

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

REPORT

THE ASAHI GLASS FOUNDATION

September 1997

Contents

Foreword	1
I. Facts about the Sixth Annual “Questionnaire on Environmental Problems and the Survival of Humankind”	2
II. Summary of Questionnaire Results	3
III. Questionnaire Results	
1. Humanity in Crisis	5
2. Lifestyle Changes and Bringing About a Sustainable Society	8
3. Progress on Environmental Issues since the Earth Summit	12
4. Cooperation among Economically Advanced and Developing Nations	16
5. Expectations for the Third Meeting of the United Nations Framework Convention on Climate Change (COP3)	17
IV. Comments from Respondents	21
V. Questionnaire as Distributed to Respondents	26

Foreword

This report contains the results of the sixth annual "Questionnaire on Environmental Problems and the Survival of Humankind" conducted by the Asahi Glass Foundation.

Five years have passed since the United Nations Conference on Environment and Development, or Earth Summit, was held in Rio de Janeiro. During 1996, the Earth Summit +5 convention was held in March, and in June the Special Session of the General Assembly to Review and Appraise the Implementation of Agenda 21 was convened, helping shed light on international cooperative approaches to solving global environmental problems. In December this year, the United Nations Framework Convention on Climate Change (COP3) will be held in Kyoto. Although these events show the extent to which the governments of countries around the world are taking an interest in global environmental problems, they also indicate the severity of these problems, which can no longer be ignored.

As in surveys carried out in past years, this year's questionnaire was designed 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. The questionnaire was also aimed at grasping regional differences with regard to these problems. This year we are also focusing on expectations for COP3, measures for establishing a sustainable society, and relationships between economically advanced and developing countries.

Once again, the Foundation would like to thank the many members of GOs and NGOs throughout the world who took the time to respond. In addition, 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.

In closing, we welcome the opinions and advice of specialists from many fields of endeavor regarding the questionnaire, so that future surveys may yield even more comprehensive and relevant results.

September 1997

Asahi Glass Foundation

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

Response period: Questionnaires were sent out in April 1997 with a return deadline in June, 1997.

Questionnaire respondent pool: Selected from members of GOs and NGOs in the United Nations Environment Program and Asahi Glass Foundation databases.

Questionnaires mailed: 3,207

Questionnaires returned: 613*

Response rate: 19.1%

Breakdown of respondents by age, sex and occupational affiliation:

Region	Number of responses	(Percent of total)
Japan	306	(49.9)
United States & Canada	38	(6.2)
Western Europe	65	(10.6)
Oceania	18	(2.9)
Eastern Europe & the former Soviet Union	15	(2.4)
Asia (outside Japan)	63	(10.3)
Latin America	41	(6.7)
Africa	52	(8.5)
Middle East	14	(2.3)
No response	1	(0.2)
Total	613	(100.0)

Sex		
Male	470	(76.7)
Female	132	(21.5)
No response	11	(1.8)
Total	613	(100.0)

Occupational affiliation		
Central government	168	(27.4)
Local government	158	(25.8)
University or research institution	96	(15.7)
Nongovernmental organization	158	(25.8)
Other	96	(15.7)
No response	10	(1.6)
Total	613	(100.0)

- Notes:
1. All percentages in this analysis were calculated based on the 613 replies received. Percentages are rounded to the nearest tenth in most cases with some rounded to the nearest hundredth.
 2. The one reply of "No response" recorded under "Region" was for a respondent from outside Japan and so is included in the overseas total, when applicable.

II. Summary of Questionnaire Results

1. Humanity in Crisis

- When will the crisis come?

The overall average time response, which was 7:49 in 1992, grew progressively later until last year, when the average time response was later than 9:00 and therefore crossed into the realm of extreme concern. This year's average response of 9:04 was nine minutes earlier than in the previous year but remained in the time range of extreme concern. By region, Western Europe showed the greatest concern and Japan showed the least, a result that is consistent with past years. In addition, women continued to show greater concern on average than men.

- Which generation will face the crisis?

More than 40% of respondents answered that by their grandchildren's generation (between the years 2031 and 2065) humanity would be unable to maintain its existence based on the mass-production and mass-consumption standards of present-day industrial civilization. Approximately 81% of respondents agreed that the crisis would arrive before the end of the 21st century (by the year 2100).

2. Lifestyle Changes and Bringing About a Sustainable Society

- Can we change our mass production and consumption lifestyles?

Of the total, 86% of respondents answered that it is possible to change overconsumption-throwaway lifestyles. However, a large gender gap was evident, with more women than men answering that they currently do not indulge in such a lifestyle.

More than 25% of respondents from every region, with the exception of Japan, answered that they currently do not indulge in overconsumption-throwaway lifestyles. Compared with this result, Japan's 2% is extremely low.

- What are you doing to help the environment?

Respondents were asked to indicate environmentally friendly activities in which they engage. More than 80% of respondents from all regions chose conserving water and electricity, using items for as long as possible before discarding, and not wasting food. A majority also chose recycling, limiting use of air conditioning, heat and automobiles, and supporting environmental organizations.

On a regional basis, recycling was most common in economically advanced regions. Being mindful of the environment when making everyday purchases was cited most often by respondents from the United States & Canada, Latin America, and Western Europe. Respondents from Japan had a much lower response rate than those from other regions for volunteer-oriented activities such as helping to plant trees and participating in local environmental activities.

- What is necessary to build a sustainable society?

The promotion of environmental education was deemed important by respondents from all regions. Also virtually universally favored was the development of sustainable technology, which received particular support from respondents from developing regions. Changes in the overconsumption lifestyles of ordinary people and changes in mass production and overconsumption-throwaway-type systems were popular responses from economically advanced regions, including Japan.

3. Progress on Environmental Issues since the Earth Summit

- What progress has been made since the Earth Summit?

The results in this section were somewhat disheartening; of the 21 areas respondents were asked to rate, 15 were deemed to have lost ground.

Areas in which progress was rated relatively highly but still lower than in the previous year included activities by NGOs and citizens' groups, the promotion of environmental education, and activities by local governments. Other areas for which progress ratings fell were contributions of science and technology and the formation of recycling systems. Areas in which progress was harshly evaluated by respondents from all regions were efforts to alter lifestyles, policies to counter global warming, and the implementation of economic policies that adequately reflect (and do not conflict with) environmental policies.

- What is most important in your country?

Respondents from developing regions and the United States & Canada indicated that environmental education was important in their own countries. Respondents from economically advanced regions and

Central & South America viewed the implementation of environmentally sound economic policies as important.

Solving poverty and overpopulation was deemed important in developing countries, while altering lifestyles and consumption patterns was deemed so in developed countries. Many respondents from Japan chose the formation of recycling systems.

- What areas should we focus on for the future?
Respondents from most regions named as most important changes in individual attitudes about the environment. The second most popular answer differed by region. Respondents from developing regions and the United States & Canada named more effective action by local governments, while respondents from Western Europe, Oceania, and Japan cited more effective action at the national level.

4. Cooperation among Economically Advanced and Developing Nations

- How should economically advanced and developing nations work together?
The number one choice of respondents from economically advanced countries (and the number two choice of respondents from developing countries) was that developed nations should set a good example and make environmental considerations more of a priority in their economies. The number one response for developing nations was that economically advanced and developing nations should create programs to promote cooperation on environmental preservation issues. Respondents from Japan also favored this latter answer.

5. Expectations for COP3

The third meeting of signatories of the United Nations Framework Convention on Climate Change (COP3) will be held with the goal of reducing emissions of carbon dioxide in economically advanced countries after the year 2000. There are currently no plans to introduce limits on emissions in developing countries.

- What do you hope will be accomplished by COP3?
The most commonly chosen response, especially by respondents from developed countries, was stronger legal backing for targets to make them binding for participating countries. Another popular answer was pledges by countries to carry out measures designed to achieve the targets. In general, responses supporting the effective, binding enforcement of targets were chosen most often.
- How to set stricter standards while guaranteeing their fairness?
Respondents from developed regions tended to support the statement that nations should put aside questions of fairness and agree on stricter standards, but coming in a close second was the statement that guaranteeing fairly imposed standards is important, and if no agreement could be reached at COP3 then temporary standards, even if lax, should be set. Respondents from developing nations showed overwhelming support for the latter response. The statement that guaranteeing fairly imposed standards is of the highest priority and deliberations should continue if standards cannot be agreed upon at COP3 was firmly supported by respondents from Western Europe but gained little support from the United States & Canada.
- When should carbon dioxide emissions standards be set for developing countries?
More than 30% of respondents from all regions, with the exception of Eastern Europe & the former Soviet Union and Africa, indicated the year 2000 as appropriate. Although more respondents from developed nations answered by the year 2000, there was also widespread support from respondents from developing regions, indicating an optimistic outlook toward setting standards in the near future.

III. Questionnaire Results

1. HUMANITY IN CRISIS

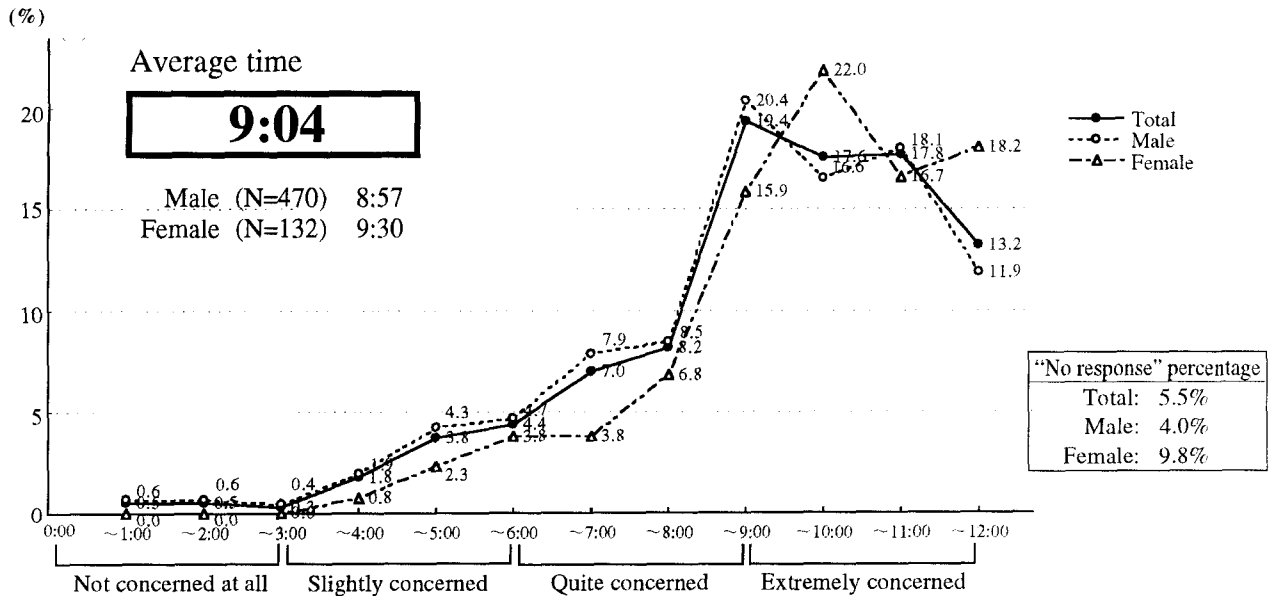
Question 1-1: Indicate with a time your concern about the survival prospects of humankind in light of the deterioration of the environment, taking into consideration the times and associated concern levels shown on the clock below.

0:01–3:00 Not concerned at all 3:01–6:00 Slightly concerned 6:01–9:00 Quite concerned 9:01–12:00 Extremely concerned

* N=number of responses

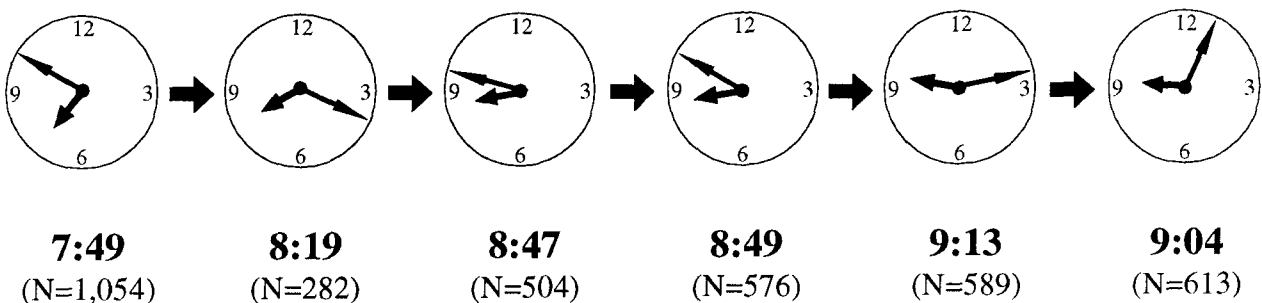
Concern about the Survival Prospects of Humankind

Percent, based on a total of 613 responses



Changes in Time from Year to Year

1992 (+30 minutes) 1993 (+28 minutes) 1994 (+2 minutes) 1995 (+24 minutes) 1996 (-9 minutes) 1997



- This year, with an average time of 9:04, is the second year in a row to register within the range of extreme concern.
- Compared with the previous year's average time, this year's result puts the hand of the clock back nine minutes, the first time in the six years of the survey when the average time did not advance.
- Most responses were concentrated in the latter part of "quite concerned" (between 8:00 and 8:59) and throughout "extremely concerned" (from 9:00 to 12:00).
- As in past years, women tended to choose a later time than men, indicating deeper feelings of concern.

