



Voices of Concern Raised over Global Environmental Problems
Results of the Seventh Annual
“Questionnaire on Environmental Problems and the Survival of Humankind”
Asahi Glass Foundation

The Asahi Glass Foundation, chaired by Jiro Furumoto, has once again carried out its survey to gauge the perceptions of respondents, mainly specialists from both governmental organizations (GOs) and nongovernmental organizations (NGOs) concerned with global environmental problems, regarding the progress of efforts to conserve the environment since the Earth Summit. In December 1997, the Third Conference of Parties to the United Nations Framework Convention on Climate Change (COP3) was held in Kyoto. COP3 was a major step on the way to halting global warming. As a result, this year's survey covers new topics such as expectations for the results of COP3 as well as subjects closely related to stopping global warming, such as energy and a carbon tax, in addition to including questions from past surveys about the “time clock” measuring crisis perception and the items of Agenda 21. The Foundation would like to express its gratitude to Professor Akio Morishima of the Faculty of Law of Sophia University for again providing invaluable advice at all stages of the project.

A Summary of Questionnaire Results

New Survey Questions: Evaluation of COP3 and Global Warming Countermeasures

- Outcome of COP3 and Related Topics
 - 1) Regarding the decision at COP3 to set the commitment period for binding targets on emissions reductions by economically advanced countries between 2008 and 2112, respondents were about split down the middle with 46% saying this was too late and 45% deeming it appropriate.
 - 2) The emissions reductions targets for industrialized countries of Japan, the EU, and Canada were judged too lax by more than 40% of respondents. Less than 40% of respondents deemed them appropriate. As high as 61% of respondents indicated that the U.S. target was too lax.
 - 3) Respondents were asked about flexibility in meeting emissions targets through four supplementary methods (emissions trading, joint implementation, a clean development mechanism, and the net approach—sinks). Respondents from all economically advanced countries showed strong support for allowing up to 20% of a country's target to be met through these methods. Respondents from developing countries showed the most support, believing that a country should be allowed to meet up to 40% of its target through these methods.
 - 4) When asked about the timing and participation of developing countries in targets for emissions reduction, most respondents from economically advanced regions answered that developed regions should set a good example. The most common answer from developing regions was that developed countries should support environmental initiatives in developing countries.

When asked when restrictions on emissions in developing countries should begin, the most common answer by respondents from both developed and developing regions was “2010–2014,” the earliest choice offered by the survey.
- The establishment of guidelines for the use of the four flexibility provisions adopted as a supplementary measure at COP3 was cited by respondents from all regions as the outcome most desired of COP4.
- Clear regional differences were seen in responses to the question about important factors for reducing emissions of greenhouse gases. Respondents from industrialized regions thought that changes in the overconsumption-oriented lifestyles of ordinary people as well as changes in mass production and consumption systems were the most important factors, while respondents from developing regions cited environmental education as most important.
- The majority of respondents from Japan and overseas indicated that current nuclear technologies should be completely rethought.
- An overwhelming majority (74%) of respondents from all regions indicated that they were in favor of introducing a carbon tax. For respondents from Japan, this figure was 77%.
- For regions where daylight saving time has been adopted, 90% of respondents are in favor of the system. For regions where daylight saving time has not been adopted, 62% of respondents are in favor of the system.

Questions Continued from Past Surveys: Agenda 21 and Lifestyles

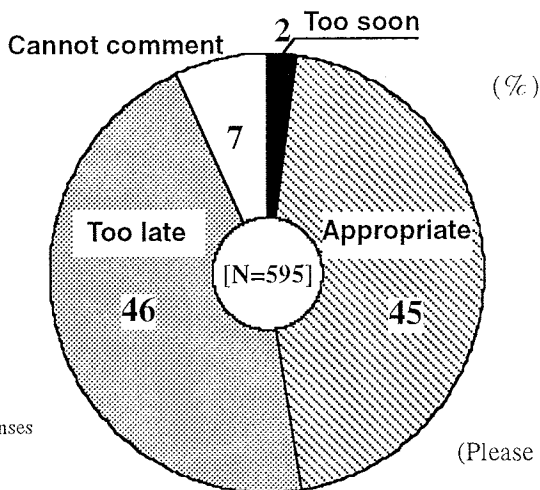
- Asked to indicate on a time scale their level of concern about the survival prospects of humankind, respondents chose an average time of 9:05, the third year in a row to register within the range of extreme concern. At 9:01, the average response time for Japan entered the range of extreme concern for the first time.
- Regarding the items contained in Agenda 21, progress in environmental education was again rated highly, but progress in such areas as lifestyle changes was rated more harshly than ever.
- Respondents, from Japan only, were asked about changes in lifestyle. About 87% indicated that they either do not lead a wasteful lifestyle or that they could adapt with difficulty to a more frugal lifestyle. The number one reason cited for why it is more difficult to change to a more frugal lifestyle was “Even though there is awareness of environmental problems, taking action is inconvenient.” (This question was asked of Japanese respondents only.)

I. New Survey Questions: Evaluation of COP3 and Global Warming Counter-measures

Outcome of COP3 and Related Topics

1. Regarding the decision at COP3 to set the five-year commitment period for binding targets on emissions reductions by economically advanced countries at between 2008 and 2112, respondents were about split down the middle with 46% saying this was too late and 45% deeming it appropriate.

