbers for both responses.
- The trend among respondents from Oceania and Eastern Europe & the former Soviet Union was the same as in the developed regions.
- Among the respondents selecting the “Other” category, many from Oceania and North America expressed the opinion that the developing countries should start participating right away.

2. FREE TRADE AND ENVIRONMENTAL PROBLEMS

Question: Free trade is making headway and we are seeing various environmental impacts when economic activities are conducted across national borders. There have also been protests conducted by groups of demonstrators, including environmental conservationists, at WTO meeting sites in the past. Please check two (2) items that invoke the most concern *in your country* among all the environmental impacts related to free trade.

	Japan (303)	United States & Canada (55)	Western Europe (79)	Asia (68)	Latin America (27)	Africa (41)	Oceania (24)	Eastern Europe & former Soviet Union (29)	Middle East (12)	Overseas Total (336)	Developed Regions (437)	Developing Regions (136)
Promoting economic activities without environmental considerations is causing growth in free trade to damage the environment.	65	58	53	71	67	61	71	55	67	62	62	67
Products with pricing that does not reflect environmental costs are imported or exported.	55	45	62	28	33	39	42	48	33	44	55	32
It is easier for uncontrolled harmful substances to be transported internationally.	28	18	29	40	26	44	8	24	58	30	27	38
Environmental pollution is intensifying in countries that are not part of multilateral environmental agreements.	12	20	22	25	7	15	42	31	8	22	15	18
It is easier for cross-border environmental pollution.	22	9	8	13	19	10	8	24	8	12	18	13
Restrictions on trade are used in the name of environmental conservation.	6	13	14	21	19	24	13	7	17	16	8	21
Other	3	16	4	1	0	10	4	3	8	6	5	4
No response	0	7	4	0	7	0	4	0	0	3	2	1

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

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

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 only one item or did not mark any items, causing the aggregate total to be less than 200%.

- Among all regions, excluding Western Europe but including Japan, the most anticipated influence exerted by free trade is "Promoting economic activities in developing countries without adequate environmental consideration." The second-ranked response in these regions and first-ranked in Western Europe was "Products with pricing that does not reflect environmental costs are imported or exported."
- The respondents from developing regions ranked "It is easier for uncontrolled harmful substances to be transported internationally" in second place.

3. WATER PROBLEMS

Question (1): Water problems are said to be the most pressing issue of the 21st century. In March next year, the 3rd World Water Forum will be held in Japan. In our last questionnaire, we found major differences among the regions regarding the severity of the problems. Water is an important resource for achieving sustainable development and a topic about which we can expect major changes in future as a result of population increases, urbanization and climate change. Please check up to three (3) items from the measures below that you feel are vital and should be taken *in your country* with regard to water resources (including water for drinking and agriculture).

	Japan (303)	United States & Canada (55)	Western Europe (79)	Asia (68)	Latin America (27)	Africa (41)	Oceania (24)	Eastern Europe & former Soviet Union (29)	Middle East (12)	Overseas Total (336)	Developed Regions (134)	Developing Regions (136)
Conserve water reserve lands.	55	22	29	35	30	34	17	21	17	28	26	34
Enact laws and regulations targeting the preservation of water quantity and quality.	31	44	35	49	52	29	54	48	50	43	39	43
Develop technologies to raise the efficiency of water usage.	28	40	48	31	33	37	42	55	50	41	45	33
Promote water recycling.	47	22	22	16	11	15	29	38	25	21	22	15
Conduct educational activities such as the encouragement of water conservation.	18	38	35	46	56	44	46	34	42	42	37	47
Introduce economic measures, such as additive taxes, to manage water consumption.	21	53	39	26	44	10	42	66	8	37	45	25
Develop technologies for water purification and the desalinization of seawater.	25	18	20	26	11	32	25	10	50	22	19	25
Collect and use rainwater.	29	4	11	22	15	27	17	7	17	15	8	22
Expand drinking water and sewage treatment facilities.	13	22	16	25	30	44	17	14	17	23	19	32
Train water experts.	7	0	6	0	7	10	0	3	0	4	4	4
Construct water reservoirs.	2	4	0	4	4	7	0	3	8	3	1	5
Build irrigation facilities.	1	2	0	7	0	10	0	3	8	4	1	7
Other	4	11	6	6	0	5	8	3	8	6	8	4
No response	0	5	1	0	0	0	0	0	0	1	3	0

Notes: Figures enclosed by a double circle represent answers with the highest number of points. A single circle is used when more than one answer is closely tied for the highest number of points. The Developed Regions figures in the chart above do not include Japan, just North America and Western Europe. Since up to three items were selected, the regional totals are 300% or less.

- It was notable that responses to the question about the most important measures regarding water resources varied by region, reflecting the different state of water resources in each region. At 55%, a large number of Japanese respondents selected “Conserve water reserve lands,” but this response didn’t even make it to second place in the other regions. The same can be said for the top-ranked response in Africa, which was “Expand drinking water and sewage treatment facilities,” and in the Middle East, which was “Develop technologies for water purification and the desalinization of seawater.”
- North America and Eastern Europe & the former Soviet Union ranked “Introduce economic measures, such as additive taxes, to manage water consumption” first while Western Europe and the Middle East selected “Develop technologies to raise the efficiency of water usage.”
- Taking an overview of the overseas responses, it appears that the following items ranked in the top three: “Enact laws and regulations targeting the preservation of water quantity and quality,” “Conduct educational activities such as the encouragement of water conservation” and “Develop technologies to raise the efficiency of water usage.” Among the Japanese respondents, the second ranked item after “Conserve water reserve lands” was “Promote water recycling.”

Question (2): It became clear from the results of the last questionnaire that problems with both water quality and quantity are much worse in developing countries than in developed countries. Please select the two (2) items below that you feel would be most effective for developed countries to support the amelioration of water problems in developing countries.

	Japan (303)	United States & Canada (55)	Western Europe (79)	Asia (68)	Latin America (27)	Africa (41)	Oceania (24)	Eastern Europe & former Soviet Union (29)	Middle East (12)	Overseas Total (336)	Developed Regions (437)	Developing Regions (136)
Transferring technology, training technicians, sending technicians.	56	65	56	43	63	29	46	62	50	51	57	43
Providing monetary assistance for infrastructure and plant construction.	47	47	42	46	52	61	46	41	67	48	46	51
Assisting with planning of water resource management policy.	39	29	47	31	41	29	21	45	58	36	39	32
Establishing educational institutions that will train technicians.	22	18	18	7	7	17	4	14	8	13	21	10
Assisting with awareness training for the general populace.	15	11	10	28	4	20	25	7	8	15	14	21
Conducting awareness training for the general populace.	5	4	9	26	15	22	21	10	8	15	6	23
Admitting developing country researchers and trainees into their own countries.	8	2	9	6	7	7	4	0	0	5	7	7
Facilitating surveys and research.	5	2	5	6	11	7	4	10	17	6	5	7
Other	3	7	1	3	0	5	13	3	0	4	3	3
No response	0	5	1	0	0	0	4	3	0	2	1	0

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

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

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

However, some respondents marked only one item or did not mark any items, causing the aggregate total to be less than 200%.

- Respondents from the developed regions ranked “Transferring technology, training technicians, sending technicians,” and “Providing monetary assistance for infrastructure and plant construction...” as the number one and two measures, respectively, to resolve water problems in developing regions.
- Respondents from the developing regions selected the same two responses, but in reverse order.

4. FOR GLOBAL ENVIRONMENTAL CONSERVATION (EXPECTATIONS FOR THE JOHANNESBURG SUMMIT)

Question: In August 2002, tenth anniversary of the Earth Summit, the world's heads of state will meet at the Johannesburg Summit to debate concrete measures to achieve sustainable development. Please check the three (3) items below for which you feel there is the greatest need in order to conserve the global environment and develop a poverty-free global society.