Changes in Average Time by Region

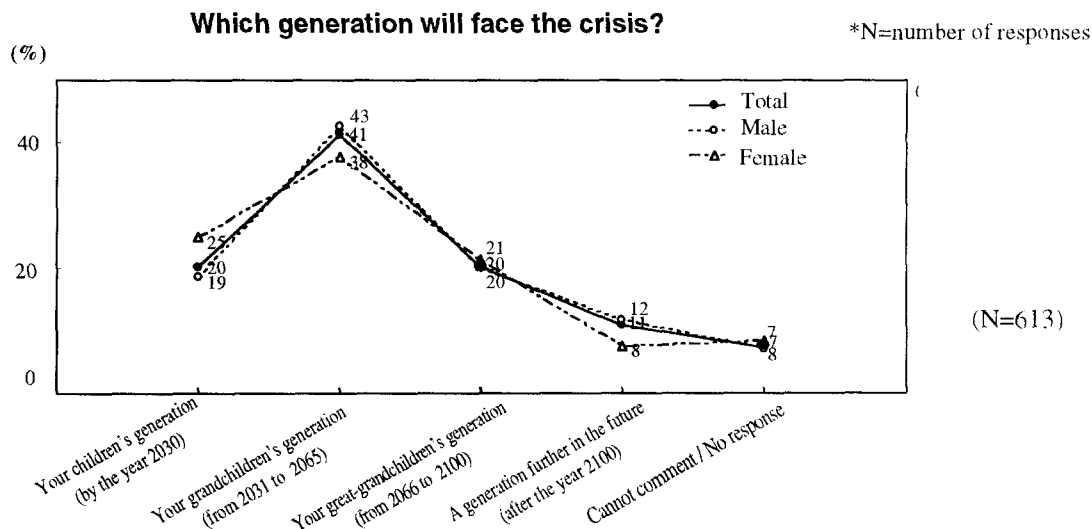
	Number of respondents	1996 → 1997	Time change
Total	613	9:13 → 9:04	-9 minutes
Japan	306	8:51 → 8:42	-9 minutes
United States & Canada	38	9:30 → 9:09	-21 minutes
Western Europe	65	9:46 → 9:53	+7 minutes
Oceania	18	9:43 → 8:52	-51 minutes
Eastern Europe & the former Soviet Union	15	9:12 → 9:37	+25 minutes
Asia	63	9:41 → 9:25	-16 minutes
Latin America	41	9:28 → 9:26	-2 minutes
Africa	52	9:25 → 9:15	-10 minutes
Middle East	14	8:30 → 9:33	+63 minutes
Overseas total	307	9:34 → 9:27	-7 minutes
Male	470	9:01 → 8:57	-4 minutes
Female	132	9:58 → 9:30	-28 minutes

- Regions for which the average indicated time grew earlier than that of the previous year by 10 minutes or more were Oceania, the United States & Canada, Asia, and Africa. For Japan and Latin America, the average indicated time grew earlier but by less than 10 minutes.
- On the other hand, the average indicated time grew later by more than 10 minutes for the Middle East, and Eastern Europe & the former Soviet Union and by less than 10 minutes for Western Europe.
- The region reporting the greatest feeling of crisis is Western Europe, unchanged from past years.
- The only regions whose times did not register within the borders of extreme concern are Japan and Oceania.
- The average response for Japan has yet to exceed 9:00 and enter the realm of extreme concern.

Comments

The overall average time response, which was 7:49 in 1992, grew progressively later until last year, when the average time response was later than 9:00 and therefore crossed into the realm of extreme concern. This year's average response of 9:04 was nine minutes earlier than in the previous year but remained in the time range of extreme concern. However, this year marks the first time that the average time has not grown later. Unchanged from last year, the greatest concern was shown by Western Europe and the least by Japan. As in past years, the average time reported by women remained later than that for men.

Question 1-2: In which generation do you think humanity will become unable to maintain its existence based on the mass-production and mass-consumption standards of present-day industrial civilization?



- The top answer to this question, garnering more than 40% of responses, was “your grandchildren’s generation (from 2031 to 2065).” Receiving 20% of responses each were “your children’s generation (by 2030)” and “your great-grandchildren’s generation (from 2066 to 2100).”
- Overall, 81% of respondents believe that humankind’s crisis of survival will come before the start of the 22nd century. This result is similar to that recorded in the previous year.

Responses by Region

	Children's generation	Grandchildren's generation	Great-grandchildren's generation	Generation further in the future	Cannot comment/ No response	(%)
Japan (N=306)	22	47	16	10	5	
United States & Canada (38)	24	39	18	8	11	
Western Europe (65)	25	38	25	8	5	
Oceania (18)	17	22	11	28	22	
Eastern Europe & the former Soviet Union (15)	20	33	20	20	7	
Asia (outside Japan) (63)	19	38	25	10	8	
Latin America (41)	15	39	24	12	10	
Africa (52)	6	31	31	17	15	
Middle East (14)	29	29	29	14		
Overseas total (307)	18	36	24	12	10	
Male (470)	19	43	20	12	7	
Female (132)	25	38	21	8	8	

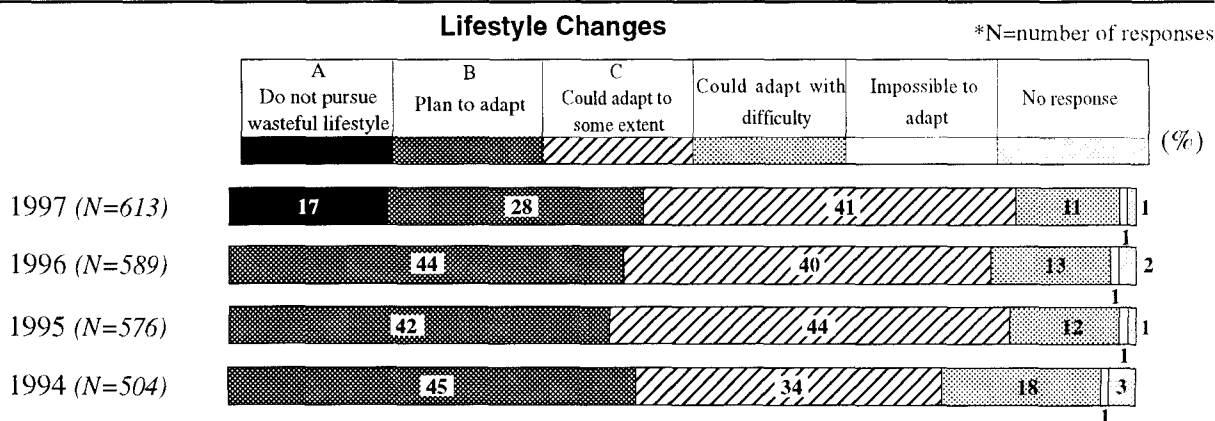
- More than 50% of respondents from all regions, with the exception of Africa and Oceania, answered that they expect the crisis to come by their grandchildren’s generation at the latest.
- Respondents from Japan answered with the highest percentage that the crisis would come by their grandchildren’s generation at the latest.
- Female respondents on average answered that the crisis would come sooner than male respondents.

Comments

In a very large majority, 81% of respondents believe that humankind will experience a crisis of survival by the year 2100.

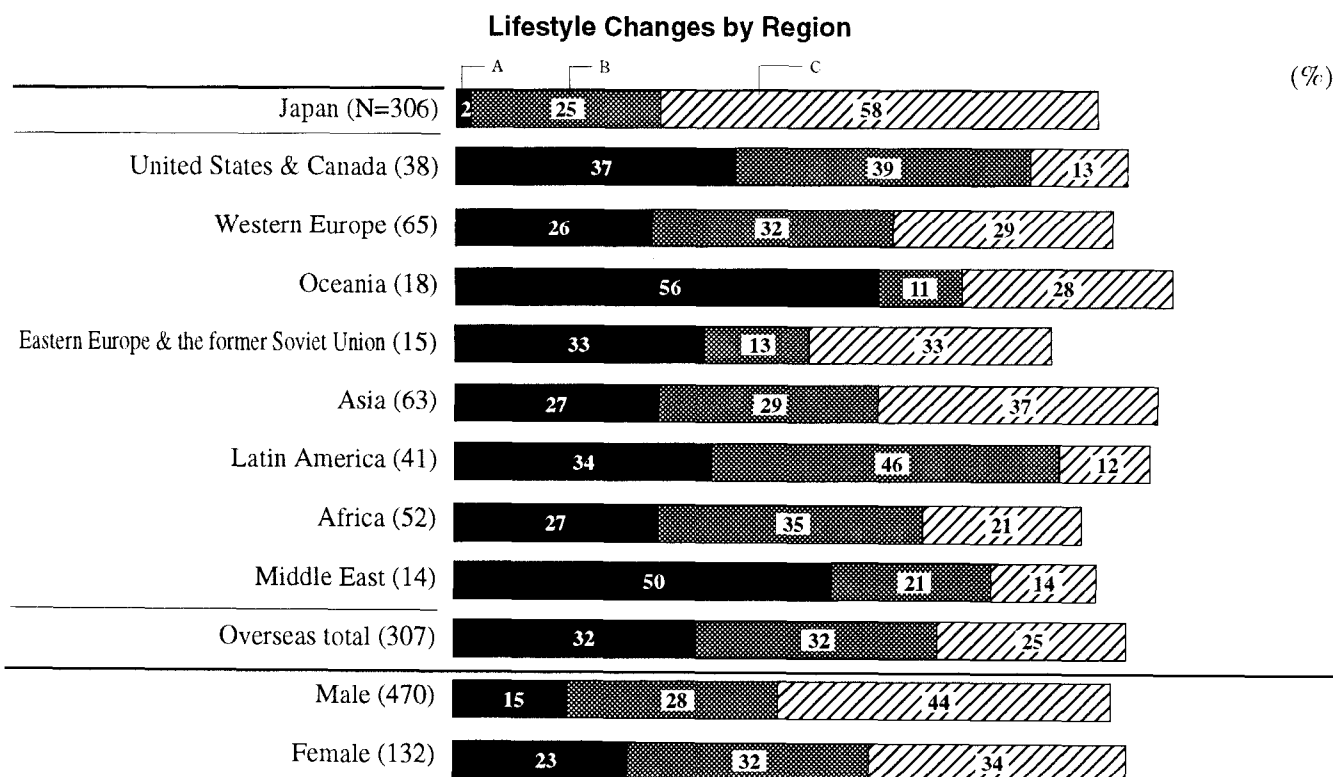
2. LIFESTYLE CHANGES AND BRINGING ABOUT A SUSTAINABLE SOCIETY

Question 2-1: Lately, there is a growing consensus that we should change our overconsumption-throwaway lifestyle. How do you feel about adapting a more frugal lifestyle, e.g., using less electricity, purchasing products that are environmentally sound, or reducing the amount of household garbage? Choose the appropriate response.



Note: For 1994 to 1996, the category of "Plan to adapt" included responses of "Already have adapted/Can adapt."
 "The category of "Do not currently pursue a wasteful lifestyle" was introduced in 1997.

- Respondents who answered that they currently do not pursue an overconsumption-throwaway lifestyle made up 17% of the total. When added to the responses of "plan to adapt" and "could adapt to some extent" this comes to 86% of respondents who believe that a change in lifestyle is possible.
- Over the years, the percent breakdown of responses to this question has remained remarkably constant.