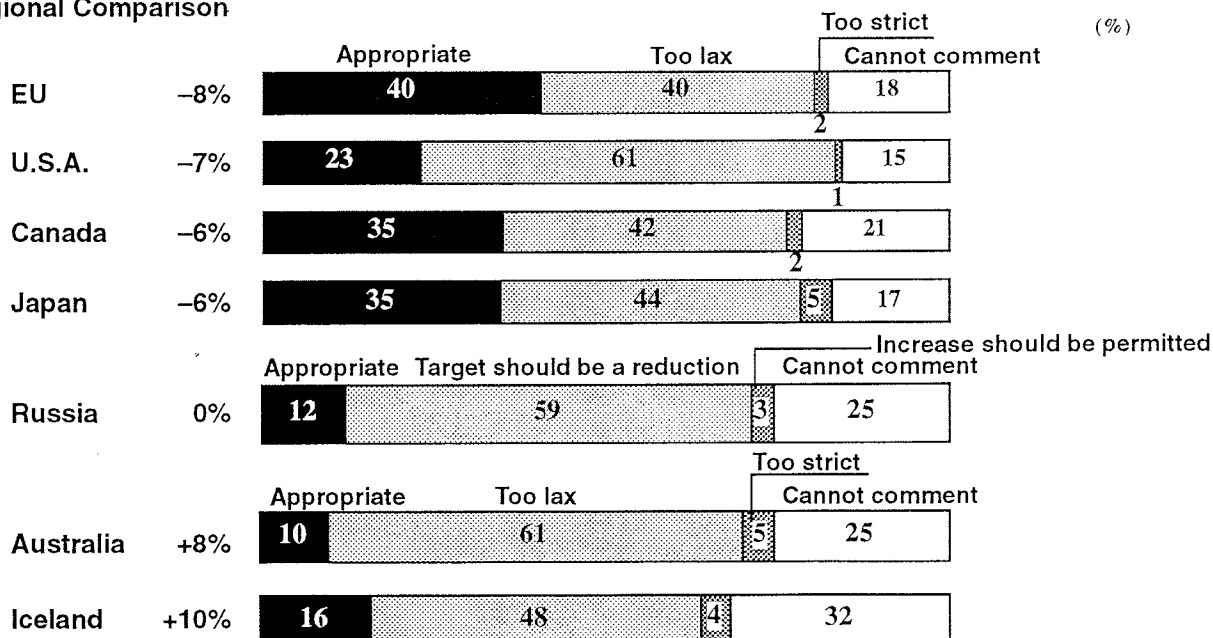
Regarding the commitment period, respondents from all regions showed a wide split in opinions with 46% indicating that it was set too late and 45% indicating that it was appropriate. Only a scant 2% of respondents indicated that it was too early. In addition, more than 60% of respondents from Western Europe and Latin America indicated that the commitment period was set too late.



2. The emissions reductions targets for industrialized countries of Japan (at 6%), the United States (at 7%), and the EU (at 8%) were judged too lax by 44%, 61%, and 40% of respondents, respectively. In particular, respondents harshly evaluated the U.S. target.

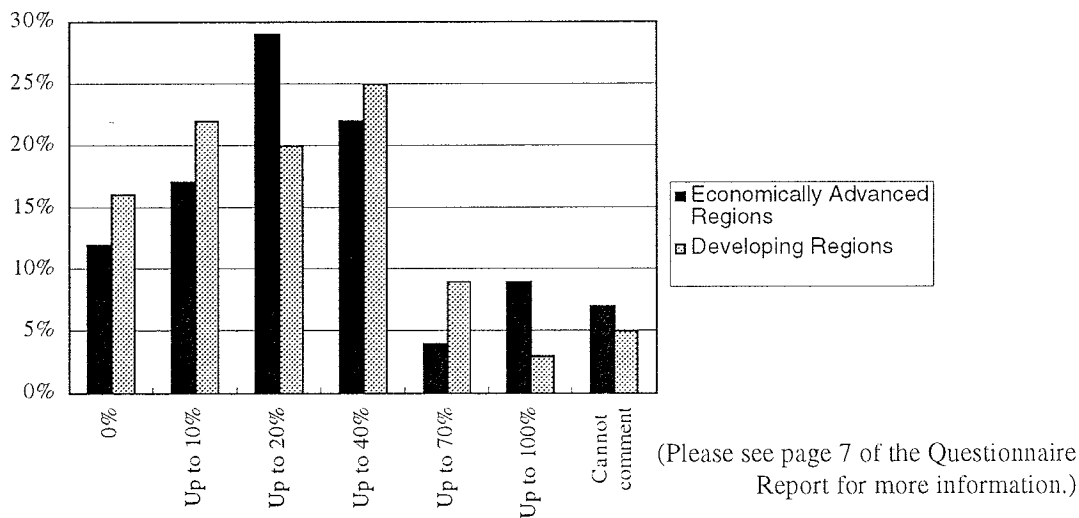
About 40%–44% of respondents felt that emissions reductions targets for Japan (at 6%), the EU (at 8%), and Canada (at 6%) were too lax, and 35%–40% deemed them appropriate. However, about 60% of respondents felt the targets for the United States (7%), Russia (0%), and Australia (a permissible increase of up to 8%) were too lax.

Regional Comparison



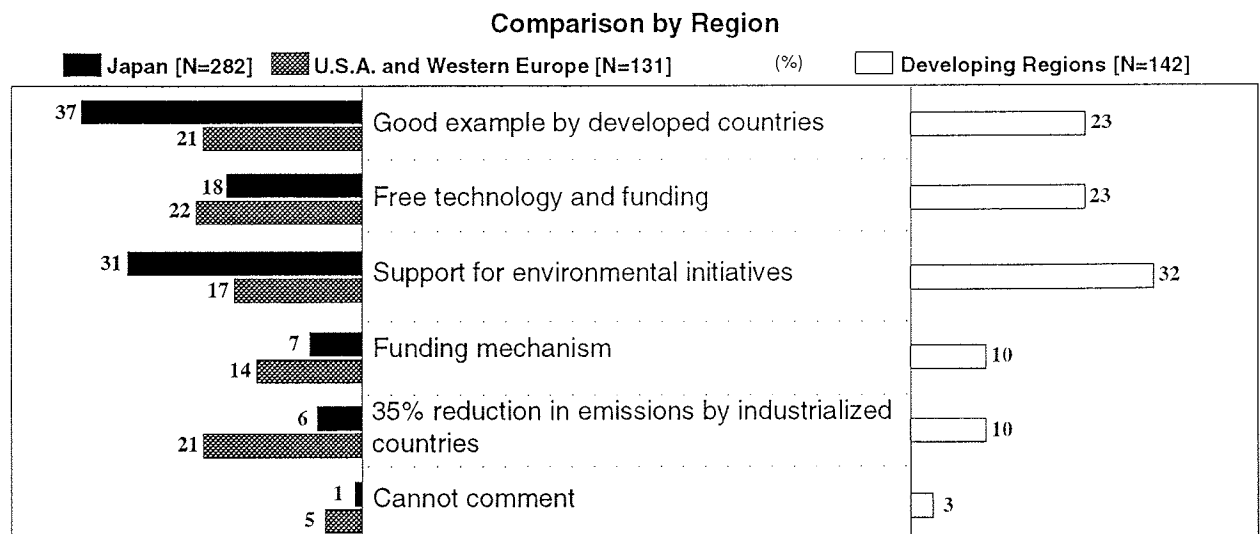
3. Respondents were asked about flexibility in meeting emissions targets through four methods (emissions trading, joint implementation, a clean development mechanism, and the net approach—sinks). Respondents from all economically advanced countries showed strong support for allowing up to 20% of a country’s target to be met through these methods. Respondents from developing countries showed the most support, believing that a country should be allowed to meet up to 40% of its target through these methods.