	Japan (303)	United States & Canada (55)	Western Europe (79)	Asia (68)	Latin America (27)	Africa (41)	Oceania (24)	Eastern Europe & former Soviet Union (29)	Middle East (12)	Overseas Total (336)	Developed Regions (134)	Developing Regions (136)
Facilitate efforts to establish "good governance"	24	45	51	34	48	29	29	24	25	39	49	35
Allocate ODA in fields in which the recipients can be expected to help themselves	39	24	34	56	15	34	38	31	58	36	30	41
Build framework to direct private-sector capital to sustainable development in developing countries.	43	35	28	28	33	46	29	45	33	33	31	35
Encourage multistakeholder participation, such as civil society or NGOs, in policy-making decisions.	36	27	22	43	37	41	33	28	17	32	24	41
Educate about membership in a diverse global community and environmental ethics	32	29	30	26	22	24	42	31	33	29	30	25
Promote scientific approach to facilitate scientifically based policy making	28	35	15	21	26	27	29	45	42	26	23	24
Create a framework that allows developing countries to benefit from free trade.	12	22	35	16	22	34	29	28	17	26	30	23
For developed countries to increase official development aid to a fixed target, such as 0.7% of GNP.	9	7	23	25	30	27	21	28	33	22	16	26
Focus on the promotion of international cooperation to raise the coping ability of developing countries.	47	13	24	25	19	17	13	21	33	20	19	21
Establish fund for sustainable development and raise the capital through innovative means.	19	22	24	19	19	10	25	24	8	20	23	16
Other	3	13	5	3	0	5	8	0	0	5	8	3
No response	1	5	1	0	7	0	0	0	0	2	3	1

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

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

The Developed Regions figures in the chart above do not include Japan, just North America and Western Europe.

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 only one item or did not mark any items, causing the aggregate total to be less than 300%.

- Different trends emerged between regions in the response to the measures selected for conservation of the global environment and development of a poverty-free global society.
- North American, Western European and Latin American respondents selected "Facilitate efforts to establish 'good governance'..." the most.
- Among respondents from the developing regions, it was a tie between "Focused and effective distribution of official development aid (ODA) from developed countries in fields in which the developing countries can be expected to help themselves" and "Encourage multistakeholder participation, such as civil society or NGOs, in policy-making decisions."
- In Japan, "Focus on the promotion of international cooperation to raise the coping ability of developing countries" was selected the most.

II. REPEAT TOPICS

1. PROGRESS TOWARD AGENDA 21

Question: Ten 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* toward 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* between 1997 and 2002

	Japan	United States & Canada	Western Europe	Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Overseas Total	Total	(%)
	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997	2002 1997
	[303][306]	[55][38]	[79][65]	[68][63]	[27][41]	[41][52]	[24][18]	[29][15]	[12][14]	[336][307]	[639][613]	
Promotion of environmental education	73 41	80 68	82 58	88 79	78 68	76 90	96 72	86 73	100 71	84 73	79 57	
Activities by local governments and citizens' groups	76 54	87 50	80 65	65 49	81 61	61 48	100 56	83 80	83 64	77 57	77 55	
Scientific and technological contributions	72 43	80 55	71 46	59 49	44 34	46 58	92 39	66 60	75 64	66 50	69 46	
Formation of recycling systems	76 42	65 68	77 68	51 38	22 32	39 29	75 44	41 33	50 29	57 45	66 44	
Environmental measures by industry	68 55	60 37	81 63	40 57	44 51	41 56	50 56	66 67	58 57	57 55	62 55	
Greenhouse gas prevention measures	32 17	24 21	54 34	38 35	19 27	34 40	21 33	34 33	50 21	36 32	34 25	
Conservation of forest resources	17 14	45 32	51 35	41 65	48 61	54 83	63 56	28 53	58 36	47 54	33 34	
Conservation of biodiversity	18 17	33 26	46 48	46 49	48 66	56 67	63 50	41 60	50 21	46 50	33 34	
Population and poverty problems	14 14	22 16	27 12	44 57	19 27	44 56	13 39	31 27	25 36	30 35	22 24	
Lifestyle alteration	14 15	16 26	6 28	28 25	11 5	7 15	8 17	14 13	33 29	15 21	14 18	

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

Comparison of Differences between 1997 and 2002

	Japan	United States & Canada	Western Europe	Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Overseas Total	Total	(%)
Promotion of environmental education Activities by local governments and citizens' groups	+32	+12	+24	+9	+9	-15	+24	+13	+29	+11	+22	
Scientific and technological contributions	+22	+37	+15	+15	+21	+13	+44	+3	+19	+21	+21	
Formation of recycling systems	+28	+25	+25	+10	+10	-11	+53	+6	+11	+17	+22	
Environmental measures by industry	+34	-3	+10	+13	-9	+10	+31	+8	+21	+11	+22	
Greenhouse gas prevention measures	+14	+23	+18	-17	-7	-14	-6	-1	+1	+2	+7	
Conservation of forest resources	+15	+3	+21	+3	-8	-6	-13	+1	+29	+4	+10	
Conservation of biodiversity	+3	+14	+15	-24	-13	-29	+7	-26	+23	-7	-1	
Population and poverty problems	+1	+6	-2	-4	-18	-11	+13	-19	+29	-5	-1	
Lifestyle alteration	0	+6	+14	-13	-8	-12	-26	+4	-11	-4	-2	
	-1	-10	-21	+3	+6	-8	-8	0	+5	-6	-3	

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

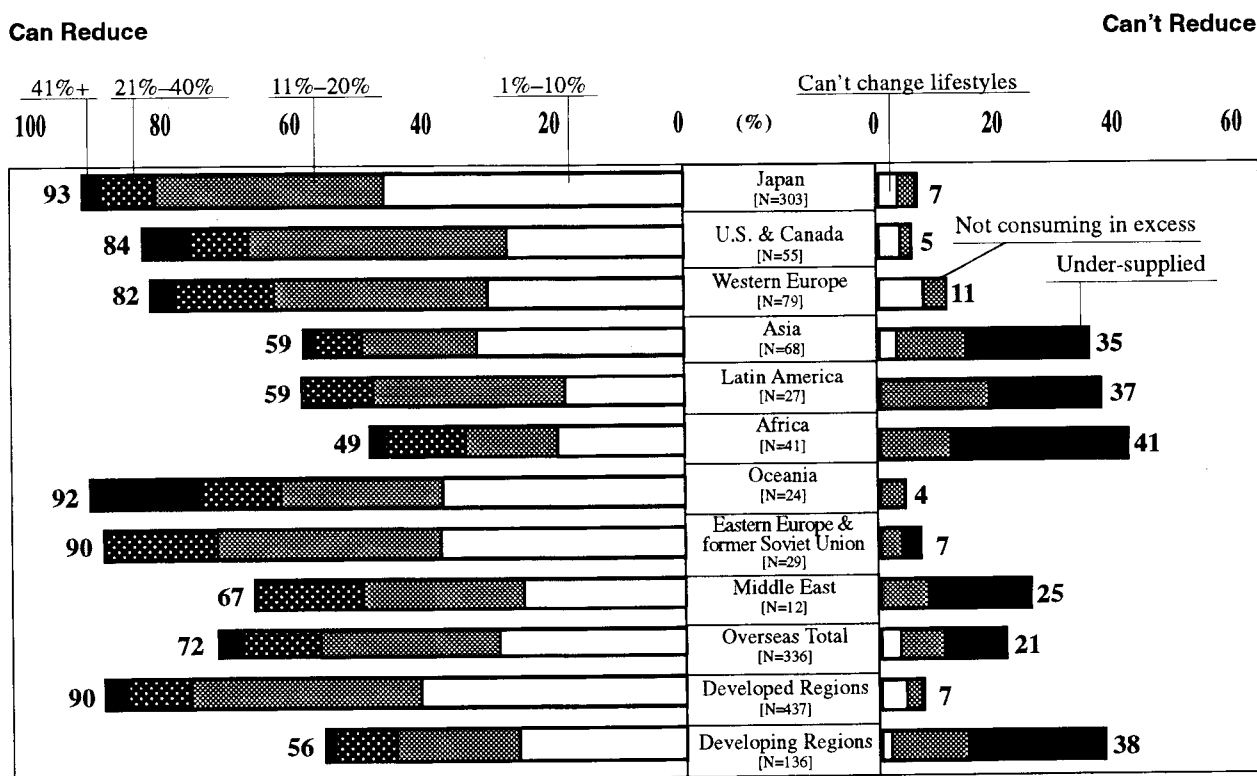
We polled respondents about the progress they felt had been achieved in 10 categories taken from the Agenda 21 action plan and listed the results in descending order in the chart. The chart also shows the responses from five years ago (1997) for comparison. The "Progress" result combines both the "Significant progress" and "Some progress" responses.