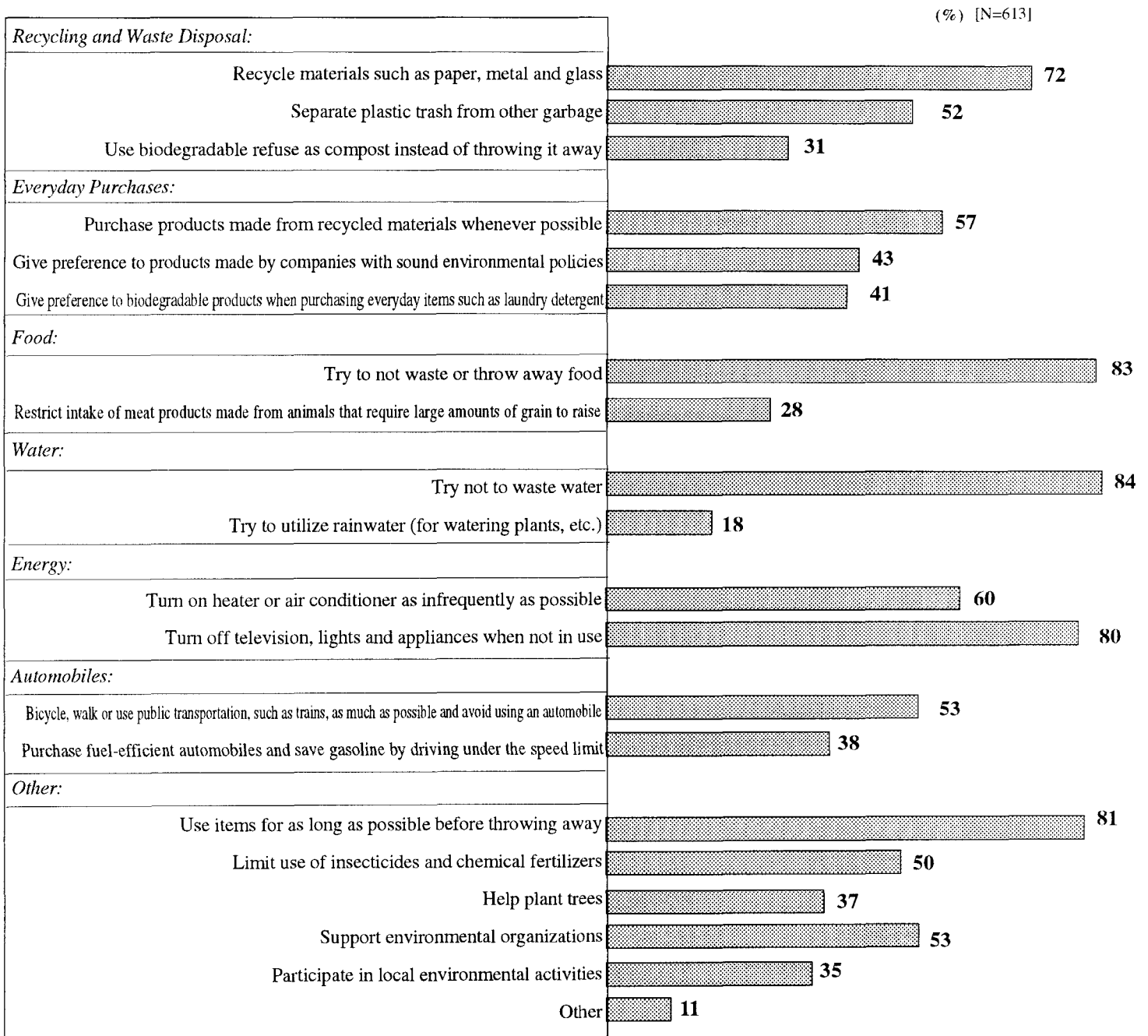
- More than 25% of respondents from all regions, with the exception of Japan, answered that they do not currently pursue an overconsumption-throwaway lifestyle. Only 2% of respondents from Japan answered that they do not pursue such a lifestyle—a percentage much smaller than that for other regions.
- The sum of "plan to adapt" and "could adapt to some extent" responses plus those of respondents who do not currently pursue a wasteful lifestyle exceeded 80% for most regions.
- More women than men answered that they currently do not pursue wasteful lifestyles.

Comments

More than 80% of all respondents indicated that they believe a change from wasteful lifestyles to be possible by indicating either that they do not currently pursue such a lifestyle, they plan to adapt, or they could adapt to some extent. In particular, more women than men responded that they do not currently pursue a wasteful lifestyle. With the exception of Japan, more than 25% of respondents from all regions answered that they do not currently pursue an overconsumption-throwaway lifestyle, making Japan's response ratio of 2% look extremely small.

Question 2-2: Please indicate all of the following activities in which you engage.

Environmentally Friendly Activities



- More than 80% of respondents from all regions indicated that they conserve water, use items for as long as possible before discarding, try not to waste food, and conserve electricity.
- A majority of respondents also reported that they recycle, limit use of air conditioning and heat, purchase products made from recycled materials, limit use of automobiles, support environmental organizations, and separate plastic trash from other garbage.

Environmentally Friendly Activities by Region

(%)	Japan (N=306)	U.S.A. & Canada (38)	Western Europe (38)	Oceania (18)	Eastern Europe & the former Soviet Union (15)	Asia (outside Japan) (63)	Latin America (41)	Africa (52)	Middle East (14)	Overseas total (307)	Male (470)	Female (132)
Recycling and Waste Disposal:												
Recycle materials such as paper, metal, and glass	(77)	(97)	(92)	(67)	(53)	(56)	(63)	35	(71)	(67)	(71)	(77)
Separate plastic trash from other garbage	(63)	(76)	34	(61)	33	35	41	31	29	41	(52)	(54)
Use biodegradable refuse as compost instead of throwing it away	20	(53)	46	(50)	40	35	29	48	14	41	29	34
Everyday Purchases:												
Purchase products made from recycled materials whenever possible	(56)	(84)	(63)	(50)	33	48	(73)	(52)	(50)	(59)	(53)	(72)
Give preference to products made by companies with sound environmental policies	32	(58)	(65)	44	47	44	(68)	37	(71)	(53)	40	(51)
Give preference to biodegradable products when purchasing everyday items such as laundry detergent	33	(63)	(57)	(72)	40	35	(59)	42	29	(50)	37	(58)
Food:												
Try to not waste or throw away food	(74)	(92)	(88)	(94)	(93)	(94)	(98)	(90)	(100)	(93)	(82)	(86)
Restrict intake of meat products made from animals that require large amounts of grain to raise	25	47	35	33	20	32	20	27	43	32	26	36
Water:												
Try not to waste water	(75)	(89)	(91)	(94)	(93)	(92)	(95)	(90)	(100)	(92)	(82)	(88)
Try to utilize rainwater (for watering plants, etc.)	4	29	34	(50)	27	27	32	46	-	33	18	20
Energy:												
Turn on heater or air conditioner as infrequently as possible	(61)	(84)	(78)	(56)	(53)	46	(63)	42	43	(60)	(60)	(62)
Turn off television, lights, and appliances when not in use	(68)	(95)	(88)	(100)	(100)	(94)	(98)	(87)	(93)	(93)	(77)	(89)
Automobiles:												
Bicycle, walk, or use public transportation, such as trains, as much as possible and avoid using an automobile	(54)	47	(65)	(50)	(80)	(62)	24	46	(50)	(53)	(52)	(57)
Purchase fuel-efficient automobiles and save gasoline by driving under the speed limit	34	(55)	43	28	33	35	49	37	43	41	40	30
Other:												
Use items for as long as possible before throwing away	(81)	(95)	(75)	(94)	(73)	(76)	(90)	(75)	(79)	(81)	(80)	(83)
Limit use of insecticides and chemical fertilizers	35	(84)	(71)	(89)	(67)	(54)	(68)	(52)	(57)	(65)	46	(64)
Help plant trees	12	(58)	37	(72)	(53)	(73)	(66)	(69)	(79)	(61)	34	45
Support environmental organizations	32	(87)	(80)	(78)	(73)	(68)	(66)	(69)	(79)	(74)	(50)	(61)
Participate in local environmental activities	15	(66)	42	(67)	47	48	(59)	(63)	(86)	(55)	33	40
Other	5	29	15	-	7	21	20	15	14	17	10	13

Note: Percentages greater than 70% are indicated by a double circle. Percentages greater than 50% but less than 70% are indicated by a single circle.

- A large percentage of respondents from economically advanced regions indicated that they conduct recycling activities. A high percentage of respondents from the United States & Canada, Latin America, and Western Europe also reported that they are mindful of the environment when making everyday purchases. Eliminating waste of food, water, and energy were top choices of respondents from all regions.
- Particularly noticeable was the fact that respondents from Japan had a much lower response rate than those from other regions for volunteer-oriented activities such as helping to plant trees and participating in local environmental activities.

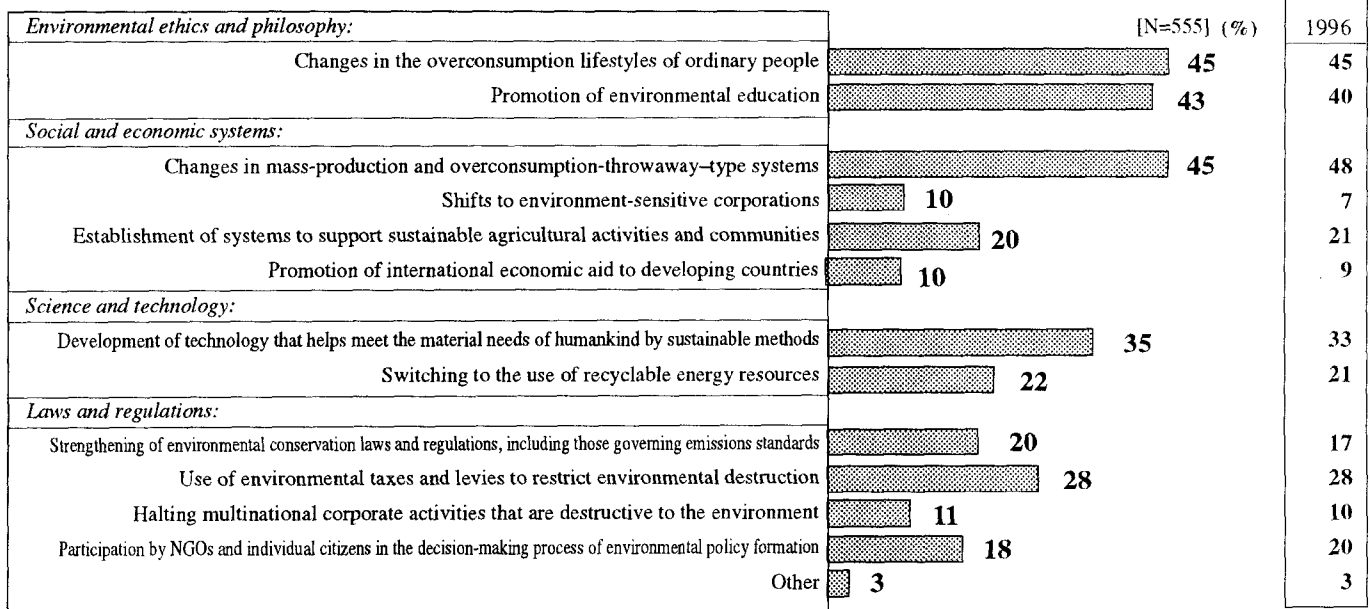
Comments

More than 80% of respondents from nearly every region reported that they are focusing on conserving water and electricity, using items for as long as possible before discarding, and trying not to waste food. In addition, a majority of respondents answered that they focus on recycling, purchasing products made from recycled materials, and limiting use of air conditioning, heat, and automobiles. A large percentage of respondents from economically advanced regions indicated that they conduct recycling activities. A high percentage of respondents from the United States & Canada, Latin America, and Western Europe also reported that they are mindful of the environment when making everyday purchases. Respondents from Japan had a much lower response rate than those from other regions for volunteer-oriented activities such as helping to plant trees and participating in local

Question 2-3: What factors do you think are most important for bringing about a sustainable society? Choose three.

Important Factors for a Sustainable Society

*N=number of responses



Responses by Region

(%)

Factor	Japan (N=298)	U.S.A. & Canada (36)	Western Europe (55)	Oceania (17)	Eastern Europe & the former Soviet Union (12)	Asia (outside Japan) (46)	Latin America (32)	Africa (48)	Middle East (11)	Overses total (257)	Male (428)	Female (117)
<i>Environmental ethics and philosophy:</i>												
Changes in the overconsumption lifestyles of ordinary people	54	47	47	18	25	22	44	21	45	34	47	38
Promotion of environmental education	32	47	40	53	42	74	47	77	55	56	41	49
<i>Social and economic systems:</i>												
Changes in mass-production and overconsumption-throwaway-type systems	59	28	36	41	17	24	28	13	45	27	45	42
Shifts to environment-sensitive corporations	10	6	9	18	8	11	13	8	-	9	11	7
Establishment of systems to support sustainable agricultural activities and communities	12	28	29	29	17	22	28	40	27	29	19	21
Promotion of international economic aid to developing countries	10	3	11	-	8	13	19	10	-	10	11	6
<i>Science and technology:</i>												
Development of technology that helps meet the material needs of humankind by sustainable methods	24	33	29	29	92	59	47	63	55	47	36	33
Switching to the use of recyclable energy resources	25	17	29	18	17	13	16	13	18	18	22	20
<i>Laws and regulations:</i>												
Strengthening of environmental conservation laws and regulations, including those governing emissions standards	16	25	15	24	25	30	25	31	27	25	19	26
Use of environmental taxes and levies to restrict environmental destruction	33	17	31	24	33	20	22	19	18	23	29	24
Halting multinational corporate activities that are destructive to the environment	10	11	13	29	-	11	13	19	-	13	10	16
Participation by NGOs and individual citizens in the decision-making process of environmental policy formation	14	25	15	18	17	28	19	23	36	22	16	23
Other	2	8	2	6	-	-	9	-	9	4	2	4

Notes: The circles indicate items with the top three percentage figures per region.