At 29%, the most commonly chosen response from industrialized regions was “up to 20%.” However, at 25%, the most commonly chosen response for respondents from developing regions was “up to 40%.” Fifteen percent of respondents from the United States & Canada chose “up to 100%,” the highest such percentage from any region. Overall, 8% of respondents chose “up to 100%.”



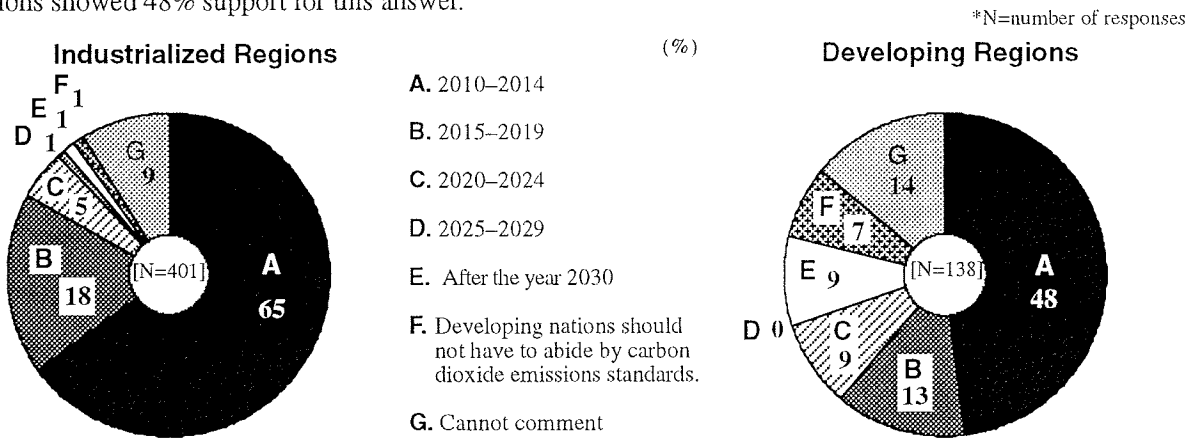
4-1. When asked about the timing and participation of developing countries in targets for emissions reduction, most respondents from economically advanced regions answered that developed regions should set a good example. The most common answer from developing regions was that developed countries should support environmental initiatives in developing countries.

Among the economically developed regions, a relatively high 35% of respondents from Japan indicated that developed regions should set a good example. The percentage of respondents from the United States & Canada who indicated that developed regions should set a good example was about even with those who indicated that economically advanced nations should reduce their emissions levels below 1990 levels by a uniform 35%. The top response from developing regions was that developed countries should support environmental initiatives in developing countries. The second most popular answers, garnering about the same response rate, were that developed regions should set a good example and developed nations should provide technology and free funding.



4-2. When asked when restrictions on emissions in developing countries should begin, the most common answer by respondents from both developed and developing regions was “2010–2014,” the earliest choice offered by the survey.

Emissions of greenhouse gases by developing countries are forecast to overtake those of economically advanced countries sometime in the second half of the 21st century, so the early participation of developing nations in reducing greenhouse-gas emissions is vital to halting global warming. The earliest available response, 2010–2014, garnered support from 60% of all respondents. Industrialized regions showed 65% support and developing regions showed 48% support for this answer.



Expectations for COP4

The establishment of guidelines for the use of the four flexibility provisions adopted as a supplementary measure at COP3 was cited by respondents from all regions as the outcome most desired of COP4.

Respondents from all areas, with the exception of Japan and developing regions, showed the most support for a system of sanctions to be enacted when emissions targets set at COP3 are not achieved. The second most common response by respondents from the United States & Canada and Western Europe was support for more leadership and commitment from economically developed countries. The most popular answer among Japanese respondents was the establishment of guidelines for the use of the four flexibility provisions, followed by a system of sanctions. Respondents from developing regions showed the most support for more leadership and commitment from economically developed countries, followed by a system of sanctions.

	Japan (216)	United States & Canada (54)	Western Europe (49)	Asia (31)	Latin America (20)	Africa (34)	Oceania (13)	Eastern Europe & the former Soviet Union (14)	Middle East (6)	Overseas total (222)	Male (350)	Female (81)
Stricter emissions targets	15	21	30	11	12	16	14	11	20	18	17	14
Establishment of an international monitoring system and a system of sanctions to be enacted when emissions targets are not achieved	50	(58)	(52)	37	36	31	(48)	(67)	(67)	(47)	(47)	(55)
The setting of a date for the start of emissions restrictions for developing countries	37	11	13	13	27	16	10	33	27	16	27	21
The establishment of guidelines for the use of the four flexibility provisions (emissions trading, joint implementation, a clean development mechanism, and the net approach—sinks)	(57)	39	33	43	(52)	45	38	22	—	38	(47)	47
More leadership and commitment from economically developed countries on combating global warming	26	47	42	(50)	48	(47)	43	28	33	44	35	39
No response	2	3	2	0	3	2	0	0	7	2	2	0