- Among overseas respondents, the responses were high for progress in the "Promotion of environmental education" and "Activities by local governments and citizens' groups," at 84% and 77%, respectively, and the responses for the top five categories in the list, ending with "Environmental measures by industry," all topped 57%. The responses for the bottom five categories in the list, from "Greenhouse gas prevention measures" to "Lifestyle alteration" were low, at less than 50%.
- In Japan, more than 68% of respondents thought progress had been achieved in each of the top five categories in the list, starting from "Activities by local governments and citizens' groups" and "Formation of recycling systems" and extending to "Environmental measures by industry." However, like their overseas counterparts, few thought that progress had been achieved in the bottom five categories.
- Compared with results from five years ago, there was at least a 10-percentage-point increase in overseas responses reporting progress in "Activities by local governments and citizens' groups," "Scientific/technological contributions," "Promotion of environmental education" and "Formation of recycling systems." In Japan, the four categories were joined by two more, "Environmental measures by industry" and "Greenhouse gas prevention measures," that recorded increases of more than 10 percentage points.
- The categories reported to have achieved the least progress five years ago, "Lifestyle alteration" and "Population/poverty problems," remained unchanged or received even fewer responses in this poll.

2. CHANGES IN LIFESTYLE

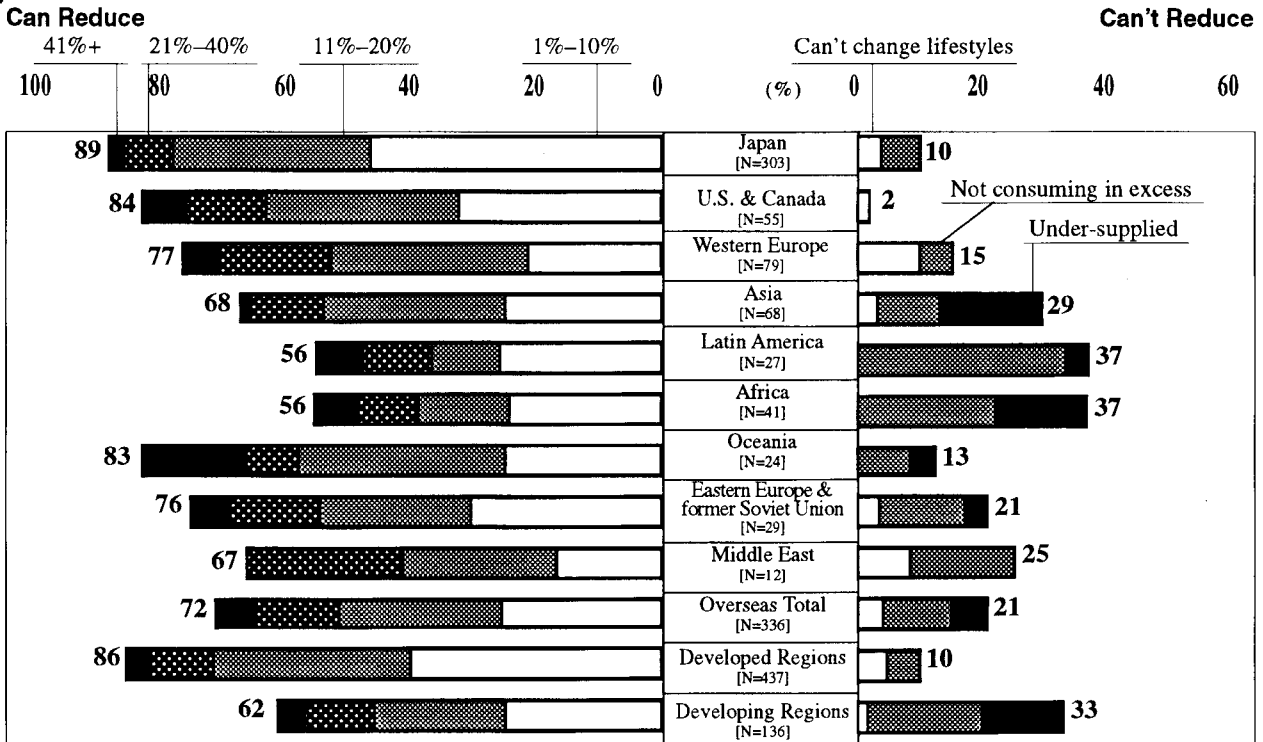
Question: To achieve a sustainable society, it will be necessary both to rebuild societal structures and to reform lifestyles dependant upon excess consumption. *In your country*, will it be possible to achieve reductions in current levels of consumption of the items below by reforming daily lifestyles? If possible, then to what extent can consumption be reduced from current levels? If it isn't possible, please select one of the reasons below. Please circle the one (1) letter on the scale of (a) to (g) that best expresses your opinion for each item.

(1) Electric power



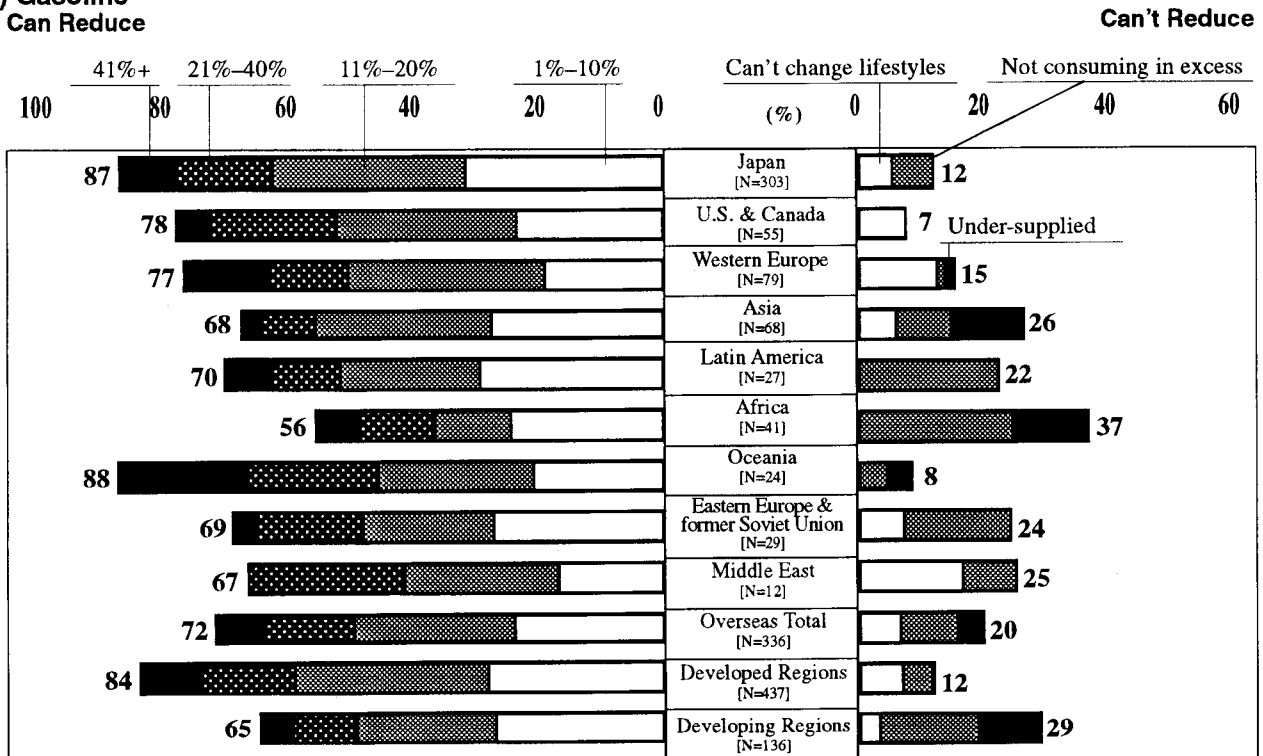
- Among the respondents from the developed regions, as well as Oceania and Eastern Europe & the former Soviet Union, more than 82% reported that consumption of electric power can be reduced.
- Although 49% to 59% of respondents from the developing regions of Asia, Latin America and Africa reported that it can be reduced, the portion of respondents selecting "Can't reduce" reached 35% to 41%, providing as reasons that they are "Under-supplied" and "Not consuming in excess."