Many respondents chose more than three factors. Responses of up to five factors have been considered valid.

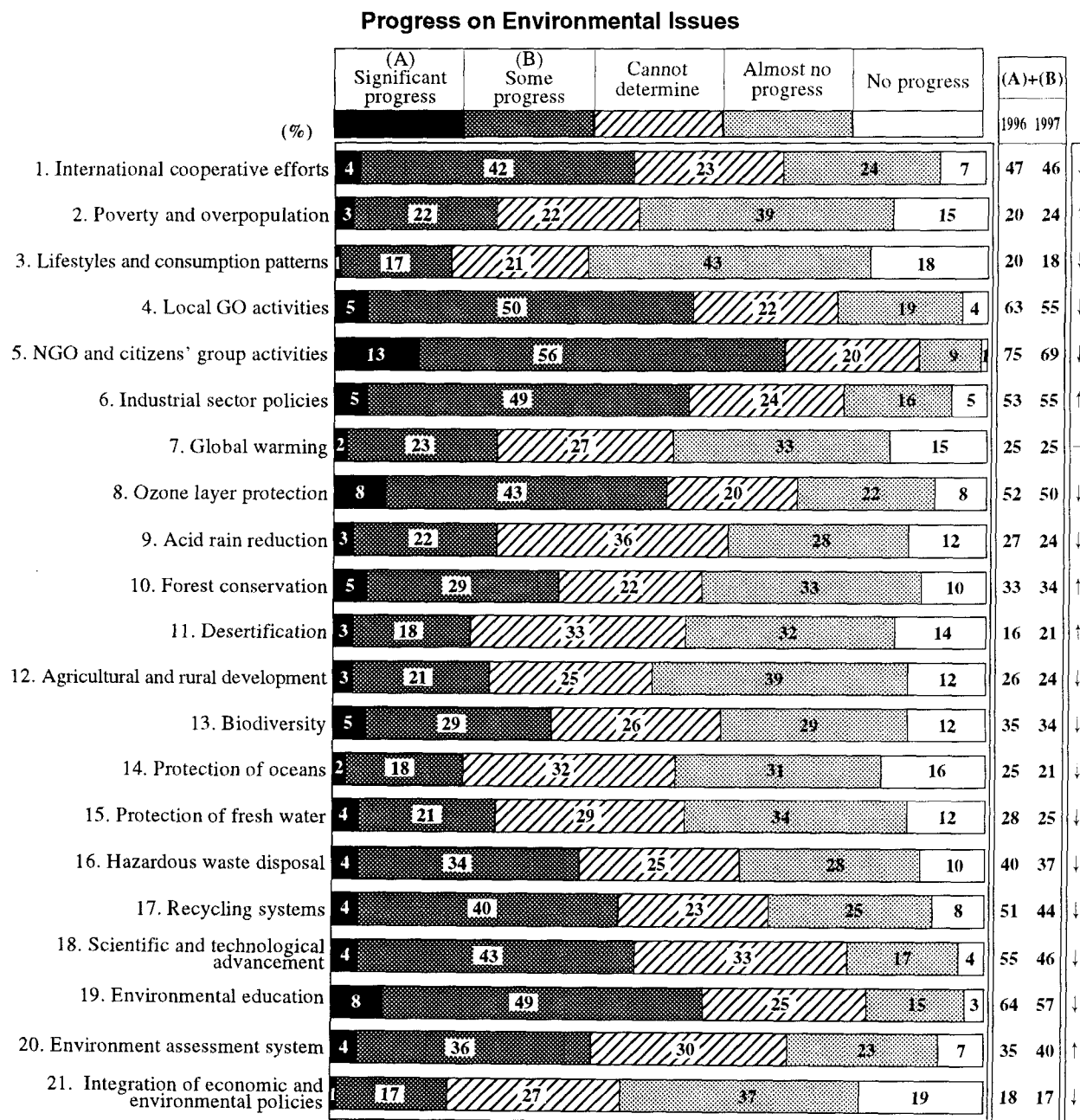
- The promotion of environmental education was viewed as very important, and was one of the top three responses, by respondents from all regions, with the exception of Japan.
- The development of sustainable technologies was also rated highly, especially by respondents from developing regions.
- Changes in the overconsumption lifestyles of ordinary people and changes in mass-production and overconsumption-throwaway systems were named as important by respondents from economically advanced regions, including Japan.
- Japan showed comparatively more support for changes in mass-production and overconsumption-throwaway systems and the introduction of environmental taxes.

Comments

The promotion of environmental education was viewed as very important by respondents from all regions but Japan. Also rated highly, especially by respondents from developing regions, was the development of sustainable technologies. Respondents from economically advanced regions, including Japan, viewed as important changes in the overconsumption lifestyles of ordinary people and changes in mass-production and overconsumption-throwaway systems.

3. PROGRESS ON ENVIRONMENTAL ISSUES SINCE THE EARTH SUMMIT

Question 3-1: Since the Earth Summit was held in Rio de Janeiro in June 1992, to what extent has progress been achieved in the areas described below? For each item, choose the best response, considering the situation *in your own country only*.



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

- Overall, the results of this question were disheartening. Of the 21 areas respondents were asked to rate, 15 were judged to have made less progress than in the previous year and only five were given more points for progress.
- The areas rated as having made the most progress were activities by NGOs and citizens' groups, environmental education, and activities by local governments, but these items received markedly lower scores compared with in the previous year. Other items in which progress was evaluated less positively than in the previous year included the contributions of science and technology (down nine percentage points), and the formation of recycling systems (down seven percentage points).
- As in past years, progress in items related directly to the state of the environment was evaluated particularly harshly and shows a downtrend from year to year.
- For the few items that were evaluated more positively this year compared with the previous year, the establishment of an environmental assessment system advanced five percentage points. Similarly, the percentage of respondents who indicated progress in efforts to solve poverty and overpopulation advanced four percentage points. The response rate for policies to combat desertification advanced five percentage points.

Responses by Region

	Japan		U.S.A. & Canada		Western Europe		Oceania		Eastern Europe & the former Soviet Union		Asia (outside Japan)		Latin America		Africa		Middle East	
	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996
	(306)	(282)	(38)	(51)	(65)	(77)	(18)	(21)	(15)	(16)	(63)	(63)	(41)	(35)	(52)	(32)	(14)	(11)
1. International cooperative efforts	39	43	39	<55	35	40	44	<62	47	50	67	>57	56	>46	65	63	64	>46
2. Poverty and overpopulation	14	14	16	22	12	8	39	>19	27	>13	57	>43	27	<37	56	>44	36	>18
3. Lifestyles and consumption patterns	15	16	26	29	28	26	17	<43	13	19	25	21	5	<20	15	13	29	27
4. Local GO activities	54	52	50	<77	65	<79	56	<86	80	>69	49	<65	61	<74	48	<75	64	55
5. NGO and citizens' group activities	59	67	82	86	83	82	83	86	87	81	78	83	80	83	79	88	86	>73
6. Industrial sector policies	55	53	37	<57	63	55	56	<71	67	>44	57	48	51	43	56	47	57	64
7. Global warming	17	19	21	<31	34	26	33	38	33	25	35	32	27	23	40	47	21	18
8. Ozone layer protection	53	52	61	65	57	<69	50	43	67	>38	38	41	44	>34	44	53	14	<36
9. Acid rain reduction	20	22	37	<51	46	46	17	19	53	>38	19	18	17	26	25	>13	7	<27
10. Forest conservation	14	14	32	35	35	38	56	<86	53	44	65	56	61	>51	83	81	36	36
11. Desertification	8	4	5	12	15	8	17	<33	-	-	43	>33	39	>23	71	<88	43	46
12. Agricultural and rural development	6	8	32	37	28	21	61	62	33	25	54	57	37	43	58	<69	21	<55
13. Biodiversity	17	16	26	<49	48	42	50	<67	60	56	49	46	66	>51	67	75	21	<64
14. Protection of oceans	10	13	34	43	29	26	67	>48	7	<31	30	30	37	40	29	<44	14	<55
15. Protection of fresh water	9	12	32	<43	32	34	50	52	47	<63	44	>33	41	37	50	<66	36	<73
16. Hazardous waste disposal	33	38	29	<45	42	49	44	48	67	>50	43	38	34	31	46	>34	36	36
17. Recycling systems	42	48	68	<94	68	70	44	<57	33	31	38	37	32	23	29	34	29	<46
18. Scientific and technological advancement	43	50	55	<71	46	<61	39	<71	60	>50	49	52	34	<46	58	50	64	<82
19. Environmental education	41	49	68	<88	58	66	72	<91	73	<94	79	71	68	77	90	88	71	<91
20. Environment assessment system	33	>21	34	43	37	39	39	<62	53	<75	57	48	54	>37	58	63	36	<64
21. Integration of economic and environmental policies	10	11	18	14	25	22	39	33	7	<44	27	25	20	29	33	38	21	>9

Notes: Percentages for 1997 greater than 50% have been circled. The number one response for each region has been marked with a double circle. Where results for 1996 and 1997 differ by more than 10 percentage points, a greater than/less than sign has been included.

- Several items were evaluated highly by respondents from all regions. These included activities by NGOs and citizens' groups, environmental education, activities by local governments, and environmental policies of the industrial sector—which were deemed to have made progress by 50% or more of respondents from nearly all regions.
- On the other hand, less than 50% of respondents from all regions reported progress in lifestyle changes, policies to counter global warming, and environmentally sound economic policies, indicating a pessimistic outlook on these issues.
- Overall, respondents from the United States & Canada and Oceania reported less progress than in the previous year. However, respondents from Asia reported more progress in many items.
- International cooperative efforts toward sustainable development in the developing countries were highly evaluated by respondents from developing regions. However, respondents from economically advanced regions reported less progress in this area.

Comments

Overall, this question's results were disheartening—of the 21 areas respondents were asked to rate, 15 were judged to have made less progress than in the previous year and only five were given more points for progress. The areas rated as having made the most progress were activities by NGOs and citizens' groups, environmental education, and activities by local governments, but these items received markedly lower scores compared with in the previous year. Other items in which progress was evaluated less positively than in the previous year included the contributions of science and technology and the formation of recycling systems. Other items in which progress was generally viewed negatively were lifestyle changes, policies to counter global warming, and environmentally sound economic policies.

Question 3-2: From the 21 items in Question 3-1, choose the three you believe are most important for solving environmental problems *in your own country only*.

Responses by Region

(%) *N=number of responses	Japan (N=306)	U.S.A. & Canada (N=38)	Western Europe (N=65)	Oceania (N=18)	Eastern Europe & the former Soviet Union (N=15)	Asia (outside Japan) (N=63)	Latin America (N=41)	Africa (N=52)	Middle East (N=14)
1. International cooperative efforts	16	11	12	11	13	10	15	17	-
2. Poverty and overpopulation	8	21	12	28	7	21	44	53	21
3. Lifestyles and consumption patterns	43	34	49	39	33	11	17	8	36
4. Local GO activities	3	8	15	17	7	11	15	10	14
5. NGO and citizens' group activities	9	11	8	17	-	10	10	4	7
6. Industrial sector policies	25	11	28	-	53	13	12	13	29
7. Global warming	23	18	15	11	-	3	5	-	7
8. Ozone layer protection	3	8	-	-	-	2	-	-	-
9. Acid rain reduction	1	-	-	-	-	2	2	2	-
10. Forest conservation	6	11	8	11	27	19	10	13	14
11. Desertification	0	-	5	6	-	-	7	13	7
12. Agricultural and rural development	9	24	22	22	27	40	22	42	21
13. Biodiversity	5	11	14	17	-	13	15	12	14
14. Protection of oceans	1	8	2	11	-	-	10	-	-
15. Protection of fresh water	2	5	9	-	7	6	10	6	36
16. Hazardous waste disposal	11	11	9	6	27	11	5	6	14
17. Recycling systems	30	5	5	11	-	-	2	8	-
18. Scientific and technological advancement	15	5	9	6	7	17	5	17	21
19. Environmental education	24	37	23	22	33	32	46	27	29
20. Environment assessment system	11	16	3	22	20	11	17	17	14
21. Integration of economic and environmental policies	43	29	43	44	40	30	32	19	14

Notes: The circles indicate items with the top three percentages for each region.
The number one response for each region has been marked with a double circle.
A "0" is used to express the range of 0.1% to 0.4%. A dash represents figures below 0.1%

- Environmental education was viewed as important by respondents from developing regions and the United States & Canada, while environmentally sound economic policies were considered important by respondents from economically advanced regions and Latin America. Solutions to poverty and overpopulation were deemed important by respondents from developing countries, while altering lifestyles and consumption patterns was viewed as vital by respondents from developed countries.
- In addition, environmental policies of the industrial sector were given priority by respondents from Western Europe and Eastern Europe & the former Soviet Union. Respondents from Asia and Africa deemed agricultural and rural development important, respondents from Japan saw recycling systems as relevant, and respondents from the Middle East viewed policies to combat desertification as vital.