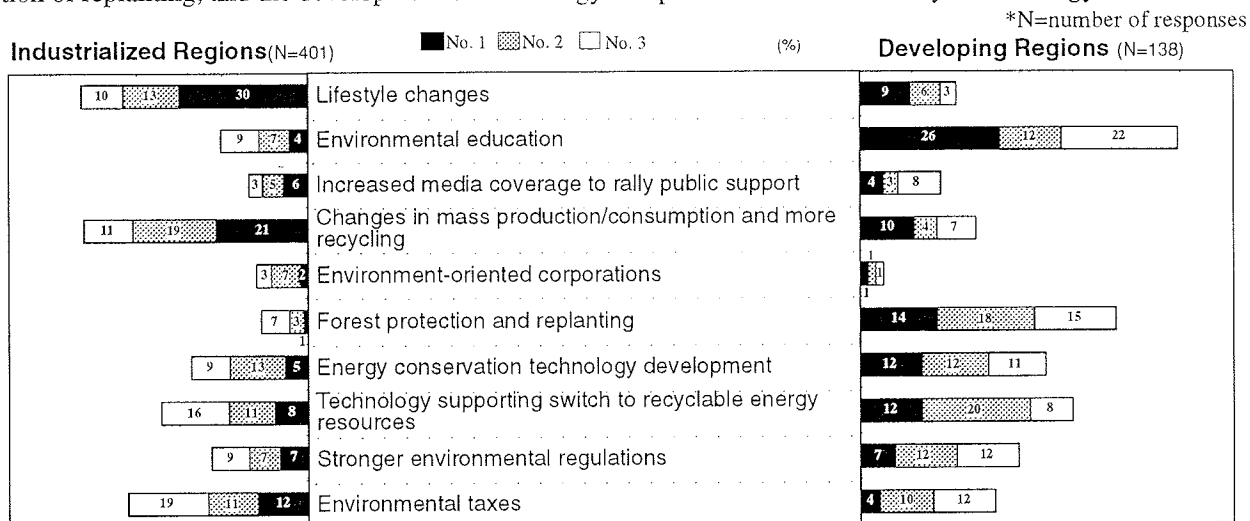
Notes: Figures enclosed by a circle represent the answer with the highest number of points. Respondents were asked to choose two answers, so the total for each region is basically 200%. However, some respondents chose only one or no answers, so for some regions the total is less than 200%.

(Please see page 10 of the Questionnaire Report for more information.)

The Reduction of Greenhouse-Gas Emissions

Respondents from industrialized regions thought that changes in the overconsumption-oriented lifestyles of ordinary people was the most important factor for reducing emissions of greenhouse gases, while respondents from developing regions cited environmental education as most important.

Clear regional differences were seen in response to the question on this topic. Respondents from industrialized countries thought the most important factors are changes in the overconsumption lifestyles of ordinary people—the most popular response, followed by changes in mass-production and overconsumption-throwaway-type systems, and use of environmental levies to restrict environmental destruction. Respondents from developing countries cited environmental education as the most important factor, followed by the protection of forests and promotion of replanting, and the development of technology that promotes a switch to recyclable energy resources.



Notes: Unclear responses have not been shown on this graph.

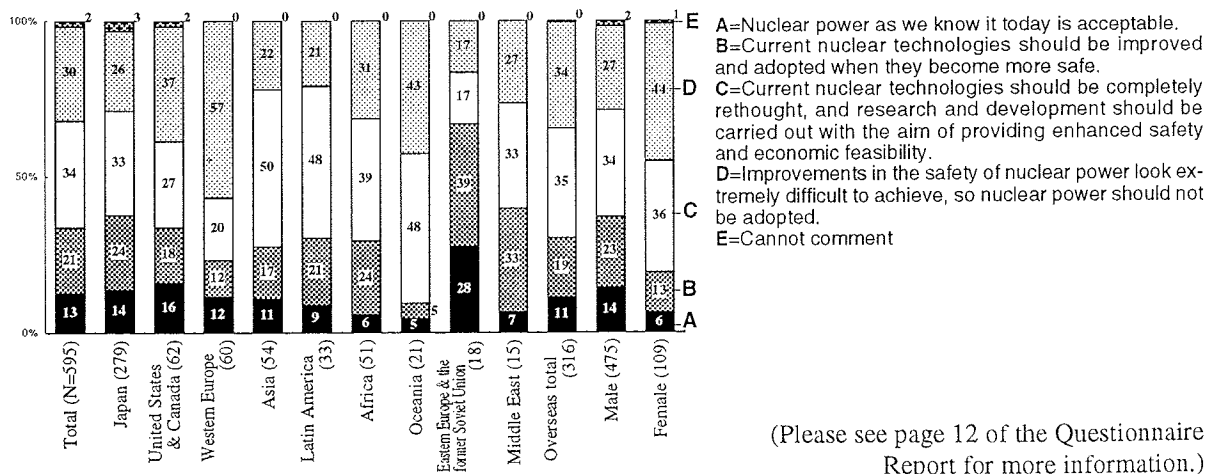
Industrialized regions included Japan, the United States & Canada, and Western Europe. Developing regions included Asia outside of Japan, Latin America, and Africa.

(Please see page 11 of the Questionnaire Report for more information.)

Nuclear Energy

The majority of respondents from Japan and overseas indicated that current nuclear technologies should be completely rethought before nuclear power be considered a viable alternative to fossil fuels.

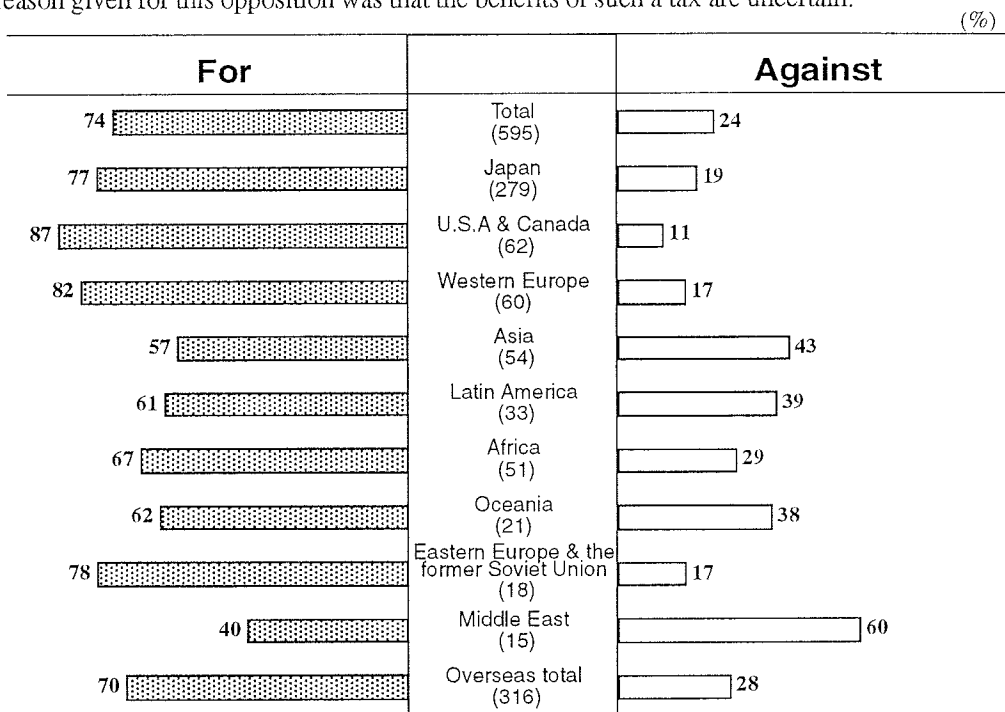
About 35% of non-Japanese respondents indicated that current nuclear technologies should be completely rethought, and 34% indicated that nuclear power should not be adopted because safety improvements look difficult to achieve. By region, a significant 57% of respondents from Western Europe indicated that nuclear power should not be adopted. Similarly, 46% of respondents from developing regions answered that current nuclear technologies should be completely rethought. For respondents from Japan, 33% indicated that current nuclear technologies should be completely rethought, more than the 26% who indicated that nuclear power should not be adopted.



