

**Results of the 14th Annual  
“Questionnaire on Environmental Problems and the Survival of Humankind”**

**REPORT**

**THE ASAHI GLASS FOUNDATION**

September 2005

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## Foreword

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

While thirteen years have already passed since the Earth Summit in Rio de Janeiro and three years since the Johannesburg Summit, the urgency and the importance of undertaking global environmental problems continues to grow ever greater. In particular, global warming is an issue deserving utmost consideration. Under the United Nations Framework Convention on Climate Change, which aims to stabilize the concentration of greenhouse gases in the atmosphere, Russia ratified the Kyoto Protocol last November. This satisfied the conditions for the protocol to take effect, which took place on February 16<sup>th</sup> this year. Recognizing climate change as a grave threat requiring a global response, countries around the world are beginning to dedicate their efforts to meeting the goals established in the Kyoto Protocol and discussing solutions beyond 2013 when the treaty expires.

In this year's survey, the 14th, the questionnaire was designed to gauge the perceptions of respondents, mainly environmental experts from both governmental and private-sector organizations, regarding the progress of environmental conservation efforts and to highlight regional differences in opinion. In addition to the issues addressed in previous surveys, including queries about the Environmental Doomsday Clock and Agenda 21, the main questions on this year's questionnaire asked about problems arising from environmental problems and their priority, food problems, and the implementation of the Kyoto Protocol and the suppression of greenhouse gas emissions.

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

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

Hikomichi Seya  
Chairman  
Asahi Glass Foundation  
September 2005

# I. Facts about the 14th Annual “Questionnaire on Environmental Problems and the Survival of Humankind”

**Response period:** Questionnaires were sent out in April 2005 with a return deadline of June 2005.

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

**Questionnaires mailed:** 3,643

**Questionnaires returned:** 709

**Response rate:** 19.5%

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

Region	Number of responses	Percent of total
Japan	312	44.1
United States & Canada	65	9.2
Western Europe	91	12.8
(Asia)	(92)	(12.9)
Asian Four (A4) (South Korea, Hong Kong, Taiwan, and Singapore)	30	4.2
Rest of Asia (RoA)	62	8.7
Latin America	32	4.5
Africa	39	5.5
Oceania	26	3.7
Eastern Europe & former Soviet Union	42	5.9
Middle East	10	1.4
(Overseas Total)	(397)	(55.9)
<b>Total</b>	<b>709</b>	<b>100.0</b>

Gender	Number of responses	Percent of total
Male	592	83.5
Female	91	12.8
No response	26	3.7
<b>Total</b>	<b>709</b>	<b>100.0</b>

Occupational affiliation	Number of responses	Percent of total
National government	93	13.1
Local government	103	14.5
University or research institution	138	19.5
Nongovernmental organization	120	16.9
Corporation	123	17.4
Other	131	18.5
No response	1	0.1
<b>Total</b>	<b>709</b>	<b>100.0</b>

- Notes:
1. This report used the 709 responses as the basis for calculating percentages, which are rounded up from the first or second decimal place.
  2. In this report, “Asia” is all of Asia, except Japan. Further, South Korea, Hong Kong, Taiwan, and Singapore are classified as the “Asian Four (A4).” Other Asian countries are classified as the “Rest of Asia (RoA).”
  3. Japan, United States & Canada, Western Europe, and the Asian Four are classified as “Developed region,” while the remainder of the Rest of Asia, Latin America, and Africa are classified as “Developing region,” and all remaining countries are classified as “Other.”
  4. Please note that where it is marked “Percentages are based on the total number of responses,” the total number of responses refers to the total number of responses to that question, not to the total number of respondents to the survey. In the diagrams, “N” represents the number of valid responses.

## II. Summary of Questionnaire Results

### ● Awareness of the Crisis Facing Human Survival

#### Environmental Doomsday Clock (Questionnaire 1.)

- The average time on the environmental doomsday clock for all respondents was 9:05, a three-minute reversal in the needle compared to the previous year. Respondents in Asia and the Middle East indicated an advance in the time, whereas respondents in Western Europe and America indicated a significant reversal, resulting in the same time as 1998 and 2002.
- The average time on the environmental doomsday clock as marked by Japanese respondents was 9:07, comparable to the previous year.
- The average time for overseas respondents was 9:04, a reversal of 5 minutes compared to the previous year.
- **Environmental conditions of concern in determining the doomsday clock time:** There was no change from the previous year in the main environmental condition of concern among respondents from all areas excluding the Asian Four. Respondents from Japan, the United States and Canada, and Western Europe most frequently cited “global warming,” and those from the Rest of Asia, Latin America, and Africa most frequently cited “deforestation, desertification, loss of biodiversity.” A notable distinction in the responses this year was the increase in the number of regions that cited “water shortage and food problems” and “air pollution, water contamination, river/ocean pollution.”