Comments

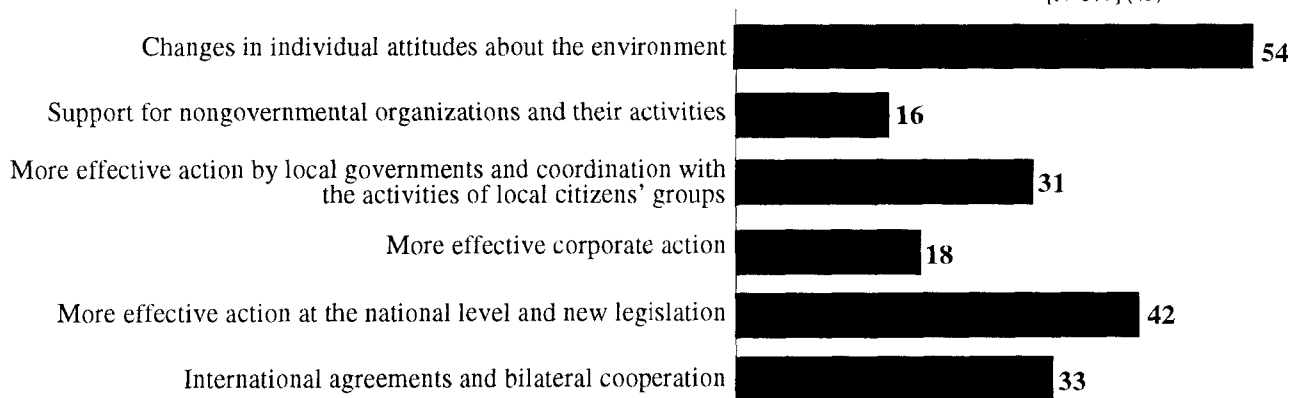
Environmental education was viewed as important by respondents from developing regions and the United States & Canada, while environmentally sound economic policies were considered important by respondents from economically advanced regions and Latin America. Solving poverty and overpopulation was deemed important in developing countries, while altering lifestyles and consumption patterns was deemed so in developed countries. A comparatively large percentage of respondents from Japan chose the formation of recycling systems.

Question 3-3: Now that nearly five years have passed since the Earth Summit was held, on which of the following areas do you think the most effort should be focused? Choose two.

Areas on Which We Should Focus

*N=number of responses

[N=576] (%)



	Japan (N=291)	U.S.A. & Canada (37)	Western Europe (63)	Oceania (17)	Eastern Europe & the former Soviet Union (13)	Asia (outside Japan) (57)	Latin America (38)	Africa (47)	Middle East (13)	Overseas total (285)	Male (443)	Female (123)
Changes in individual attitudes about the environment	54	46	59	59	38	61	50	53	46	54	53	59
Support for nongovernmental organizations and their activities	14	19	16	12	8	19	13	26	38	19	16	15
More effective action by local governments and coordination with the activities of local citizens' groups	22	41	24	35	23	49	45	49	46	40	30	30
More effective corporate action	22	27	21	6	8	7	16	9	8	14	19	16
More effective action at the national level and new legislation	42	32	48	53	54	42	37	38	54	42	41	44
International agreements and bilateral cooperation	37	32	33	35	69	14	34	21	8	28	35	27

Notes: Number one items in each category are marked with a double circle. Number two items are indicated with a single circle. A "0" is used to express the range of 0.1% to 0.4%. A dash represents figures below 0.1%. Responses of up to two items have been considered valid.

- The most popular choice for respondents from all regions except Eastern Europe & the former Soviet Union and the Middle East was changes in individual attitudes about the environment.
- The second most often chosen response, for respondents from developing regions and the United States & Canada, was more effective action by local governments and coordination with the activities of local citizens' groups. The number two answer for respondents from Western Europe, Japan, and Oceania was more effective action at the national level.

Comments

Respondents from most regions named as the most important item changes in individual attitudes about the environment. The number two answer was more effective action by local governments for respondents from developing regions and the United States & Canada but more effective action at the national level for respondents from Western Europe, Oceania, and Japan.

4. COOPERATION AMONG ECONOMICALLY ADVANCED AND DEVELOPING NATIONS

Question 4: "The solution of global environmental problems will require cooperation between economically advanced nations and developing countries." In response to the preceding statement, which one of the following most accurately reflects your thoughts?

International Cooperation

*N=number of responses

(%)	Japan (N=306)	U.S.A. & Canada (38)	Western Europe (65)	Oceania (18)	Eastern Europe & the former Soviet Union (15)	Asia (outside Japan) (63)	Latin America (41)	Africa (52)	Middle East (14)	Overseas total (307)	Male (470)	Female (132)	Total (613)
Economically advanced countries should provide developing nations with more economic and technological aid for environmental conservation.	14	5 (20)	11	7	22 (24)	13	7	16	15	16	15		
To help conserve the environment, economically advanced countries should adopt environmentally sound import policies and prohibit imports of products associated with environmental destruction.	9	(13)	8	17	-	3	7	-	7	6	7	10	8
Multinational corporations active in developing nations should pursue sound environmental policies that can serve as positive models for local businesses.	10	11	12	6	-	3	2	6	-	6	8	8	8
Economically advanced nations should make environmental considerations more of a priority in their economies, and developing countries should take care not to follow the examples of environmentally destructive activities set by wealthy countries.	(20)	(58)	(32)	(33)	(40)	(24)	20	(31)	(29)	(32)	(27)	(22)	(26)
To increase the effectiveness of cooperative environmental efforts, developing nations should institute stricter domestic environmental measures and implement environmental education programs.	8	5	9	6	-	10	15	13	7	9	9	9	9
Developing countries and economically advanced nations should create programs to promote cooperation on environmental preservation issues.	(39)	8	18	(22)	(47)	(35)	(29)	(35)	(50)	(28)	(33)	(33)	(33)
No response	-	-	-	6	7	3	2	2	-	2	0	2	1

Notes: Number one items in each category are marked with a circle. Number two items are indicated with a dotted circle. A "0" is used to express the range of 0.1% to 0.4%. A dash represents figures below 0.1%.

- If we contrast responses from economically advanced and developing regions, we see that the top answer from respondents from the United States & Canada and Western Europe was that economically advanced nations should set a good example and make environmental considerations more of a priority in their economies, while the number one response for respondents from developing regions was that economically advanced and developing nations should create programs to promote cooperation on environmental preservation issues.
- The second most popular answer for respondents from developing regions was that economically advanced nations should set a good example and make environmental considerations more of a priority in their economies.
- Respondents from Western Europe, Latin America, and Asia showed support for the statement that economically advanced countries should provide developing nations with more economic and technological aid for environmental preservation. Respondents from the United States & Canada indicated that they believed that economically advanced countries should adopt environmentally sound import policies and prohibit imports of products associated with environmental destruction.
- The most popular choice for respondents from Japan was that economically advanced and developing nations should create programs to promote cooperation on environmental preservation issues.

Comments

Respondents from developed regions answered most often that economically advanced nations should set a good example and make environmental considerations more of a priority in their economies. This response was the number two choice of respondents from developing regions. The top response for respondents from developing regions was that economically advanced and developing nations should create programs to promote cooperation on environmental preservation issues. This answer also gained wide support from Japanese respondents.

5. EXPECTATIONS FOR THE THIRD MEETING OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (COP3)

Question 5-1: If we are to successfully create a sustainable society, we must endeavor to stop global warming, a phenomenon that could have far-reaching effects on humankind. In December 1997, the third meeting of signatories of the United Nations Framework Convention on Climate Change (COP3) will be held in Japan with the goal of reducing emissions of carbon dioxide in economically advanced countries after the year 2000. What do you hope will be accomplished by this convention? Please choose one of the following.

Expectations for COP3

	Japan (N=306)	U.S.A. & Canada (38)	Western Europe (65)	Oceania (18)	Eastern Europe & the former Soviet Union (15)	Asia (outside Japan) (63)	Latin America (41)	Africa (52)	Middle East (14)	Overseas total (307)	Male (470)	Female (132)	Total (613)
Stronger legal backing for targets to make them binding for participating countries	30	30	40	17	27	27	24	27	43	31	30	32	31
Stricter emissions targets	8	8	18	-	20	10	15	6	14	11	10	10	9
Pledges made by each country to carry out measures designed to achieve the targets	19	16	8	22	20	22	22	33	14	20	21	14	19
Greater voice given to NGOs in policy formation	5	3	3	-	7	3	2	2	7	3	3	7	4
Broader awareness of global warming among corporations and individuals	14	13	15	17	13	17	7	15	14	14	13	20	14
More leadership from host nation Japan and other economically advanced nations on policy proposals and their implementation	23	18	15	44	13	17	29	15	7	19	23	15	21
No response	1	3	-	-	-	3	-	2	-	2	1	2	1

*N=number of responses

Notes: Number one items in each category are marked with a double circle.
Number two items are indicated with a single circle.

- The most popular choice of respondents from Japan, the United States & Europe, Western Europe, Eastern Europe & the former Soviet Union, Asia, and the Middle East was stronger legal backing for targets to make them binding for participating nations. Another response that was widely chosen was pledges by each country to carry out measures designed to achieve the targets.
- More leadership from economically advanced countries was a popular choice of respondents from Japan, the United States & Canada, Oceania, and Latin America.
- Stricter emissions targets were supported by Western Europe, Eastern Europe & the former Soviet Union, and the Middle East.

Comments

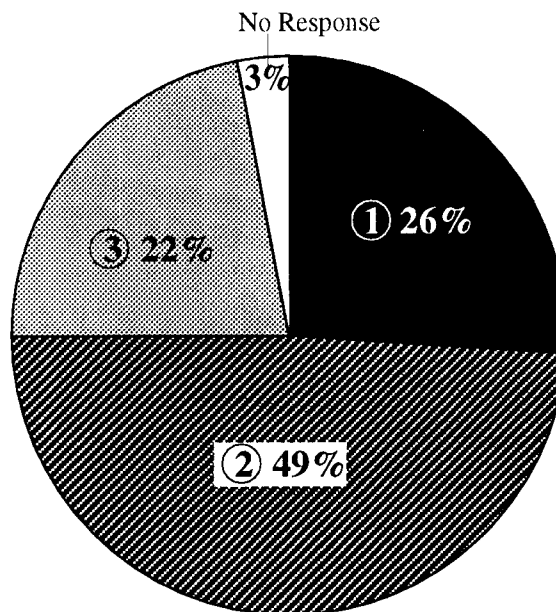
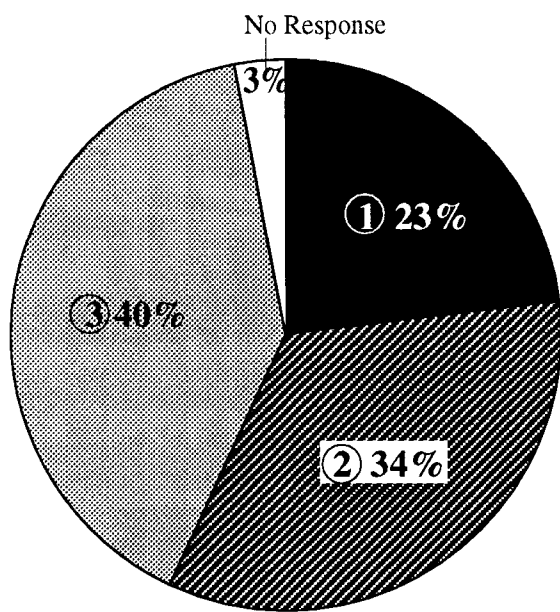
The most commonly chosen response, especially by respondents from developed countries, was stronger legal backing for targets to make them binding for participating countries. Another popular answer was pledges by countries to carry out measures designed to achieve the targets. In general, responses supporting the effective, binding enforcement of targets were chosen most often.

Question 5-2: The COP3 meeting scheduled for December 1997 will call for stricter carbon dioxide emissions standards for developed countries after the year 2000. However, each of these countries, fearing that standards will be imposed unequally or especially harshly on itself, is not expected to support stricter targets. At COP3, what type of agreement do you think should be reached and how important is setting fair standards among all nations concerned? Please choose one of the following.