**(2) Gas/fuel oil
Can Reduce**



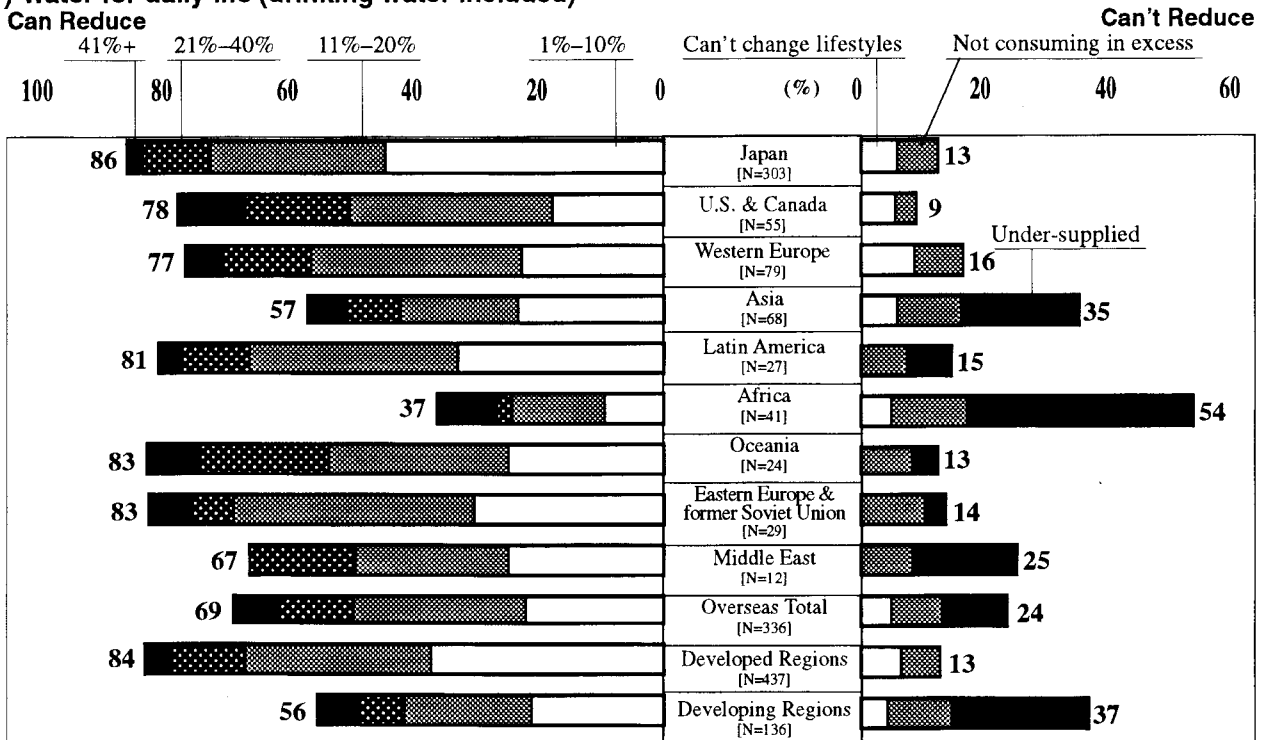
- More than 76% of respondents from the developed regions, as well as Oceania and Eastern Europe & the former Soviet Union reported that consumption of gas/fuel oil can be reduced, while 21% or fewer reported it could not.
- Although 56% to 68% of respondents from developing regions replied that consumption could be reduced, a large number, ranging from 29% to 37%, reported it could not, with most providing the reasons as "Not consuming in excess" and "Under-supplied."

**(3) Gasoline
Can Reduce**



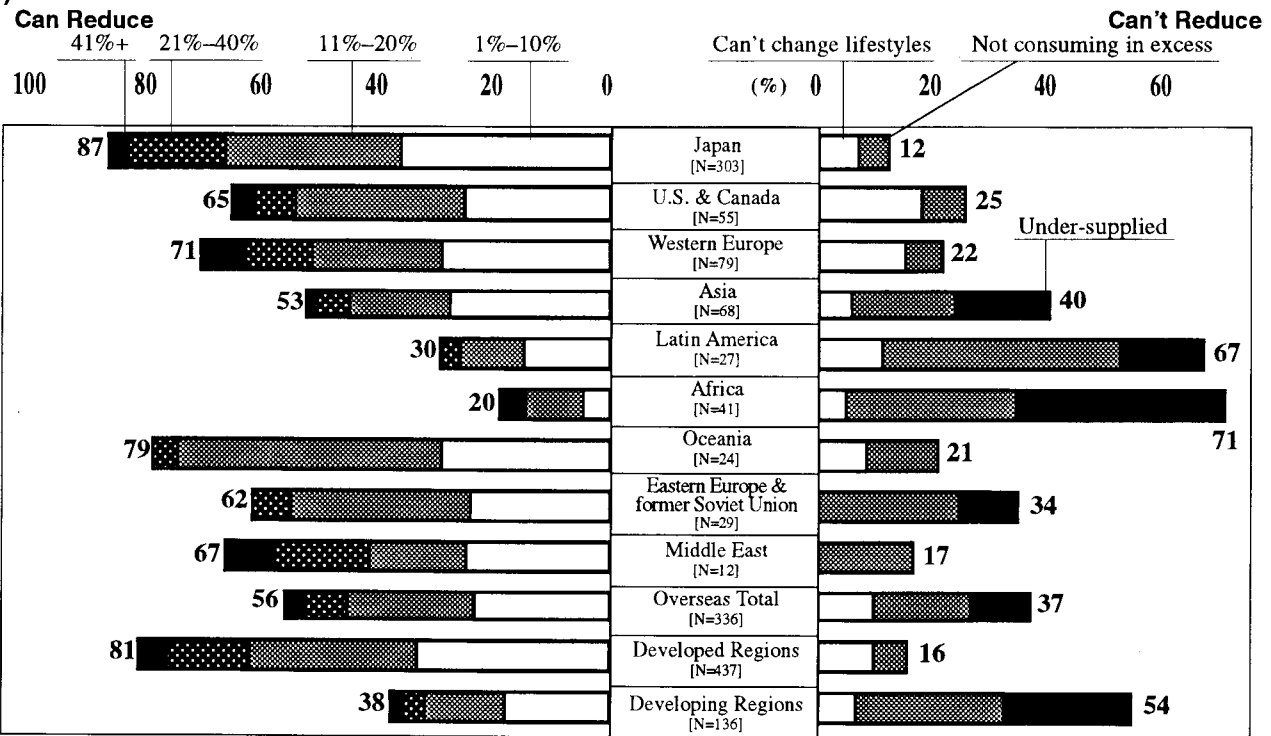
- In the developed regions and Oceania, more than 77% of respondents replied that gasoline consumption could be reduced, while those indicating it could not amounted to 15% or less.
- The largest "Can't reduce" response, at 37%, was from those polled in Africa. In the regions of Asia, the Middle East, Eastern Europe & the former Soviet Union and Latin America, more than 20% of respondents replied that gasoline consumption couldn't be reduced.

(4) Water for daily life (drinking water included)