Introduction of a Carbon Tax

An overwhelming majority (74%) of respondents from all regions indicated that they were in favor of introducing a carbon tax. For respondents from Japan, this figure was 77%.

The carbon tax is a measure aimed at restricting consumption of fossil fuels by taxing electricity, natural gas, gasoline and other energy resources related to the emission of carbon dioxide. An overwhelming majority—74%—of respondents from all regions and 77% of respondents from Japan indicated that they were in favor of introducing a carbon tax. The most commonly chosen reason overall for introducing such a tax was to encourage energy conservation at businesses and households. For respondents from Japan, the most commonly chosen reason was to promote strategies that combat global warming. About one-fourth of respondents were opposed to introducing a carbon tax. The most common reason given for this opposition was that the benefits of such a tax are uncertain.



Note: Unclear responses have not been shown on this graph.

Reasons for supporting the introduction of a carbon tax

	Japan (216)	United States & Canada (54)	Western Europe (49)	Asia (31)	Latin America (20)	Africa (34)	Oceania (13)	Eastern Europe & the former Soviet Union (14)	Middle East (6)	Overseas total (222)	Male (350)	Female (81)
Higher-priced fossil fuels will reduce demand and encourage energy conservation at businesses and households.	51	(78)	(84)	48	(60)	(47)	(54)	(50)	(83)	(65)	(61)	(49)
A carbon tax will enable us to promote strategies that combat global warming at the least cost.	(54)	26	45	29	20	44	31	29	17	33	45	38
By instituting a carbon tax, we can raise funds for technological R&D related to global warming.	31	43	27	39	50	35	46	43	50	38	35	35
To achieve the reductions in carbon dioxide emissions targeted at COP3, we must use all available means.	19	26	22	19	30	21	23	29	33	24	20	30
A carbon tax has value as a way to educate the public about conserving energy.	44	26	22	(55)	40	44	46	(50)	17	36	37	47

Notes: Unclear responses have not been shown on this graph.

Percentages represent the total of answers ranked 1 and 2.

The sample size for the Middle East is small, so please view these figures for reference only.

A circle indicates the most commonly chosen response for a given region.

Respondents were asked to choose two answers, so the total for each region is basically 200%. However, some respondents chose only one or no answers, so for some regions the total is less than 200%.

(Please see pages 13 and 14 of the Questionnaire Report for more information.)

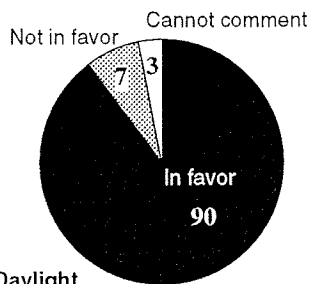
Introduction of Daylight Saving Time

For regions where daylight saving time has been adopted, 90% of respondents are in favor of the system. For regions where daylight saving time has not been adopted, 62% of respondents are in favor of the system.

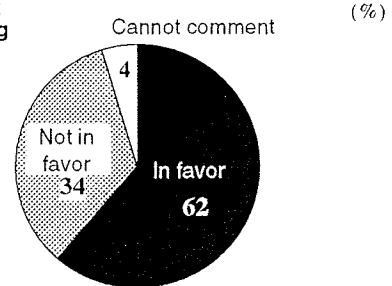
Approximately 70 countries in Europe and around the world have adopted a daylight saving time system. About 60% of non-Japanese respondents were from countries that currently have a daylight saving time system. About 90% of respondents from regions where daylight saving time has been adopted and 62% of respondents from regions daylight saving time has not been adopted are in support of such a system. In Japan, although 59% of respondents are in favor of daylight saving time, this is the lowest percentage of all regions surveyed. For respondents from regions where daylight saving time has been adopted, the number one reason why they supported the system was the achievement of energy conservation without infrastructure investment or technological progress. The number one response for respondents from regions where daylight saving time has not been adopted was that putting daily lives in tune with nature enables people to turn away from excess use of resources. For Japanese respondents, the number one reason for opposing daylight saving time was climate and cultural factors, followed by the opinion that daylight saving time upsets people's daily routines and is unnatural.

*N=number of responses

Respondents from Countries That Do Have a Daylight Saving Time System [N=192]



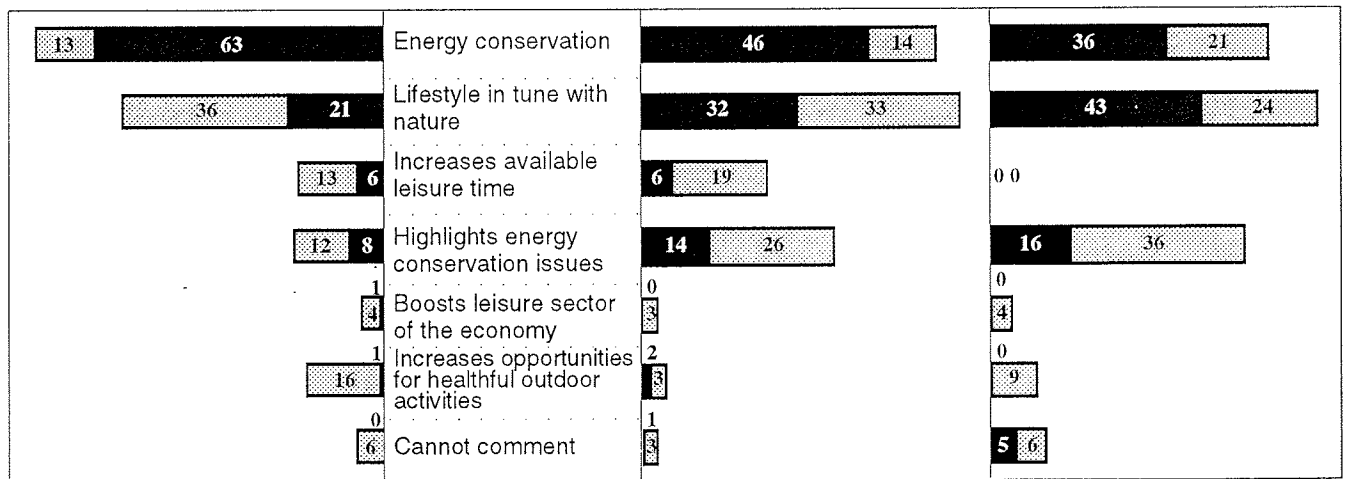
Respondents from Countries That Do Not Have a Daylight Saving Time System [N=384]