Fair Standards in Setting Targets at COP3

Economically Advanced Regions
(Japan, the United States & Canada, Western Europe)

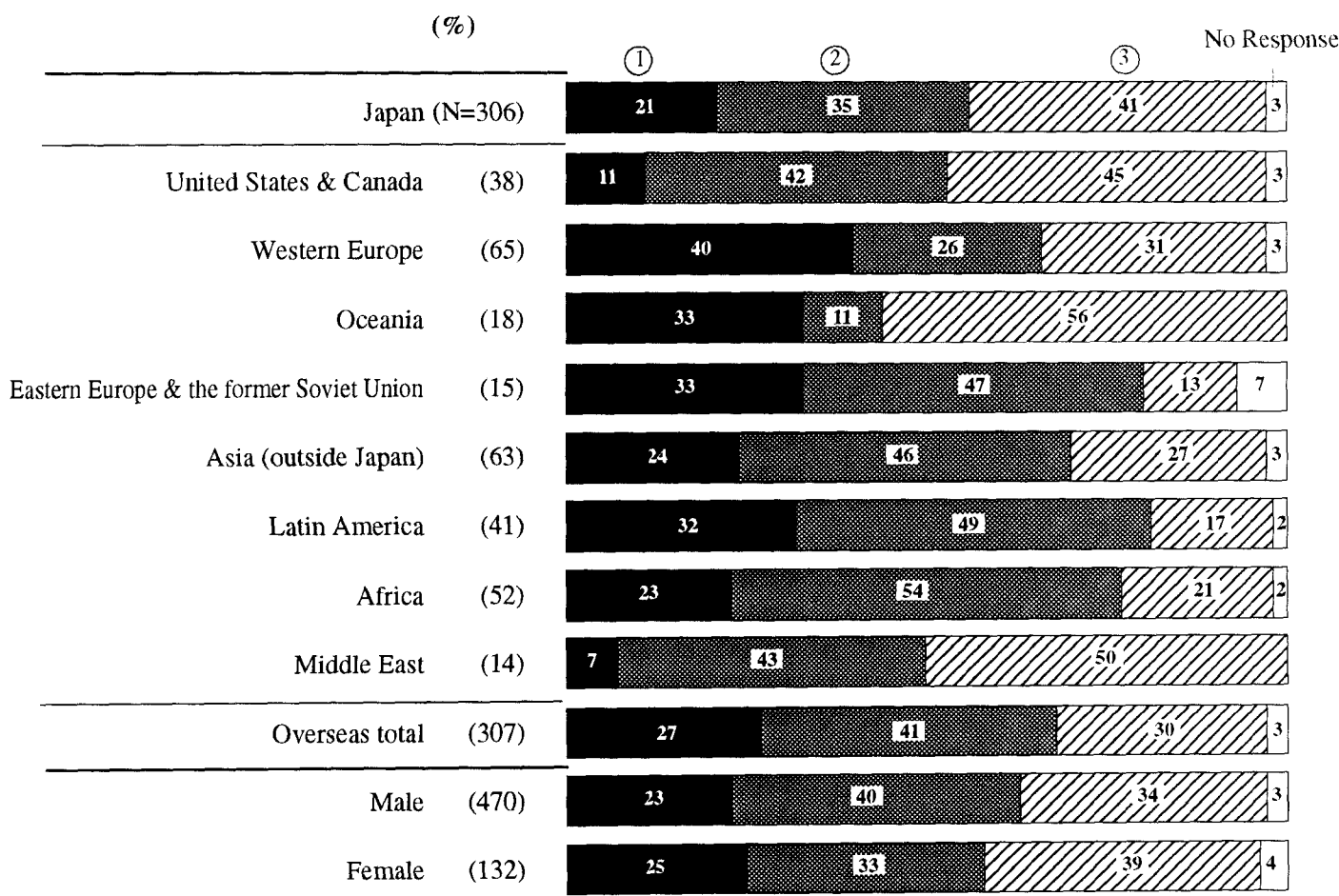
Developing Regions
(Asia, Latin America, Africa)



- ① Guaranteeing fairly imposed standards is of the highest priority. If fair standards cannot be agreed upon at COP3, then deliberations should continue afterwards.
- ② Guaranteeing fairly imposed standards is important. If an agreement is difficult to reach at COP3, then temporary standards should be set even if they are relatively lax.
- ③ It is not important for fair standards to be guaranteed. Nations participating in COP3 should put aside questions of fairness and agree to impose stricter standards.

- Forty-nine percent of respondents from developing regions (Asia, Latin America, and Africa) answered that temporary standards should be set even if they are relatively lax. Conversely, 40% of respondents from economically advanced regions (Japan, the United States & Canada, and Western Europe) favored stricter standards at the expense of fairness.

- ① Guaranteeing fairly imposed standards is of the highest priority. If fair standards cannot be agreed upon at COP3, then deliberations should continue afterwards.
- ② Guaranteeing fairly imposed standards is important. If an agreement is difficult to reach at COP3, then temporary standards should be set even if they are relatively lax.
- ③ It is not important for fair standards to be guaranteed. Nations participating in COP3 should put aside questions of fairness and agree to impose stricter standards.



*N=number of responses

- Respondents from economically advanced regions, including Japan, the United States & Canada, and Western Europe, supported the statement that nations should put aside questions of fairness and agree on stricter standards, but coming in a close second was the statement that guaranteeing fairly imposed standards is important, and if no agreement could be reached at COP3 then temporary standards, even if lax, should be set. However, respondents from Western Europe supported the statement that guaranteeing fairly imposed standards is of the highest priority and deliberations should continue if standards cannot be agreed upon at COP3.
- Respondents from developing regions, including Asia, Latin America, and Africa, showed much stronger support for temporary but fair standards rather than stricter standards.
- Fifty percent or more of respondents from Oceania and the Middle East supported the statement that nations should put aside questions of fairness and agree on stricter standards.

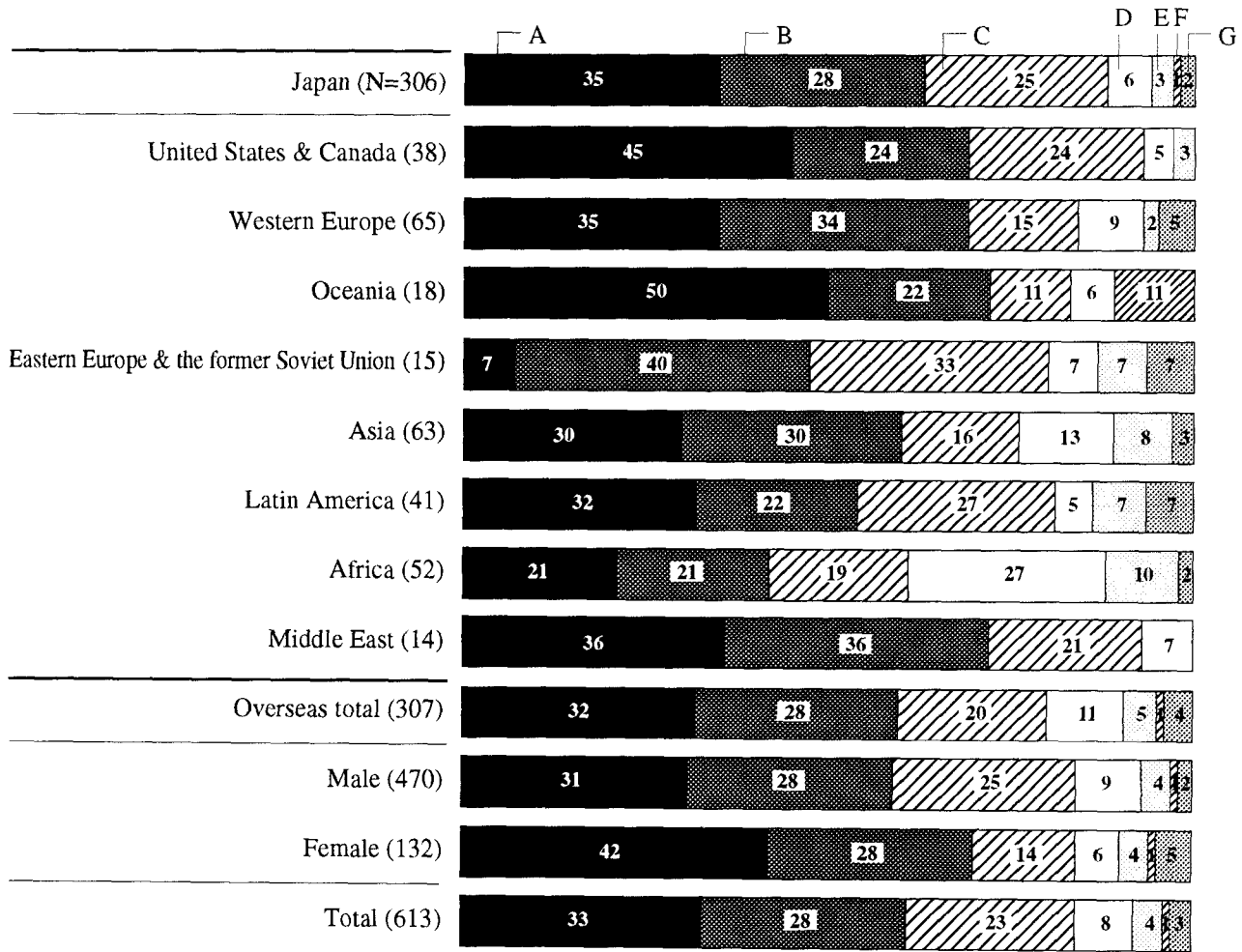
Comments

Respondents from developed regions tended to support the statement that nations should put aside questions of fairness and agree on stricter standards, but coming in a close second was the statement that guaranteeing fairly imposed standards is important, and if no agreement could be reached at COP3 then temporary standards, even if lax, should be set. Respondents from developing nations showed overwhelming support for the latter response. The statement that guaranteeing fairly imposed standards is of the highest priority and deliberations should continue if standards cannot be agreed upon at COP3 was firmly supported by respondents from Western Europe but gained little support from the United States & Canada.

Question 5-3: The COP3 meeting will deal with setting carbon dioxide emissions standards for economically advanced nations and will not apply to developing countries. In the future, developing nations' carbon dioxide emissions are expected to climb dramatically. When do you think emissions should begin to be restricted in developing countries? Please choose one of the following.

Carbon Dioxide Emissions Standards for Developing Countries

- A 2000
- B 2005
- C 2010
- D 2020
- E After the year 2030
- F Developing nations should not be restricted by carbon dioxide emissions standards in the future.



- Thirty-five percent or more of respondents from developed regions, including Japan, answered that emissions should be restricted by the year 2000. More than 80% of respondents from developed regions said that standards should be set by or before 2010.
- Respondents from Eastern Europe & the former Soviet Union and Africa showed weak support for setting standards by 2000, but 30% or more of respondents from Asia, Latin America, and the Middle East were in favor. In total, more than 80% of respondents from all regions, with the exception of Africa, said that standards should be set by or before 2010.

Comments

Thirty percent or more of respondents from all regions, with the exception of Eastern Europe & the former Soviet Union and Africa, indicated the year 2000 as appropriate. Although more respondents from developed nations answered by the year 2000, there was also widespread support from respondents from developing regions, indicating an optimistic outlook toward setting standards in the near future.

IV. Comments from Respondents

This section contains a selection of respondents' comments, as elicited by Question 6. Each comment is accompanied by the respondent's name, organization, country, and office registration number. Where the respondent has requested anonymity, only his or her gender, if indicated, is denoted by an M or F.

It is apparent from the UNEP report, *Global Environmental Outlook*, that the state of the global environment has not improved since the Earth Summit, some five years ago. While we recognize the importance of maintaining a safe and healthy environment, it does not appear that we have a strong commitment from all sectors of society to change our unsustainable patterns of production and consumption. Most of our effort is taken up in saying what needs to be done and not doing what needs to be done. If action is not forthcoming by all sectors of society, we will destroy the very environment that we depend on for our survival.

Patrice LeBlanc, Environmental Management Authority (EMA) of Trinidad and Tobago, CANADA 009

One of the key obstacles is the fact that environmentally damaging behavior is still economically profitable. Changes in the taxation and subsidies system should change that, then many people will switch to a more sustainable behavior out of economic self-interest.

Maier Durgen, German NGO Forum Environment and Development, GERMANY 022

Proposal: local towns and municipalities in industrialized countries should "adopt" sister towns and municipalities in developing countries for partnership in local Agenda 21 and follow up.

Peter F. Schei, Directorate for Nature Management, NORWAY 055

Environmental concern at the international level should be addressed through the established norms and policies. Developed countries should make greater efforts. There is much to be done by them. Each country should set environmental concern as a top priority. But it should be remembered that environmental problems can only be addressed by alleviation of poverty and education.

M, China National Environmental Protection Agency, CHINA 057

Proper attention must be taken in developing countries to raise public awareness as regards existing environmental problems. In this connection, developed countries should come forward to help developing countries in carrying out such awareness programs effectively.

S.M.A. Rashid, NGO Forum for Drinking Water Supply and Sanitation, BANGLADESH 061

Surveys, summits, agreements; these are verbal and theoretical steps toward understanding the very real problems that face us—and our planet. However, unless the majority of us, as a species, start to make real progress and take our destiny into our own hands, through action, we have lost.

Chuck Swift, Sea Shepherd/Earth First!, U.S.A. 068

To solve environmental problems and to bring about behavioral change, it's important to target the source. In this case, educating the teacher trainers so that the teachers who come out of training institutes have understood the problems and are interested. This way the problems will be targeted appropriately in class room.

Premila Kumar, Dept. of Environment, FIJI 073

Unfortunately, environmental issues have been used by developed countries as a way to stop the economic growth of developing countries and that's totally unacceptable for my country. In the same way, the last CSD meeting showed that developed countries have forgotten the commitments they made in Rio de Janeiro in 1992.