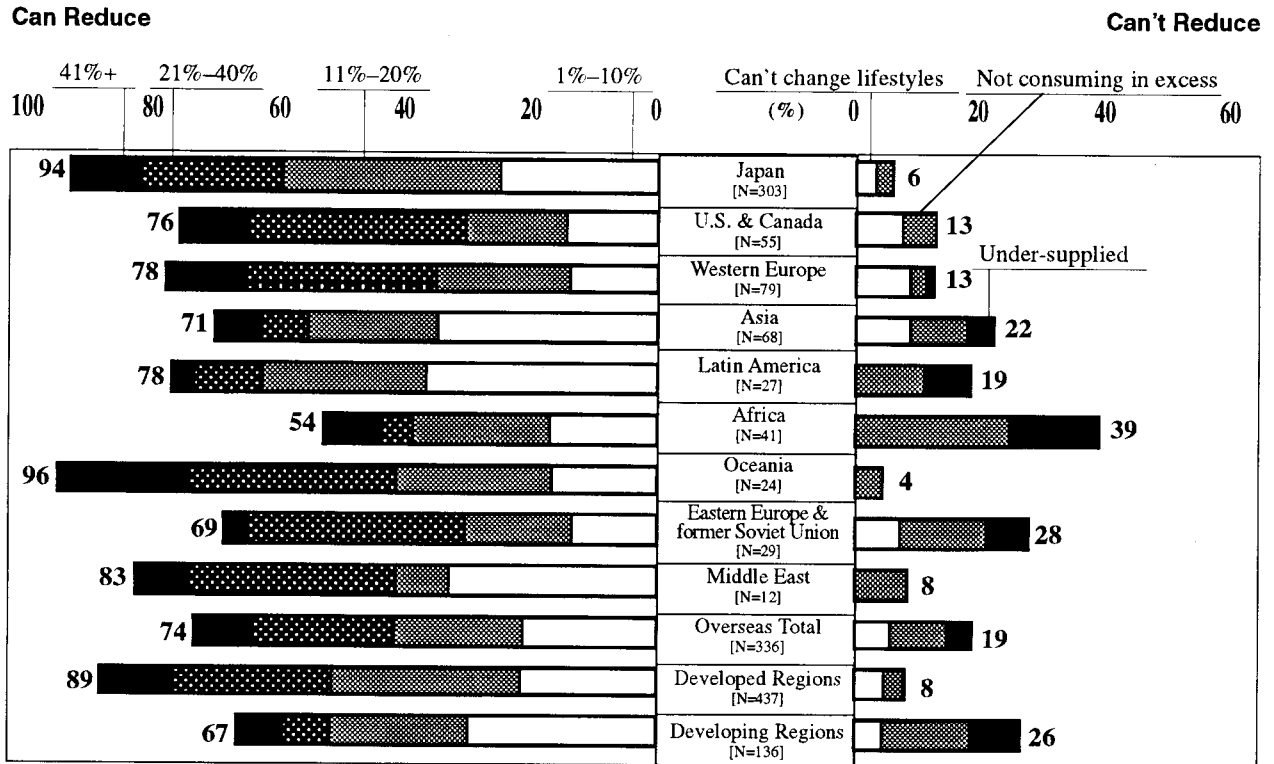
- More than 77% of respondents from the developed regions, as well as Oceania, Eastern Europe & the former Soviet Union replied that consumption of water for daily life could be reduced, while those responding in the negative amounted to 16% or less.
- In Africa, 54% of respondents said that consumption couldn't be reduced and just over 37% indicated that it could.
- Africa had the highest number of respondents stating the reason as "Under-supplied" for the "Can't reduce" response. Asia was next and was followed by the Middle East.

(5) Food



- In the developed regions, as well as Oceania and the Middle East, over 65% of respondents stated that consumption of food could be reduced.
- In Africa (71%) and Latin America (67%), those stating that consumption could not be reduced out-numbered the "Can reduce" responses significantly. The trend in Asia was similar at 40%.
- In Africa, a high percentage of respondents (37%) provided "Under-supplied" as the reason for being unable to reduce consumption.
- A large proportion of respondents in North America and Western Europe, 18% and 15%, respectively, provided "Can't change lifestyles" as the reason for the inability to reduce consumption.

(6) Paper



- In all regions excluding Africa, more than 70% indicated that paper consumption could be reduced. Africa was alone in having this number no higher than 54%.
- The region with the most negative responses regarding consumption reduction was Africa at 39%, followed by Eastern Europe & the former Soviet Union at 28%.

Potential for Lifestyle Changes—Indicators of the Potential for Reductions in Consumption of Energy and Food

	Electric power	Gas/fuel oil	Gasoline	Water for daily life (drinking water included)	Food	Paper	Average value
Japan [N=303]	+86	+79	+75	+74	+75	+88	+80
U.S. & Canada [N=55]	+78	+82	+71	+69	+40	+64	+67
Western Europe [N=79]	+71	+62	+62	+61	+49	+66	+62
Asia [N=68]	+24	+38	+41	+22	+13	+49	+31
Latin America [N=27]	+22	+19	+48	+67	-37	+59	+30
Africa [N=41]	+7	+20	+20	-17	-51	+15	-1
Oceania [N=24]	+88	+71	+79	+71	+58	+92	+77
Eastern Europe & former Soviet Union [N=29]	+83	+55	+45	+69	+28	+41	+54
Middle East [N=12]	+42	+42	+42	+42	+50	+75	+49
Overseas Total [N=336]	+51	+51	+52	+46	+20	+55	+46
Developed Regions [N=437]	+83	+76	+72	+71	+65	+81	+75
Developing Regions [N=136]	+18	+29	+36	+19	-16	+41	+21

Note: consumption reduction indicator = “Can reduce” response rate (%) - “Can’t reduce” response rate (%)

Overview of the Six Consumption Categories

- In the developed regions and Oceania, the indicator for all six categories was high, at more than 60% on average, signifying that the “Can reduce” response rate significantly outweighed the “Can’t reduce” response rate. In contrast to the high indicators recorded for Japan and Oceania, in particular, it is notable that the indicator for the “Food” category for North American and Western European respondents was low—in the 40s—compared to the other categories.
- Among the developing regions, the indicator for respondents from Asia and Latin America was low, at approximately 30 on average, and even lower for respondents from Africa, at -1. The indicators for food among African and Latin American respondents and for water among African respondents were negative numbers. Compared to the developed regions and Oceania, the indicators for “Electric power,” and “Gas/fuel oil,” were markedly low for these regions.
- Among respondents from Eastern Europe & the former Soviet Union and the Middle East, the indicators averaged 50, positioning these regions between the developed and developing regions.

IV. Comments from Respondents

This year's questionnaire elicited a total of 199 free comments, including 89 from 31 countries outside Japan and 110 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 36 representing 29 countries and 23 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

The private sector will be the engine for sustainable development if it is to succeed. Greater governmental support through performance-based regulations that reward good works and offer incentives for moving in the sustainable direction are needed. These approaches have received too little attention in the debate over sustainable development.

Andrew Mangan, North America Section, Business Council for Sustainable Development, U.S.A. 229

It is now 5 years that we have had a State Ministry for Environment, with 2 ministers, but 20 years that we have had an Environmental Affairs Agency, with 4 presidents. Some achievements are noteworthy, e.g., in establishing nature reserves and waste recycling, while others are not as brilliant, e.g., pollution abatement.

M, Cairo University, EGYPT 232

Our greatest problem is lack of international focus and leadership on environmental issues. We have far less focus now than at Rio, although we know more and have made important progress in some sectors. At the global level, we have some further agreements, such as that on POPs. Industry is playing a much more important, positive role now. However, many governments have lowered the environment on their priorities.

Michael Keating, Environment Writer and Consultant, CANADA 251

Johannesburg is our last chance for ending unsustainable lifestyles and unacceptable poverty.

Prof. M. S. Swaminathan, M.S. Swaminathan Research Foundation, INDIA 106

The great challenge we face is not technical or financial, but that of reforming the structure of our societies to value the environment and people, and stop sacrificing them both to greed and vested interests. Unfortunately, Australia has a long way to go. We have won the struggle to change public attitudes so that they think and say that the environment is important, but now we face the much harder task of getting individuals, companies and governments to act as though it is. We say the right words, but the lifestyles and methods have not changed to match them.

David Wanless, The Wilderness Society, AUSTRALIA 189

Ecological wisdom does not consist in understanding how to live in accord with nature; it consists in understanding how to get humans to agree on how to live in accord with nature. (Ken Wilber) Tell me how "global sustainable development" for the developed world can mean anything other than to learn to shrink sustainably whilst enabling the rest of the world to grow sustainably?

Nadia McLaren, Union of International Associations, BELGIUM 246

Nepal is rich in water resources (rivers, ponds, canals, glaciers, lakes, etc.). It is vital for the substances of all living organisms including plants, animals and man. All these resources are getting polluted, owing to the filth and dirt coming out from unplanned settlements, factories, industries, hospitals, etc. Water pollution is Nepal's alarming problem. Nepalese people are deprived from germ-free water due to lack of sewage/water treatment technology. The majority of people are suffering from water-borne diseases. Beside it, air polluted due to the running of old vehicles with the help of gasoline and harmful gases coming (released out) from brick factories (chimney) and industries. People destroyed the forest to expand the cultivable land, obtain fuel wood and build settlements. These are the warning issues in our country. Developed countries can play a centre role to settle these problems. Please keep your joint effort in our country.

Sundar Suwal, Nepal International Consumers Union, NEPAL 270

Necessity to create strong international water regulations and guidance.

Dukhovny Victor, SIC ICWC, UZBEKISTAN 118

NGOs and universities concerned with environmental management and education are not encouraged.