Reasons for Approval of Daylight Saving Time System

Respondents from Countries That Do Have a Daylight Saving Time System and Approve of the System [N=172]

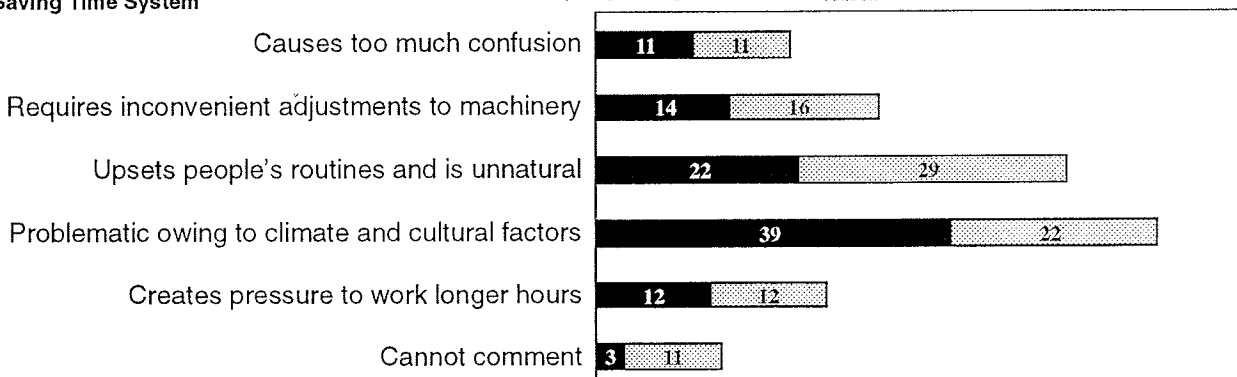
Respondents from Countries That Do Not Have a Daylight Saving Time System but Do Approve of the System [N=235]



Reasons for Disapproval of Daylight Saving Time System

Japan [N=105]

(%)



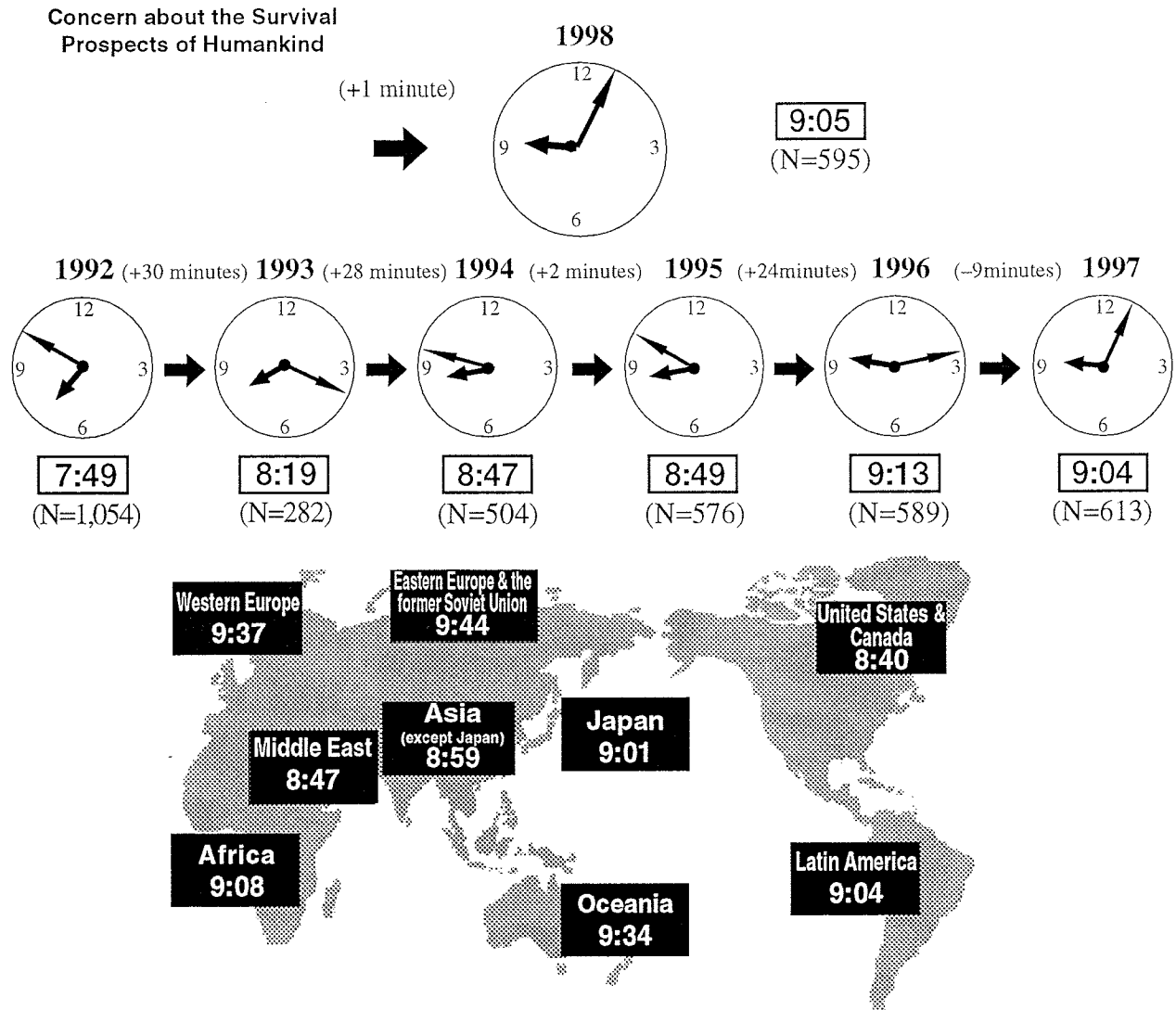
(Please see pages 15 and 16 of the Questionnaire Report for more information.)