M, Minister of Foreign Affairs, MEXICO 094

The timber firms are cutting trees with little interest in replanting. Mining firms are clearing forests and vegetation on the earth's surface without any serious plans for reforestation, or restoration of top soil. Dangerous gases from garbage and waste from industries are emitted daily without any scientific monitoring of the quantity. The developing and least developed countries will face serious environmental problems both in the atmosphere and on land in future.

M, Evergreen Club of Ghana (E.C.O.G.), GHANA 113

Some of the biggest troubles in environmental conservation are the economic issues, especially in developing countries. Unless developed countries provide economic alternatives in environment-friendly production, conservation will remain an expensive activity. If conservation issues help to create more profitable production, it would be easier for developing countries to work on their environmental protection.

Patricia Zurita, Proyecto Proteccion de la Biodiversidad, ECUADOR 124

Sustainable environmental protection will result from poverty alleviation, especially in poor, developing countries. Other-

wise, people will continue to damage the environment in order to survive now. The future matters little. Developed democracies should help weed out corrupt, oppressive and inefficient governments in the developing world. Poverty and environmental degradation are intertwined.

Ketiboa K. Blay, Agribusiness Times, GHANA 132

The most important environmental problem of the world is population growth. Also, it is very important for the people of developed countries to recognize and understand that people in developing countries are at least part of nature and equal to them.

M, World Watch and WIT and three Iranian NGOs, IRAN 136

I am deeply concerned that at a human level we are not taking pressing environmental issues as seriously as we should be. While there is deep commitment by some sectors of society, it is not enough to weight the balance towards future sustainability. The answer as I see it is for innovative education campaigns aimed at all levels of the community from preschoolers through to senior citizens, from industry to government, from individuals to community and from self to other.

Carole Douglas, Greenline Group Pty Ltd, AUSTRALIA 152

Environment is the future; developing countries take it as a political issue. Nations are to lay down the policy. I mean environmental policy. This will create sustainable development especially among the poor (grassroots). These are the base of humankind.

M, Evangelical Lutheran Church in Tanzania (NWD), TANZANIA 155

Environment conservation at a global level is a reality of life and should not be taken as casual or as a fashion. In nature, 'soil' is the only commodity to change 'seed' into a fiber or plant and that soil is being degraded by injudicious use of water and chemicals, thereby inviting the problems of waterlogging and salinization. Soil erosion is causing desertification. In order to check these problems, individuals should step forward to work for the future, keeping the past as his experiences.

Dr. Laxmi Kant Dadhich, Paryavaran Parishad, INDIA 166

It is encouraging that more and more ordinary people are becoming aware of the principle of the environment as it affects their day-to-day lives directly and indirectly, through processes that were otherwise abstract and only existed in the mysterious domain of the scientist. At least people are becoming aware of their position in the cause-and-effect linkages in the systems.

Edward Shumba, Department of National Parks and Wildlife Management, ZIMBABWE 167

Environmental degradation as well as deterioration in quality of life continue unabated. Personally, I do not find Rio Summit made any difference; no significant impact has been felt in respect of overall environmental improvement. However, the number of convention, acts, rules, publications, and the amount of legislation, etc. have increased. Commitment by people and governments can only lead to some positive and constructive approach for regeneration and improvement in the quality of life. Of course, this requires intensive awareness and education.

Dr. Sundara Narayana Patro, Orissa Environment Programme, INDIA 181

The single most important environmental problem of the world is poverty. Unless we accept this, all else will be useless. An unequal world will forever be a divided world, and a divided world can never be a sustainable world.

Adil Najam, MIT/BU, U.S.A. 189

I think that developing countries should also try to attain sustainable development right now. I do not think that for these countries the solution is first a growing economy and then to start showing concern about the environment. It should be simultaneous.

M, Ministerio de Bienes Nacionales, CHILE 201

Global warming and ozone depletion are serious issues. But for us in the developing countries, how to cook with whatever type of energy is available and accessible is more immediately serious; this problem will not wait!!

M.A.O. Karama, Waves Engineering Co. Ltd., SUDAN 211

Changing our current lifestyle requires rediscovering and reliving our traditional cultures and returning to sustainable agricultural production. In other words, we should find ways to apply the village community culture in today's increasing urbanization and modernization. We can learn a lot from the past and from the lives of rural communities.

Emmanuel C. Talag, Department of Energy, PHILIPPINES 240

Eco-politics and eco-diplomacy should play active roles in spreading eco-ethics the world over. The polluter should pay the cost of pollution, whether he is in a developing or developed country. Of course, developed countries will have to bear greater responsibilities during the transition phase.

Dr. Anil Kumar Tewari, National Forum for Environmental Studies and Conservation (NESCO), INDIA 241

Environmental problems are compounded in developing countries because of lack of resources and small incomes to afford the means to solve problems. When terms of trade improve developing countries would then be able to marshal resources

and inputs to tackle environmental issues. High rates of illiteracy and poor standards of living also impede progress in environmental issues.

Peter Barnes, Animal Research Institute (C.S.I.R.), GHANA 249

Developing countries find it difficult to implement environmental agreements and international protocols because of poverty. They must degrade the environment in a drive to export primary products to the greedy developed countries who pay very unfair prices for those products. In the end, little money is available with which to implement environmental policies etc. I think developed countries have a moral obligation to assist developing nations to protect their environment.

Prince Avortri, Council for Scientific & Industrial Research (C.S.I.R.), GHANA 251

The main problem is that people don't care. They don't care because they don't know what's going to happen. So, if they learn what will happen, they'll stop doing it!

Carlos Ramon Ostolaza, CONCODES, PERU 256

Action by governments, by industry, by NGOs are all contingent on a better informed public demanding change. Therefore, most effort should be placed on education and raising public awareness.

Robert Lamb, TUE International, U.K. 263

The developed nations are still not willing to pay for the benefits of not altering the ecosystems of the developing nations. This short-sightedness will inevitably increase environmental problems. Also, very little is done in trying to solve the demographic explosion of the less educated population. With regard to climate change, the complexity of economic assistance from the World Bank is such that it is very difficult to get any help from them. We are the largest NGO in the North of Argentina. I have gone many times to JICA and the Japanese Embassy for cooperation in tree planting. We have never received any. We normally plant 50,000 trees a year; with economic assistance we could be planting over 200,000.

Andren Hamilton Joseph, Ass. Civil Los Algarrobos, de Desarrollo Sostenible, ARGENTINA 272

If people knew the problem, they would be at least 50% of the way already toward the solution of the problem.

Letecia T. Espero, Mindanao Baptist Rural Life Center (NGO), PHILIPPINES 279

Public awareness: the public has to be taught or informed about the problems of the environment. This will help them to become environmentally conscious. If the public becomes aware of the problems of their own environment, people will try as much as they can to reduce them.

Kene Lenyatsu, Department of Mines, BOTSWANA 294

Five years ago, the nations of the world, meeting at Rio de Janeiro for the Earth Summit, made far-reaching promises to save the world's environment. The Rio Principles, Agenda 21, the convention on biodiversity and the framework convention on climate change demanded commitments that were global as well as national. Is the world a better place than it was in 1992? Unfortunately not! Despite the Rio commitments there is less money available today to implement environmental programs than five years ago. And while the number of poor people in the world has increased, the profligate lifestyles of the rich have barely altered. But there is hope.

Gagan Dmir, Rail India Technical and Economic Services, INDIA 300

It may not be impossible but it is actually difficult to solve environmental problems without solving poverty problems first. Changes in individual attitudes about the environment are most important. Strict enforcement of rules and laws, education and religion also have their role to play.

Rabevazaha Rabekorianana Celine, Association pour la Promotion de l'Entreprise à Madagascar, MADAGASCAR 313

Humankind is approaching the 21st century, and if we are to survive then we must face up to global environmental problems. For human beings to remain on this planet, everyone—individuals and corporations—must obey strict international guidelines and adopt environmentally friendly attitudes. To attain this end, legal guidelines will be necessary. In addition, environmental education from early childhood, recycling and energy saving measures will be necessary to preserve Space-ship Earth. Both the government and NGOs should do whatever they can. The beginning is when individuals begin to pay attention to the environment.

Kazuyoshi Yogosawa, Manager, Publication Section, Research Division, Japan Weather Association, JAPAN J014

I think that people's awareness of the importance of global environmental problems is growing. However, there is not adequate information about the current state of affairs. If people cannot get a good picture of the problems and the enormity of their repercussions, then they are not likely to take action.

M, The Energy Conservation Center, JAPAN J031

There is no time to lose in dealing with global environmental problems, and I think that they will not be solved by relying on individual efforts alone. Therefore, economic measures must be introduced and the principle of 'polluters pay' must be rigidly enforced.

M, Japan Environment Association, JAPAN J032

People around the world are seeking economic advancement, but if we stop to think about the environment then we must

relegate economic considerations to secondary importance. We have no time to dally with personal economic advancement and self-serving corporate efforts. I think we must devise legal guidelines with as much speed as possible. The way in which we deal with the problems facing the global environment is a vital test of how well humankind can overcome its own egotism.

Kunihiko Okada, General Director, Matsushita Institute of Government and Management, JAPAN J041

I think the top priority for national and regional governments should be to devise policies that will bring about a revolution in people's awareness of the effects that their daily activities have on the environment. To accomplish this, the environmental activities that have been conducted to date are not enough. New strategies, involving the introduction of regulations and economic policies, must be considered and implemented.

Chikako Mizutani, Administrator, Environment Protection Division, Aichi Prefecture, JAPAN J057

To say that environmental problems are an emergency that will determine the survival or destruction of all humankind is an overstatement. Finding solutions to these problems will definitely involve culture clashes between nations. Although it may not take the 300 years it took for the Vatican to recognize Galileo or the 150 years before Darwin's works were recognized, it will nevertheless take a long time to achieve cultural changes. Therefore, these problems are an emergency but I think it will be very difficult to achieve success by rushing toward a result. First, we must steadily aim to accomplish the things that we know are within the realm of possibility. By taking too much time now we may compromise our future, but I hardly think we need to worry about our total destruction.

M, Nissan Science Foundation, JAPAN J060

The economic growth of developed countries is stable to some extent, but from now on developing countries will come to the forefront with respect to environmental problems. Without violating the rights of developing countries to economic growth, we must recommend increased efforts to promote environmental preservation.

Hisashi Yamagata, Senior Researcher, Molecular Microbiology and Genetics Laboratory, Research Institute of Innovative Technology for the Earth, JAPAN J075

Although much better than in the past, the awareness of the ordinary Japanese citizen with respect to environmental issues needs to be improved vastly. Compared with the United States and European countries, this awareness is very much behind. Furthermore, we need to rethink environmental education in Japan. I think we can say that education from an early age is especially important, and we need to revise the educational programs at our schools.

F, Global Environmental Forum, JAPAN J085

Although all kinds of measures have been tried and some have been effective, the overall situation remains unchanged. We are steadily heading for disaster. Although it is a good thing that companies, industries and national governments set targets, the individual people who make up these entities do not have an enlightened awareness of environmental problems. We have already crossed the critical point for the environment. If we continue in this vein, then for people in the future the hour shown on the 'crisis clock' will grow later with increasing speed. All I can do is pray that I won't have to write this same kind of thing in next year's survey.

M, Iwate Prefectural Office, JAPAN J087

The fact that more than 4.5 billion years of careful balance between living organisms and the global environment is being destroyed by human beings in less than 100 years is something that I think everyone should be made aware of. In particular, I think everyone should know the extent to which the economically advanced countries are dependent on the developing nations for resources and energy.

M, Environment Agency, JAPAN J094

Global environmental problems are complex, so it is important to deal with them on each level and at each stage. That is to say, action needs to be taken on a broad range of levels—individual people, companies, organizations, governments, and regional cooperatives. And if we look to the future, environmental education is important. From elementary school students to adults, we must all take responsibility for the 21st century. Also, the clash of interests in developed countries needs adjustment. These countries should work on cooperating more with developing nations. The most important factor is careful attention to detail in these efforts.

Takashi Nitta, Professor, Department of General Culture, Tokai University, JAPAN J106

'When the last tree is cut and the last river is polluted and the last fish is caught, people will not be able to eat their money.' I have two T-shirts with this written on the front, one in Spanish and one in English. I got them in Costa Rica and in Nepal. In both cases, the shirts were on sale in national parks. Whenever the subject of global environmental problems comes up, Japan seems to think that 'preservation costs a lot of money,' when actually preservation is related to NGOs, nonprofit organizations, volunteers, and corporate efforts. In other countries, environmental protection—especially of the natural environment—is viewed as an integral whole with economic activities as only one facet. This does not mean spurious 'ecobusiness' but rather viewing trees as assets simply as they are, growing in the forest. When contrasted with the environmental education efforts and other activities pursued throughout the world, I cannot help but wonder what on earth the Japanese people are thinking.