### 1. Repeat Topics

#### 1-1. Progress Toward Agenda 21 (Questionnaire 2.)

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

- More than 70 percent of respondents, from all areas including Japan but excluding the Asian Four, indicated there had been progress in the “promotion of environmental education.” In addition, more than 60 percent of respondents, excluding those from Latin America and Africa, indicated there had been progress in “activities by local governments and citizens’ groups.”
- As in previous years, more respondents reported no progress than those who indicated progress in the areas of “conservation of forest resources,” “conservation of biodiversity,” “greenhouse gas prevention measures,” “population/poverty problems,” and “lifestyle alteration.” In particular, more than 50 percent of respondents indicated there had been no progress in the areas of “population/poverty problems,” and “lifestyle alteration.”
- More than 40 percent of all respondents reported no progress with regards to “global warming countermeasures,” far exceeding the 30 percent of respondents who reported progress. Particularly notable are the responses from the United States and Canada, including the United States which has not ratified the Kyoto Protocol, where 70 percent of respondents reported no progress and 20 percent of respondents reported progress.

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

#### 2-1. Environmental Problems and Their Priority (Questionnaire 3.)

- Respondents in most regions pointed to “climate change including global warming” as the environmental problem that should be given the highest priority and needed to be undertaken by the global community. Respondents from developed regions most frequently cited “climate change including global warming,” followed by “energy problems,” and “population problems.” In contrast, “poverty” and “preservation and restoration of ecosystems and biodiversity” placed high among respondents from developing regions.
- Among local environmental problems, respondents in all areas excluding developing regions gave high priority to “waste management and recycling,” “urbanization and transportation problems,” and “energy

problems.” These responses highlighted the various problems that arise on a local level with the advancement of urbanization. On the other hand, respondents in developing regions most frequently cited “poverty” and “deforestation,” marking a contrast to the responses from developed regions.

## **2-2. Food Problems (Questionnaire 4.)**

- Only eight percent of respondents chose “food production still has the capacity to grow,” indicating that the majority of respondents saw a need for some type of political strategy to solve the problem.
- Comparatively, a higher percentage of respondents from developed regions marked “technological innovations cannot be relied upon for further increases in agricultural productivity” than those from developing regions. This was particularly true for respondents from the United States and Canada, at 35 percent. In contrast, the percentage was lowest among respondents from Africa, who expressed hope for technology to increase productivity.

## **2-3. The Implementation of the Kyoto Protocol and the Suppression of Greenhouse Gas Emissions (Questionnaire 5.)**

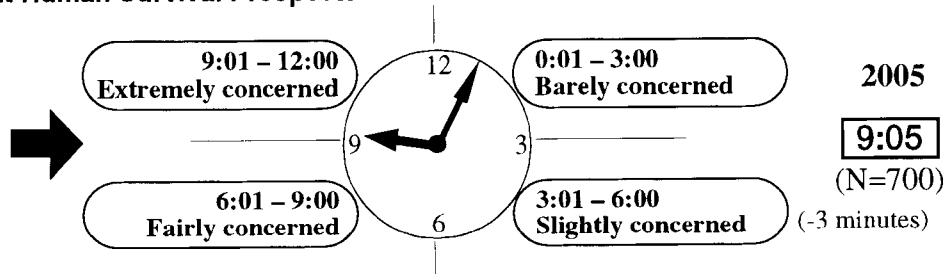
- The majority of respondents from Japan evaluated the Kyoto Protocol taking effect favorably. In contrast, there was only a 12-percentage point difference among overseas respondents who evaluated the implementation of the Kyoto Protocol favorably from those who evaluated it unfavorably. Differences existed among overseas respondents, with more respondents from Oceania, Eastern Europe/former Soviet Union and the United States and Canada evaluating the event unfavorably than those who evaluated it favorably.
- Whereas respondents from Japan, Asia, Eastern Europe/former Soviet Union, and the Middle East favorably evaluated the Kyoto Protocol in itself, respondents from the United States and Canada, Western Europe and Oceania cited the value of the protocol’s secondary effects.

### III. Questionnaire Results

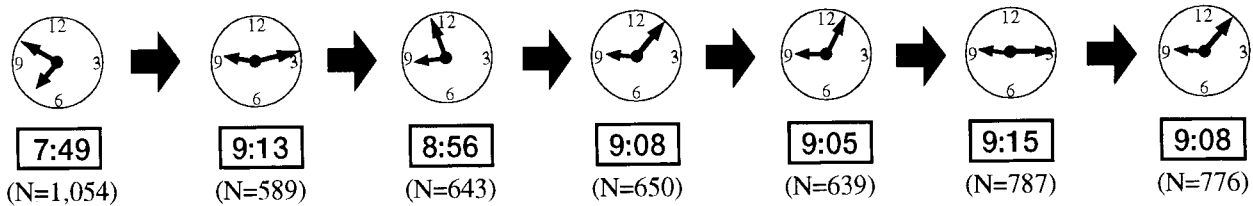
#### ● AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL — ENVIRONMENTAL DOOMSDAY CLOCK (QUESTIONNAIRE 1.)