Sylvester S. Orhiere, Afriem (NGO) Lash (University), NIGERIA 133

Attitude of people coupled with government's willpower and self-regulation can bring about a sea change in controlling environmental changes. Linking environmental consciousness with religious ceremonies and practices and ensuring environmental education through vocational education and training will undoubtedly bring about greater commitment and deep sense of moral responsibility of people towards environment protection and sustainable development. In addition, activity-based environment education should be an integral part of any curriculum.

Dr. Vinay Swarup Mehrotra, Agriculture Division, PSS Central Institute of Vocational Education, INDIA 156

Can you help me to form a non-governmental organization to focus mostly on educating Kenyans on importance of environmental control countrywide?

Abbrey Vugigi Mwugusi, Central Government, KENYA 158

With education comes knowledge, with knowledge comes understanding, with understanding comes caring.
Lily Venizelos, Sea Turtle Conservation, Medasset-Mediterranean Association Save the Sea Turtle, GREECE 278

Governments are to dedicate large sums of money to environmental education to solve environmental problems on sustainable basis.

Michael Tsiagbey, Environment, Council for Scientific & Industrial Research, GHANA 324

Information must be disseminated throughout the world, for example, less than 0.1% of the population of my country knows a single word of the Kyoto Protocol.

Badjagou O. Pascal, Association Orukutuku, REPUBLIC OF BENIN 283

The number one problem we are facing is population increase. This may be solved by the number two problem which is the burning of fossil fuels. The supply of oil will peak and remain relatively constant during the period 2008 to 2018 so any increase in consumption by either population growth or per capita use will have severe effects on the developing nations. Therefore we must stop burning fossil fuels and develop alternatives.

M, Non-governmental organization, CANADA 015

I would say, only if developing countries undergo radical changes themselves allowing multistakeholder participation and create or support more effective frameworks for co-operation, trust will be enhanced thus allowing a better and more permanent global partnership. A lot of challenges may only be tackled successfully if we allow market differentiation and market forces to work in favor of the environment on non-renewable resources, distinguishing green and socially sound products, promoting organic agriculture, etc.

Stimmer Gerhard, V/8, EU-Affairs Environment, Federal Ministry of Agr. & Environment, AUSTRIA 034

World leaders should live the "real life" of the world citizens to understand their frustrations, dreams, targets and needs. Stop the nicely decorated summits with perfect temperature, nice folders and nice presentations. It is way more urgent that what world leaders realize. Kyoto protocol should become an educational program financed by an international endowment running RIGHT NOW. Without understanding of environmental problems by the common citizen, little progress will be done in the future.

David Ascanio, Morphos, VENEZUELA 045

The present course of the US prevents the third world to develop.

Teresa Z. Kief, Aid Programmes, International Lions Association, POLISH living in GERMANY 070

The developing world disturbs the environment for its survival but the developed world for the riches.

Chrisantha Hetharitelei, National Council of YMCA of Sri Lanka, SRI LANKA 083

Developed countries should take more initiative in any topics related to environmental problems than the developing countries.

M, European Society for New Methods in Agricultural Research / Mendel University of Agriculture and Forestry, CZECH REPUBLIC 217

I think that current generations are not responsible enough regarding environmental protection, but I hope that new generations will be more responsible and understand it to be part of your life.

Miroslav Raicevic, Ecological Section, The Association of Montenegrin-Japanese Friendship, MONTENEGRO 291

Environmental democracy is one of the most important tools to further sustainable development. However, in most countries environmental democracy is more or less a fiction.

Veit Koester, Multilateral Cooperation, Danish Forest and Nature Agency, DENMARK 310

We would be able to achieve our aims and objectives on 'Responsible prosperity' if our coalition does not end in workshops, conferences and the like, but becomes a global household word capable of debating, offering suggestions, feed-back and in local dialects.

M, Kindness Club of Africa (GIRAFFE), GHANA 334

Environmental problems begin in our heads and minds. If we are spiritually and emotionally unfulfilled, we and our environment will suffer. No material things can compensate for that void, which shows as greed and hunger. In a sustainable society, there will be more awareness about the real needs of mankind and of the individual, and there will be a reappraisal of diversity and respect for all living things. Sharing and solidarity will be "by-products" of a meaningful and humane life-style where living creatures are valued more than dead things, abstract things and systems.

F, BMLFUW - Ministry of the Environment, AUSTRIA 050

Developed countries are dumping their waste in the developing countries... This needs to be monitored and addressed.

Robema A. Boligor, Dept. of Agriculture, National Government, PHILIPPINES 054

Survival of humankind will largely depend on the 3 Ps - Population, Poverty and Pollution.

Dr. S.K. Shringi, Govt. College, Kota, Government, INDIA 244

The problem of transnational corporations (TNCs) proved to be a major obstacle at the Rio Earth Summit. The cynical disregard for the environment shown by these corporations, illustrated by the impact of the WTO, means that the adverse influence of TNCs has yet to be countered. To advance in any meaningful way, the heads of state must face this dilemma at the Johannesburg Summit.

David Black, Trust, Oxleas Wood Challenge Fund, U.K. 075

I believe only natural disasters will make developed countries and governments in developing countries accept that a restructuring of the economy is necessary.

Hamid Taravati, Environment research and education, Taravat-Bahar Institute, NGO, IRAN 220

Need recognition of widespread chemical pollution as a serious problem for both environmental & human health.

F, Soil & Health Association of New Zealand, Inc., NEW ZEALAND 100

In my country we have no industries today, we can develop this sector, with sound environmental technologies.

Maria Ivone L.P. Costa, National Authority for PWS, GUINEA BISSAU 194

So much has been written on environmental problems, but socio-economic condition plays a greater role in development.

F, Biotechnology, Indonesian Institute of Sciences, INDONESIA 193

I feel very strongly that any efforts to 'save the planet' are futile now. USA politics are so destructive and arrogant and anti-environment. I'm serious about this—all my research points to this sad conclusion: the system won't change itself and it won't be changed by its opponents. Only economic and environmental melt-down will stop it—hopefully at a time when some regions and species are still able to recover...

Lothar Luken, IRELAND 196

The prime strategy to mitigate the present environmental problems should be to have a holistic specio-functional inventory of the world ecosystem so as to protect and use it in a sustainable way.

Dr. R. V. Verma, Institute for Regional Development Studies, INDIA 301

Biotechnology raises profound questions, particularly for biological diversity.

M, Center for International Environmental Law, U.S.A. 307

The principal environmental problem in Bolivia is the desertification and poverty. Each time it gets worse.

Urbelinda Ferrufino, Asociacion Ecologica del Doiente (ASED), BOLIVIA 328

Issues relating to sustainable development, as far as the environment is concerned, must also be appreciated from the perspective of the needs of developing countries' indigenous people too.

E. Siisi-Wilson, Forest Management Certification, African Timber Organisation (ATO), GABON 304

Comments from Japan

As long as the doctrine of capital permeates production and distribution, a drastic measure for environmental conservation is difficult. Progress in the environmental sciences in the fundamental research fields which point toward the solutions to the problems, will receive a fatal blow in the forthcoming university system reforms. We must start fostering an environmental conservation movement at the ordinary citizens' level that employs a long-term perspective.

Yukio Sakamaki, Japan Association on the Environmental Studies, Japan 003J

Environmental problems are associated with just about every industry. It is vital to position the production and consumption locations for agriculture and food-related industries as close together as possible. This is not to

limit free trade; it is to create awareness for humanity as a whole.

M, National Institute for Rural Engineering, Japan 060J

I think that the earth's ability to absorb more of an environmental burden is close to reaching the saturation point. I wonder whether there are any organizations or researchers that are showing in a graphic model the extent to which the world has approached the saturation point. If we can display it graphically, I think that the conservation efforts of individuals and states will be enhanced.

M, Miyazaki Prefectural Government, Japan 072J

In Japan, there are already high standards of energy conservation, particularly in the industrial sector. To reach the commitments of the Kyoto Protocol, in addition to the government creating a framework that incorporates both conservation and economics as a matter of course, the country must provide leadership in offering incentives to change the awareness of consumers, transportation, and individual citizens in particular.