Michiko Imai, Director, Le Verseau Inc., JAPAN J117

Whenever we think of environmental problems, we seem to think of individual negotiations between one country and another. Certainly, governments should make policies regarding our shared home, the Earth, but it is essential for national governments to cooperate in preserving the global environment. The global environment does not exist as regionally divided segments, yet environmental protection measures often exist solely as the sum of individual regional policies. That's why I think it is vital for NGOs and citizens to get involved in policy making and for central governments and regional governments to cooperate.

M, Environment Agency, JAPAN, J140

Basically, humans tend to look out for themselves first before they worry about anything else. Therefore, without strong regulations, I don't think that major lifestyle changes are likely to happen. In economically advanced nations, I think environment-related regulations that force up prices and bring down living standards are necessary to lessen the burden on the environment. However, if living standards come down too much there might be secondary complications, so a systematic approach is essential.

Tetsuya Kusuda, Professor, Department of Civil Engineering, Kyushu University, JAPAN J146

Environmental problems involve complex issues and approaches to solving them cannot be implemented without a comprehensive plan. Environmentally aware people have grasped the root problems and have gone on to make suitable changes in their daily lives, including work. If this should go on to raise societal and philosophical questions about how we should live then it would be a good thing. A reverse pattern of progress is also possible. Modern problems affect us all. By finding the ideal way to live our lives, we will also find the solutions to our problems.

F, KYOTO FORUM, JAPAN J155

One reason why not much progress has been made in finding solutions to environmental problems is that this doesn't lend itself well to business. Perhaps a business-oriented approach to finding new technologies and creating new systems is what is lacking. On the other hand, major corporations are beginning to show greater awareness of environmental problems and there are more examples of companies that are proactively developing environmentally sound products. I think this is a good trend, but to support it we need more environmental awareness on the part of consumers as well.

Toshiaki Nishiyama, Senior Engineer, Shonan Village Project Section, Office of General Affairs, Planning Department, Kanagawa Prefectural Government, JAPAN J163

Responses to environmental problems require education at home and in school, policies by local and national governments, and activities by companies that make economic sense. To accomplish this, we need to promote environmental education and environmental technological development. In addition, countries should contribute to the formation of international treaties to implement environmental policies. However, I think it is key to remember that in forming international cooperative bodies the basic prerequisite should be economically feasible strategies.

M, The Energy Conservation Center, JAPAN J189

Creating an economy that takes account of environmental costs is fundamental to solving global environmental problems.

Susumu Wakamori, Deputy Chief, Office of Home Economics, Takasago City Office, JAPAN J212

Until now, approaches to solving environmental problems have mainly involved the fields of natural science, engineering, law, and economics. In the future, unless we use more cultural and social sciences approaches such as ethnology, sociology, and history, I think it will be difficult to implement environmental policies.

M, Aichi Prefectural Office, JAPAN J230

Global environmental problems are by definition difficult for ordinary people to grasp in their everyday lives. Most people seem very negative, feeling that any individual efforts to conserve the environment would be an insignificant drop in the bucket and not make an impact. Therefore, we have to create societies in which environmentally friendly activities are valued and supported.

Naoyuki Sato, Assistant Director, Environmental Initiative Division, Planning Department, Kamakura City, JAPAN J236

Although legal measures will become more and more important, I think it is action—based on awareness and 'environmental sense' and by people in both developed and developing countries—that is essential. If mechanisms to stimulate this awareness and 'environmental sense' are put into place then citizen's groups and NGOs will get more support.

F, JAPAN J303

V. Questionnaire as Distributed to Respondents

1-1. Indicate with a time your concern about the survival prospects of humankind in light of the deterioration of the environment, taking into consideration the times and associated concern levels shown on the clock below.

Please write your time here.

:
 (*Example :)

1-2. In which generation do you think humanity will become unable to maintain its existence based on the mass-production and mass-consumption standards of present-day industrial civilization? Please tick your answer.

- (1) Your children's generation (by the year 2030)
- (2) Your grandchildren's generation (from 2031 to 2065)
- (3) Your great-grandchildren's generation (from 2066 to 2100)
- (4) A generation further in the future (after the year 2100)
- (5) Cannot comment

2-1. Lately, there is a growing consensus that we should change our overconsumption-throwaway lifestyle. How do you feel about adapting a more frugal lifestyle, e.g., using less electricity, purchasing products that are environmentally sound, or reducing the amount of household garbage? Tick the appropriate response below.

- (1) Plan to adapt
- (2) Could adapt to some extent
- (3) Could adapt with difficulty
- (4) Impossible to adapt
- (5) Currently, I do not indulge in an overconsumption-throwaway lifestyle.

2-2. Please tick all of the following activities in which you engage.

- Recycling and Waste Disposal: (1) Recycle materials such as paper, metal, and glass
- (2) Separate plastic trash from other garbage
- (3) Use biodegradable refuse as compost instead of throwing it away
- Everyday Purchases: (4) Purchase products made from recycled materials whenever possible
- (5) Give preference to products made by companies with sound environmental policies
- (6) Give preference to biodegradable products when purchasing everyday items such as laundry detergent
- Food: (7) Try to not waste or throw away food
- (8) Restrict intake of meat products made from animals that require large amounts of grain to raise
- Water: (9) Try not to waste water
- (10) Try to utilize rainwater (for watering plants, etc.)
- Energy: (11) Turn on heater or air conditioner as infrequently as possible
- (12) Turn off television, lights, and appliances when not in use
- Automobiles: (13) Bicycle, walk, or use public transportation, such as trains, as much as possible and avoid using an automobile
- (14) Purchase fuel-efficient automobiles and save gasoline by driving under the speed limit
- Other: (15) Use items for as long as possible before throwing away
- (16) Limit use of insecticides and chemical fertilizers
- (17) Help plant trees
- (18) Support environmental organizations
- (19) Participate in local environmental activities
- (20) Other (Please specify _____)

2-3. What factors do you think are most important for bringing about a sustainable society? Please tick three.

Environmental ethics and philosophy:

- (1) Changes in the overconsumption lifestyles of ordinary people
- (2) Promotion of environmental education that fosters an appreciation of the harmonious coexistence of living things in nature

Social and economic systems:

- (3) Changes in mass-production and overconsumption-throwaway-type systems
- (4) Shifts to environment-sensitive corporations
- (5) Establishment of systems to support sustainable agricultural activities and communities
- (6) Promotion of international economic aid to developing countries

Science and technology:

- (7) Development of technology that helps meet the material needs of humankind by sustainable methods
- (8) Switching to the use of recyclable energy resources

Laws and regulations:

- (9) Strengthening of environmental conservation laws and regulations, including those governing emissions standards
- (10) Use of environmental taxes and levies to restrict environmental destruction
- (11) Halting multinational corporate activities that are destructive to the environment
- (12) Participation by NGOs and individual citizens in the decision-making process of environmental policy formation
- (13) Other (Please specify: _____)

3-1. Since the Earth Summit held in Rio de Janeiro in June 1992, to what extent has progress been achieved in the areas described in items (1) to (21) below? For each item, circle the best response from (a) to (e), considering the situation *in your own country only*.

Significant progress
Some progress
Cannot determine
Almost no progress
No progress

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| (1) International cooperative efforts toward sustainable development in the developing countries | (a) | (b) | (c) | (d) | (e) |
| (2) Efforts to solve basic problems, such as poverty and overpopulation | (a) | (b) | (c) | (d) | (e) |
| (3) Efforts to alter lifestyles and consumption patterns | (a) | (b) | (c) | (d) | (e) |
| (4) Activities by local governments | (a) | (b) | (c) | (d) | (e) |
| (5) Activities by nongovernmental organizations and citizens' groups | (a) | (b) | (c) | (d) | (e) |
| (6) Environmental protection policies of the industrial sector | (a) | (b) | (c) | (d) | (e) |
| (7) Policies to counter global warming | (a) | (b) | (c) | (d) | (e) |
| (8) Policies to protect the ozone layer | (a) | (b) | (c) | (d) | (e) |
| (9) Policies to reduce acid rain | (a) | (b) | (c) | (d) | (e) |
| (10) Policies to conserve forests | (a) | (b) | (c) | (d) | (e) |
| (11) Policies to combat desertification | (a) | (b) | (c) | (d) | (e) |
| (12) Sustainable agricultural development and development of rural communities | (a) | (b) | (c) | (d) | (e) |
| (13) Policies to conserve the earth's biodiversity | (a) | (b) | (c) | (d) | (e) |
| (14) Policies to protect the oceans | (a) | (b) | (c) | (d) | (e) |
| (15) Policies to protect freshwater resources | (a) | (b) | (c) | (d) | (e) |
| (16) Policies for the disposal of hazardous wastes and substances | (a) | (b) | (c) | (d) | (e) |
| (17) Formation of recycling systems | (a) | (b) | (c) | (d) | (e) |
| (18) Science and technology's contributions toward solving environmental problems | (a) | (b) | (c) | (d) | (e) |
| (19) Promotion of environmental education | (a) | (b) | (c) | (d) | (e) |
| (20) Establishment of an environmental assessment system to generate information on which to base comprehensive environmental policy formation | (a) | (b) | (c) | (d) | (e) |
| (21) Implementation of economic policies that adequately reflect (and do not conflict with) environmental policies | (a) | (b) | (c) | (d) | (e) |

3-2. From the above 21 items, choose the three that you believe are most important for solving environmental problems *in your own country only*. Write the item numbers, in any order, in the spaces below.

() () ()

3-3. Now that nearly five years have passed since the Earth Summit was held, on which of the following areas do you think the most effort should be focused? Please choose two.

- ⁽¹⁾ Changes in individual attitudes about the environment
- ⁽²⁾ Support for nongovernmental organizations and their activities
- ⁽³⁾ More effective action by local governments and coordination with the activities of local citizens' groups
- ⁽⁴⁾ More effective corporate action
- ⁽⁵⁾ More effective action at the national level and new legislation
- ⁽⁶⁾ International agreements and bilateral cooperation

4. "The solution of global environmental problems will require cooperation between economically advanced nations and developing countries." In response to the preceding statement, which one of the following most accurately reflects your thoughts.

- ⁽¹⁾ Economically advanced countries should provide developing nations with more economic and technological aid for environmental conservation.
- ⁽²⁾ To help conserve the environment, economically advanced countries should adopt environmentally sound import policies and prohibit imports of products associated with environmental destruction.
- ⁽³⁾ Multinational corporations active in developing nations should pursue sound environmental policies that can serve as positive models for local businesses.
- ⁽⁴⁾ Economically advanced nations should make environmental considerations more of a priority in their economies, and developing countries should take care not to follow the examples of environmentally destructive activities set by wealthy countries.
- ⁽⁵⁾ To increase the effectiveness of cooperative environmental efforts, developing nations should institute stricter domestic environmental measures and implement environmental education programs.
- ⁽⁶⁾ Developing countries and economically advanced nations should create programs to promote cooperation on environmental preservation issues.

5-1. If we are to successfully create a sustainable society, we must endeavor to stop global warming, a phenomenon that could have far-reaching effects on humankind. In December 1997, the third meeting of signatories of the United Nations Framework Convention on Climate Change (COP3) will be held in Japan with the goal of reducing emissions of carbon dioxide in economically advanced countries after the year 2000. What do you hope will be accomplished by this convention? Please choose one of the following.

- ⁽¹⁾ Stronger legal backing for targets to make them binding for participating countries
- ⁽²⁾ Stricter emissions targets
- ⁽³⁾ Pledges made by each country to carry out measures designed to achieve the targets
- ⁽⁴⁾ Greater voice given to NGOs in policy formation
- ⁽⁵⁾ Broader awareness of global warming among corporations and individuals
- ⁽⁶⁾ More leadership from host nation Japan and other economically advanced nations on policy proposals and their implementation

5-2. The COP3 meeting scheduled for December 1997 will call for stricter carbon dioxide emissions standards for developed countries after the year 2000. However, each of these countries, fearing that standards will be imposed unequally or especially harshly on itself, is not expected to support stricter targets. At COP3, what type of agreement do you think should be reached and how important is setting fair standards among all nations concerned? Please choose one of the following.

- ⁽¹⁾ Guaranteeing fairly imposed standards is of the highest priority. If fair standards cannot be agreed upon at COP3, then deliberations should continue afterwards.
- ⁽²⁾ Guaranteeing fairly imposed standards is important. If an agreement is difficult to reach at COP3, then temporary standards should be set even if they are relatively lax.
- ⁽³⁾ It is not important for fair standards to be guaranteed. Nations participating in COP3 should put aside questions of fairness and agree to impose stricter standards.

5-3. The COP3 meeting will deal with setting carbon dioxide emissions standards for economically advanced nations and will not apply to developing countries. In the future, developing nations' carbon dioxide emissions are expected to climb dramatically. When do you think emissions should begin to be restricted in developing countries? Please choose one of the following.

- ⁽¹⁾ 2000 ⁽²⁾ 2005 ⁽³⁾ 2010
- ⁽⁴⁾ 2020 ⁽⁵⁾ After the year 2030
- ⁽⁶⁾ Developing nations should not be restricted by carbon dioxide emissions standards in the future.

6. Feel free to write comments on any topic related to environmental problems.

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REPORT

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