II. Questions Continued from Past Surveys: Agenda 21 and Lifestyles

Humanity in Crisis

Asked to indicate on a time scale their level of concern about the survival prospects of humankind, respondents chose an average time of 9:05, the third year in a row to register within the range of extreme concern. At 9:01, the average response time for Japan entered the range of extreme concern for the first time.

The overall average time response was 9:05, the third year in a row to exceed 9:00 and register within the range of extreme concern. Overseas response times were 18 minutes earlier overall, for an average time of 9:09. The average time for respondents from Japan entered the range of extreme concern with 9:01 for the first time. This compares with an average time of 8:08 for Japan three years ago, which stood in sharp contrast to the overseas average of 9:22. As in last year, the average time reported for women was later than that for men.



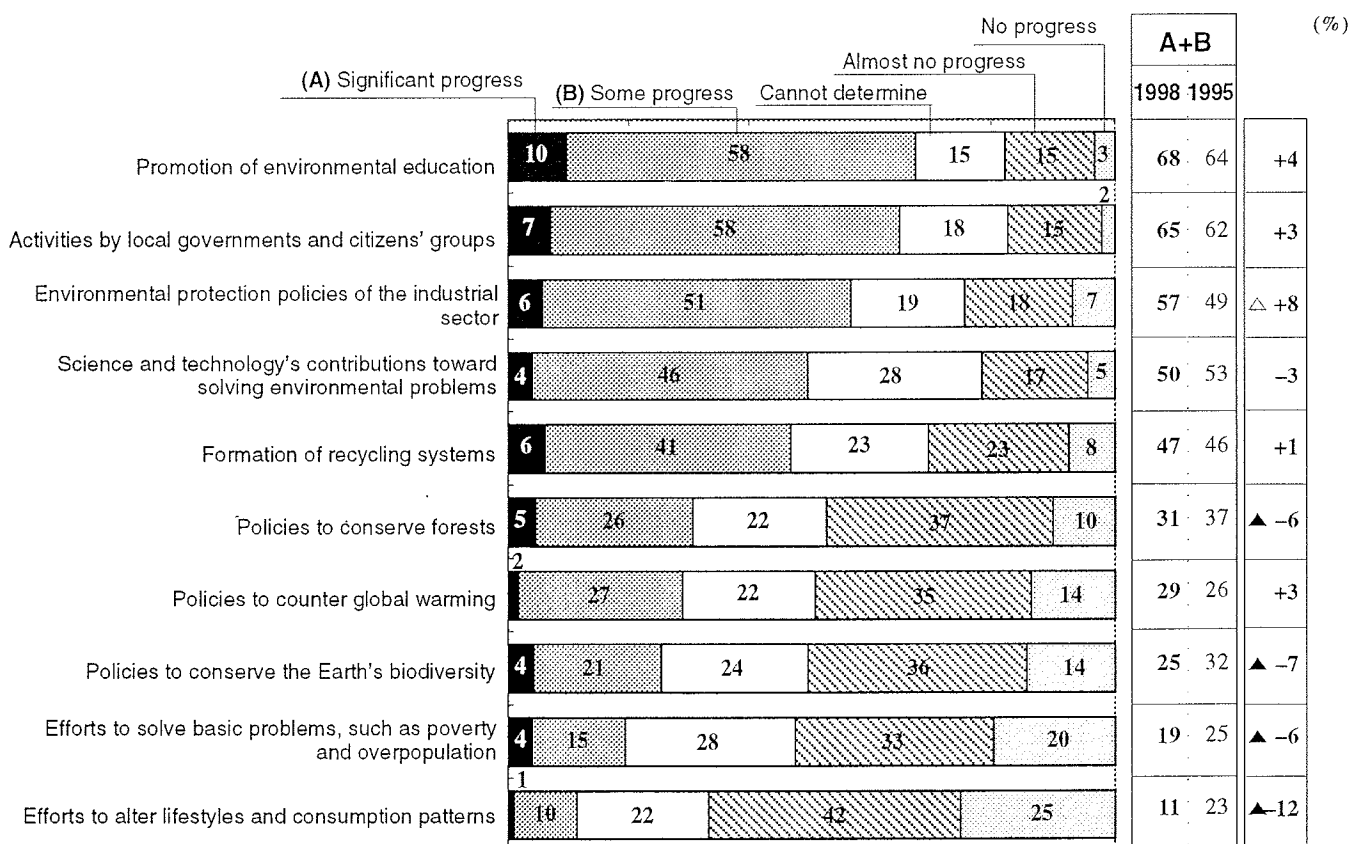
	Number of respondents	Changes in time from year to year			Changes in average time by region	
		'95	'97	→ '98	1995 → 1998	1997 → 1998
Total	595	8:49	9:04	→ 9:05	16	1
Japan	279	8:08	8:42	→ 9:01	53	19
Overseas total	316	9:22	9:27	→ 9:09	-13	-18
Male	475	8:46	8:57	→ 9:01	15	4
Female	109	8:57	9:30	→ 9:25	28	-5

(Please see pages 17 and 18 of the Questionnaire Report for more information.)

Progress in Agenda 21

Regarding the items contained in Agenda 21, progress in environmental education was again rated highly, but progress in such areas as lifestyle changes was rated more harshly than ever.