Satoshi Kaichida, Environment and Plant Siting Department, Chugoku Electric Power Co. Inc., Japan 069J

The importance of nature and environmental conservation are taught through compulsory education. So must the adults be taught to behave and value the importance of the earth as an accepted part of society. To this end, I think that more space and time in media, such as newspapers, TV and magazines, should be used for education. It would be ideal if society would develop so that environmental topics are always a topic in the community, households and the schools.

Minoru Yoneda, Earther Co., Ltd., Japan 016J

I would like to heartily disseminate to the other countries the movement from our country that places the idea in the curriculum of all countries worldwide, starting from kindergarten, that resources are not limitless and that it is important to strike a balance with the environment and nature.

Ichiro Sano, Japan 061J

Although general awareness of environmental problems continues to rise in Japan, the link between scientific understanding and concrete action is still lacking. There is a need to reform systems, promote environmental education and get citizens and NGOs to participate in securing understanding and action that is at least on par with the concern and concrete efforts undertaken with respect to economic and social problems. As far as business is concerned, environmental management, environmental audits, environmental accounting, and environmental reporting are one means by which environmental considerations can be reflected in economic decision making. Even if we do not go so far as to suddenly impose carbon taxes, there is a need to make greater use of environmental conservation methods linked to economic logic.

Koya Ishino, Automobile Environmental Countermeasures Section, Ministry of the Environment, Japan 015J

Litter—primarily plastic products—on the waterfront is leading to the rapid worsening of the ocean environment. From the viewpoint of this as a global environmental problem, a response is urgent. To start with, Japan should vigorously pursue international undertakings in the area around the Japan Sea, and I would like to see substantial budget provisions made for it.

Hiroshi Kaneko, Sakata Regional Office, Society for Conservation of Water and Green Environment, Japan 018J

Whether it is a corporation or a household, it is a matter ultimately of forcing change in each individual's lifestyle. In that sense, punitive regulations and coercive powers will be required for offenders. It is desirable to signal that this is a problem of that magnitude.

M, Matsushita Electronic Components Co., Ltd., Japan 089J

There is a need to indicate the burden on the environment and the benefits obtained, and in general society, to thoroughly debate the costs (forced reductions in consumption or the setting up of a tax system) and benefits.

The premise is that one takes action by oneself, but I think that a blend of economic and regulatory methods is required to support this. I think that environmental taxes linked to conservation-minded consciousness are a fair means of reforming the consumer society.

Sekio Higuchi, Society of Automotive Engineers of Japan, Inc., Japan 171J

Create a framework that incorporates environmental problems into economic decision making. Facilitate breakthroughs in science and technology that resolve environmental problems.

M, The Okinawa Development Finance Corporation, Japan 198J

Dissemination of the "Small is Beautiful" concept (Shumacher's theory)—> it is vital to move toward a society that features small-lot production/low volume consumption/low volumes of waste.

M, The Tokio Marine and Fire Insurance Co., Ltd., Japan 223J

I do not believe it to be a desirable state of affairs when a handful of developed countries hoard much of the energy, resources and other riches of the earth. I think it is necessary to devise an appropriate system whereby a surcharge is levied according to the portion of the benefit of the resources received and a fixed benefit is passed on to the developing countries. Environmental taxes, energy taxes, natural resource taxes and others would not just serve as a tool for environmental measures, they could be positioned as measures to address the inequities in international society, and I think the North/South problems should be resolved along with environmental problems.

Tetsuya Watanabe, Environmental Coordination Bureau, Department of the Environment, Hiroshima Prefectural Government, Japan 087J

To resolve the problems, the benefit to humanity not the benefit to the nation should be given priority. To achieve that it would be desirable to set up an international institution with powerful authority. The alleviation of poverty in the developing countries is also a matter of the utmost importance. In addition to financial support, it is necessary to address "good governance" (Questions 7-8).

Toshio Hiroi, Modern Law Department, Tokyo Keizai University/ Totoro No Furusato Foundation, Japan 139J

Although, on the one hand, we won't be able to see any noticeable improvement in a short period of time even if we diligently respond to environmental problems, I think that it is fact that there are numerous welcome changes occurring in both the developed and developing countries. For example, reduced consumption of coal and increased energy efficiency in China, and the progress achieved in emissions trading by the US, UK, EU and BP. It is important to look on favorably to this type of forward-looking effort and, by acknowledging the magnitude of the problem, to encourage international cooperation. Rather than laying blame, I think we should think about how to move ahead and whether we can do something ourselves.

Keiichi Yokobori, Institute of Research and Innovation (IRI), Japan 156J

Can we not aim to create a regional policy framework regarding the environment and sustainable development among Japan, China and Korea? (a contribution to this wonderful world)

Masaharu Yanashita, Chair of Environmental Policies, Graduate School of Environmental Studies, Nagoya University, Japan160J

In consideration of environmental conservation, since the total amount of resources cannot be increased, to alleviate poverty it will be necessary for policy initiatives that aim for the equal distribution of energy consumption and food among developed and developing countries.

Hirokazu Yamamoto, Graduate School of Agricultural and Life Sciences, University of Tokyo, Japan 176J

Overseas, there are cities that are recognized as environmentally advanced. In our country too, there are several cities that are being recognized by citizens as advanced, and these are the heart of a movement that will spread throughout the entire country. We will tell the world about this. I think that this Japanese model will be our best international contribution to worldwide environmental conservation.

Tsutomu Mizutani, Otemon Gakuin University, Japan 179J

Water scarcity on a worldwide scale is a concern. Forest conservation and replanting are important for their water resource cultivation functions. I would like to see the public and private sectors cooperate and educational activities by a global institution (United Nations, etc.) that will pledge funds and manpower.

Tomoaki Fujii, Tokyu Environmental Cleanup Foundation, Japan 229J

Create an eco stamp system: each household would have eco stamps distributed in proportion to the amount of resources recycled, such as paper, containers and water, or the amount of electricity or gas and other energy conserved, or the number of days spent in eco service. Once collected, the eco stamps can be used to purchase eco products, such as low-emission vehicles, housing made of domestic timber, devices that use solar energy, devices that recycle rainwater, or insulated windows, etc.

Yoichi Nagatsuka, Planning Department, Japan International Forestry Promotion & Cooperation Center, Japan 130J

The major topics now are the US's high consumption lifestyle and rapid move to isolationism and the need to increase the rights of women in the developing world to education and a voice.

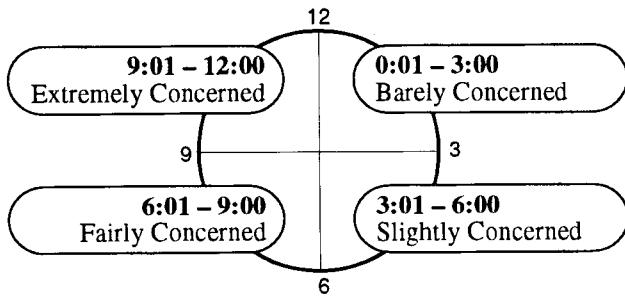
Makoto Hoshino, WWF Japan, Japan 173J

Even if the U.S. were to return to the COP3 framework, or developing countries were to participate, the CO₂/ global warming problem will not return to the original levels even in the distant future. I feel that we should continue doing what we can now to the best of our ability, the developed countries should focus on developing radical technologies (for example, reintroduction of CO₂ to the ocean or earth's crust) and the developing countries should concentrate on capacity building (including education, policy-making abilities and the fostering of technical experts).

Tsuzuru Nuibe, the Energy Conservation Center, Japan, 255J

V. Questionnaire as Distributed to Respondents

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 corresponding to the extent of your concern in the boxes below.



Please write your time here.

:

(Example :)

2-1. In November 2001, the Seventh Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP7) was held in Marrakech, Morocco. Representatives of 172 countries met under one roof and obtained final agreement on important working regulations for the Kyoto Protocol. How would you evaluate the COP7 results? Please indicate whether you favor or oppose them and mark the main reason for this by checking one (1) option below.