This year, respondents were asked to evaluate 10 items. For those items that respondents judged to have shown significant progress or some progress, we have compared data with three years ago. Items for which progress was more highly evaluated in 1998 were environmental education, activities by local governments and citizens' groups, and environmental protection policies of the industrial sector. Compared with three years ago, the evaluation of progress in environmental protection policies of the industrial sector was up eight percentage points. Items for which progress was evaluated particularly harshly were efforts to alter lifestyles, efforts to solve problems such as poverty and overpopulation, and policies to conserve the Earth's diversity. Compared with three years ago, the percentage of respondents citing "significant progress" or "some progress" for these items decline by six percentage points or more. In particular, progress in efforts to alter lifestyles was down 12 percentage points. Progress in policies to conserve forests also declined by six percentage points. Respondents from Africa, Latin America and other developing regions tended to favorably evaluate progress in efforts to solve problems such as poverty and overpopulation, progress in policies to conserve forests, and policies to conserve the Earth's diversity. However, responses from Japan and other industrialized regions did not indicate progress. The reverse was true for formation of recycling systems and science and technology's contributions, which were highly evaluated by industrialized regions and not so by developing regions.



Notes: In cases where no answer has been indicated by a respondent, a response of "Cannot determine" has been recorded.

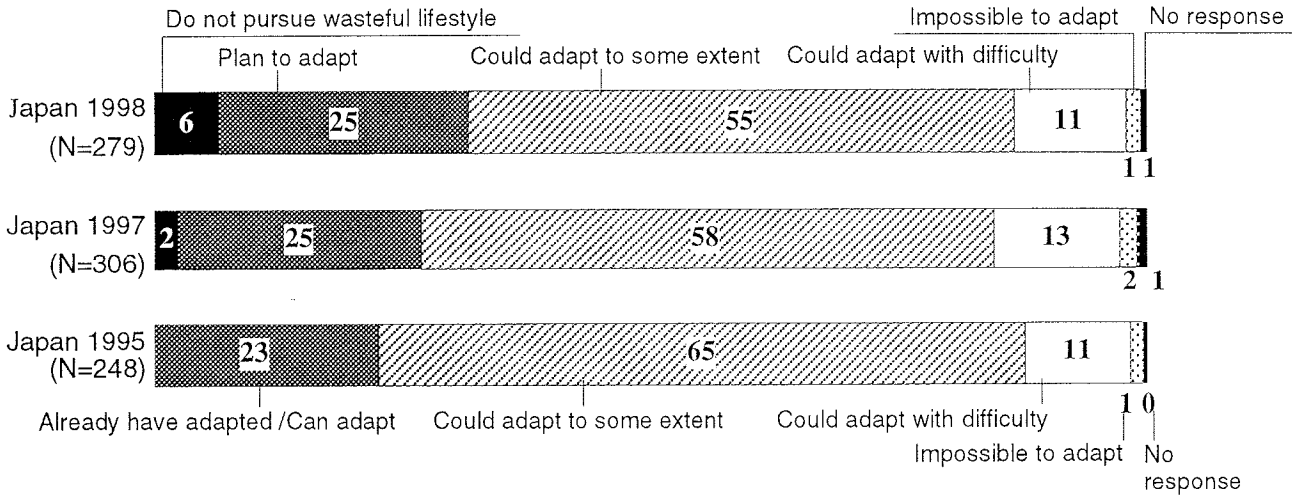
A white triangle indicates where results between 1995 and 1998 increased by five or more percentage points.

A black triangle indicates where results between 1995 and 1998 decreased by five or more percentage points.

(Please see pages 18 and 19 of the Questionnaire Report for more information.)

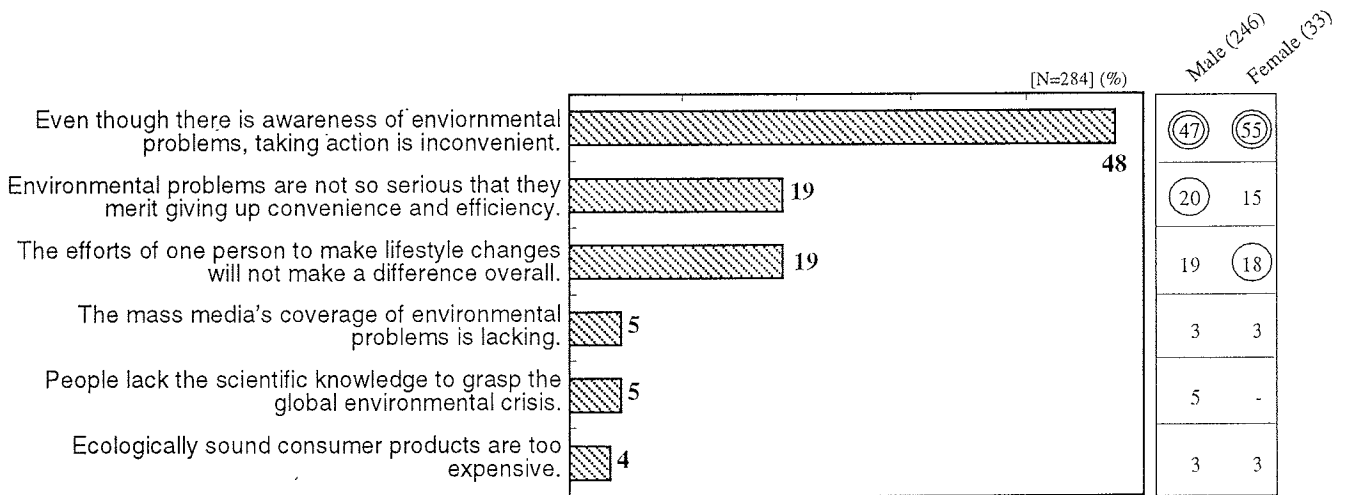
Changes in Lifestyle (This question was asked of Japanese respondents only.)

Respondents who answered that they currently do not pursue an overconsumption-throwaway lifestyle in addition to respondents who answered that they “plan to adapt” or “could adapt to some extent” made up 87% of the total. Thus, many respondents felt positive about making lifestyle changes. The trend in responses for this question have not changed much in three years.



Note: For 1995, the category of “Do not currently pursue a wasteful lifestyle” was not available. Instead, the category of “Plan to adapt” included responses of “Already have adapted/Can adapt.”

Even in Question 7 of this year’s survey, only 11% of respondents indicated progress in efforts to change lifestyles. Notably, this figure was only 5% for respondents from Japan. The most commonly chosen reason for this was that “Even though there is awareness of environmental problems, taking action is inconvenient,” which garnered a response rate of 48%.



Notes: Percentages are based on number of responses. Omitted responses (3%) have not been included in the total. Number one items in each category are marked with a double circle. Number two items are indicated with a single circle.

(Please see page 20 of the Questionnaire Report for more information.)