A. In Favor

Reason:

- (1) Because it is now possible for each national government to proceed with ratification procedures for the Kyoto Protocol since the detailed working regulations were decided for flexible measures, such as "Emissions Trading," "Joint Implementation" and the "Clean Development Mechanism," and for the cap on carbon sinks.
- (2) Because technical assistance for climate change and three endowment funds (a special climate change fund, a least developed countries fund and a Kyoto Protocol adaptation fund) were established to support developing countries.
- (3) Because concrete measures were decided upon if the targets are not met (1.3 times the excess emissions from the next period's emissions allowance are to be deducted).
- (4) Because agreement was reached by every other country even though the United States didn't participate.
- (5) Because, although the efficacy of the reductions will be weakened by the compromises made, it is the first step toward global greenhouse gas reduction measures.
- (6) Other: _____

B. Opposed

Reason:

- (1) Because the actual reduction results will be weakened as a result of compromises taken to accommodate each country's claims regarding conflicting interests (i.e. woodland absorption volumes, application of penalties).
- (2) Because legally binding provisions for compliance were deferred until the first session of the Conference of the Parties meeting after the protocol has come into effect.
- (3) Because it failed to set a quantitative cap on reductions through emissions trading and it was agreed not to differentiate between reduction volumes achieved through this trading and actual reduction volumes (potential emissions reduction loophole).
- (4) Because the United States hasn't changed its stance toward non-support of the protocol.
- (5) Because the developing countries' reduction obligations weren't debated and there was no consensus on future approaches.
- (6) Other: _____

2-2. The conditions for each country to ratify the Kyoto Protocol were arranged with the agreements reached at COP7. As it will be each country's own decision whether or not to ratify the protocol, please indicate which of the following items you think will be important for facilitating ratification in your country. Please check the two (2) items you consider the most important.

- (1) U.S. return to the protocol (U.S. ratification).
- (2) U.S. promise to strive to reduce domestic emissions even if it doesn't ratify the Kyoto Protocol yet.
- (3) Developing countries' promises to participate in the Kyoto Protocol's emissions reduction framework in the near future.
- (4) Clarification of the system and processes (provisions in domestic systems) for reaching reduction targets in developed countries.
- (5) Promotion of technical development and the provision of insight into the growth potential of environmental businesses.
- (6) Other: _____

2-3. It has been forecast that developing countries, including China and India, will produce a higher share of annual world CO₂ emissions than the developed countries by 2020, and it is thought that the efforts to curb global warming will be ineffective without developing country participation. The idea that “developing countries should participate in the protocol’s emissions reduction framework starting from the second commitment period (2013 onward)” has been put forward. When do you think developing countries should start participating? Please check one (1) item.

- ⁽¹⁾ Between 2013 and 2014. ⁽²⁾ Between 2015 and 2017. ⁽³⁾ Between 2018 and 2021.
⁽⁴⁾ After 2022. ⁽⁵⁾ The expected start should vary by country.
⁽⁶⁾ There is no need for developing countries to participate.
⁽⁷⁾ Other: _____

3. Free trade is making headway and we are seeing various environmental impacts when economic activities are conducted across national borders. There have also been protests conducted by groups of demonstrators, including environmental conservationists, at WTO meeting sites in the past. Please check two (2) items that invoke the most concern in your country among all the environmental impacts related to free trade.

- ⁽¹⁾ It is easier for uncontrolled harmful substances to be transported internationally.
⁽²⁾ It is easier for cross-border environmental pollution.
⁽³⁾ Products with pricing that does not reflect environmental costs are imported or exported.
⁽⁴⁾ Environmental pollution is intensifying in countries that are not part of multilateral environmental agreements.
⁽⁵⁾ Growth in free trade is damaging the environment, particularly in developing countries, as a result of promoting economic activities without adequate environmental consideration.
⁽⁶⁾ Restrictions on trade are used in the name of environmental conservation.
⁽⁷⁾ Other: _____

4-1. Water problems are said to be the most pressing issue of the 21st century. In March next year, the 3rd World Water Forum will be held in Japan. In our last questionnaire, we found major differences among the regions regarding the severity of the problems. Water is an important resource for achieving sustainable development and a topic about which we can expect major changes in future as a result of population increases, urbanization and climate change. Please check up to three (3) items from the measures below that you feel are vital and should be taken in your country with regard to water resources (including water for drinking and agriculture).

- ⁽¹⁾ Enact laws and regulations targeting the preservation of water quantity and quality.
⁽²⁾ Introduce economic measures, such as additive taxes, to manage water consumption.
⁽³⁾ Develop technologies for water purification and the desalinization of seawater.
⁽⁴⁾ Develop technologies to raise the efficiency of water usage.
⁽⁵⁾ Expand drinking water and sewage treatment facilities.
⁽⁶⁾ Build irrigation facilities.
⁽⁷⁾ Conduct educational activities such as the encouragement of water conservation.
⁽⁸⁾ Conserve water reserve lands.
⁽⁹⁾ Promote water recycling.
⁽¹⁰⁾ Construct water reservoirs.
⁽¹¹⁾ Collect and use rainwater.
⁽¹²⁾ Train water experts.
⁽¹³⁾ Other: _____

4-2. It became clear from the results of the last questionnaire that problems with both water quality and quantity are much worse in developing countries than in developed countries. Please select the two (2) items below that you feel would be most effective for developed countries to support the amelioration of water problems in developing countries.

- ⁽¹⁾ Providing monetary assistance for infrastructure and plant construction (drinking water and sewage treatment plants, irrigation plants).
⁽²⁾ Transferring technology, training technicians, sending technicians.
⁽³⁾ Assisting with planning of water resource management policy.
⁽⁴⁾ Assisting with awareness training for the general populace.
⁽⁵⁾ Facilitating surveys and research.
⁽⁶⁾ Establishing educational institutions that will train technicians.
⁽⁷⁾ Admitting developing country researchers and trainees into their own countries.
⁽⁸⁾ Conducting awareness training for the general populace.
⁽⁹⁾ Other: _____

5. To achieve a sustainable society, it will be necessary both to rebuild societal structures and to reform lifestyles dependant upon excess consumption. *In your country*, will it be possible to achieve reductions in current levels of consumption of the items below by reforming daily lifestyles? If possible, then to what extent can consumption be reduced from current levels? If it isn't possible, please select one of the reasons below. Please circle the one (1) letter on the scale of (a) to (g) that best expresses your opinion for each item.

Can Reduce
1% - 10% 11% - 20% 21% - 40% 41% +
Can't Reduce
Not consuming in excess
Can't change lifestyles
Under-supplied

- (1) Electric power (a) (b) (c) (d) (e) (f) (g)
- (2) Gas/fuel oil (a) (b) (c) (d) (e) (f) (g)
- (3) Gasoline (a) (b) (c) (d) (e) (f) (g)
- (4) Water for daily life (drinking water included) (a) (b) (c) (d) (e) (f) (g)
- (5) Food (a) (b) (c) (d) (e) (f) (g)
- (6) Paper (a) (b) (c) (d) (e) (f) (g)

6. Ten 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* toward 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.

Significant progress
Some progress
Cannot determine
Almost no progress
No progress

- (1) Promotion of environmental education (a) (b) (c) (d) (e)
- (2) Activities by local governments and citizens' groups (a) (b) (c) (d) (e)
- (3) 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)

7. In August 2002, tenth anniversary of the Earth Summit, the world's heads of state will meet at the Johannesburg Summit to debate concrete measures to achieve sustainable development. Please check the three (3) items below for which you feel there is the greatest need in order to conserve the global environment and develop a poverty-free global society.

- (1) Focused and effective distribution of official development aid from developed countries in fields in which the developing countries can be expected to help themselves.
- (2) Creation of a framework that would be effective for private-sector capital from developed countries to be directed toward sustainable development in developing countries.
- (3) For developed countries to increase official development aid to a fixed target, such as 0.7% of GNP.
- (4) Establish fund for sustainable development and raise the capital through innovative means, such as a tax on foreign currency transactions, etcetera.
- (5) Focus on the promotion of international cooperation to raise the coping ability of developing countries.
- (6) Create a framework that allows developing countries to benefit from free trade.
- (7) Promote undertakings in scientific observation and research and in the information field to facilitate scientifically based policy-making decisions.
- (8) Facilitate efforts to establish "good governance" to improve democratic administration and its transparency.
- (9) Encourage multistakeholder participation, such as civil society or NGOs, in policy-making decisions.
- (10) Encourage education that fosters awareness of one's membership in a global community that respects diversity and the possession of an environmental ethic.
- (11) Other: _____

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

**Results of the 11th Annual
"Questionnaire on Environmental Problems and the Survival of Humankind"**

REPORT

**September 2002
Published by the Asahi Glass Foundation**

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Production assisted by IR Japan, Inc.

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Printed on recycled paper.