**Question:** To what extent do you feel that the current deterioration of the global environment has created a crisis that will affect the continuance of the human race? Write a time within the range 0:01 to 12:00 corresponding to the extent of your concern in the boxes below.

#### Concern about Human Survival Prospects



1992 (+84 min.) 1996 (-17 min.) 2000 (+12 min.) 2001 (-3 min.) 2002 (+10 min.) 2003 (-7 min.) 2004



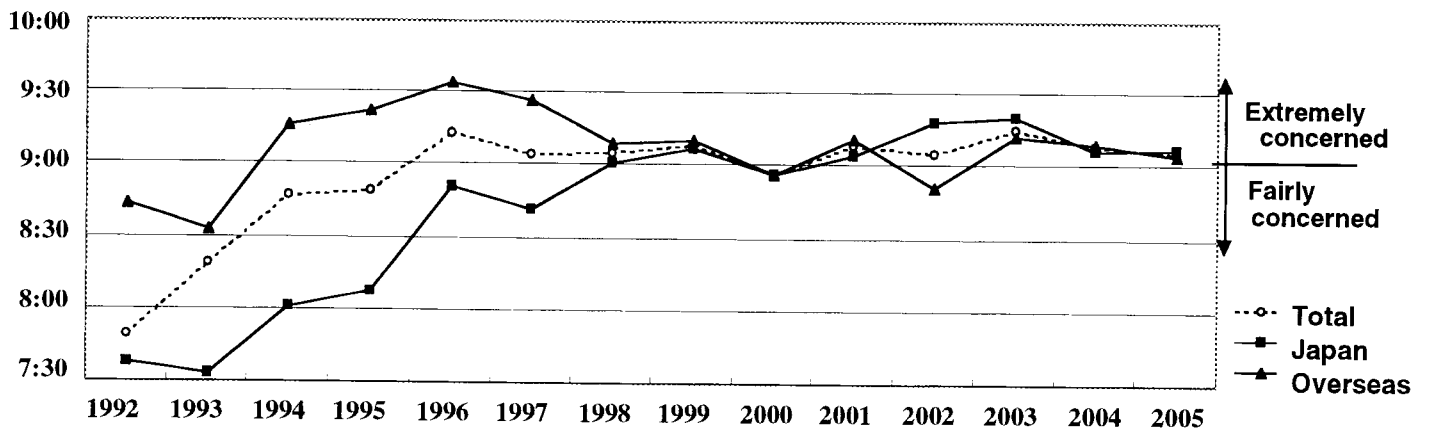
	Number of respondents (2005)	Changes in time from year to year			Changes in average time by region	
		1995 → 2004	2004 → 2005	2005	1995 → 2005	2004 → 2005
Total	700	8:49 → 9:08	→ 9:05		+16	-3
Japan	310	8:08 → 9:06	→ 9:07		+61	+1
United States & Canada	64	8:52 → 9:14	→ 8:54		+2	-20
Western Europe	90	9:02 → 8:56	→ 8:43		-19	-13
Asia	90	9:41 → 9:32	→ 9:41		0	+9
Asian Four	30	* → 9:35	→ 9:49		*	+14
Rest of Asia	60	* → 9:29	→ 9:37		*	+8
Latin America	32	9:23 → 9:12	→ 9:08		-15	-4
Africa	38	9:33 → 9:04	→ 9:03		-30	-1
Oceania	24	9:44 → 9:08	→ 9:18		-26	+10
Eastern Europe & former Soviet Union	42	9:29 → 8:30	→ 8:26		-63	-4
Middle East	10	9:09 → 8:41	→ 9:18		+9	+37
Overseas Total	390	9:22 → 9:09	→ 9:04		-18	-5
Male	585	8:46 → 9:05	→ 9:05		+19	0
Female	91	8:57 → 9:24	→ 9:00		+3	-24
Developed Regions	494	* → 9:09	→ 9:04		*	-5
Developing Regions	130	* → 9:05	→ 9:20		*	+15
Other	76	* → 8:43	→ 8:49		*	+6

- The average time on the environmental doomsday clock for all respondents retreated by three minutes from the previous year to 9:05, which was the average time in 1998 and 2002.
- The average time on the environmental doomsday clock as marked by Japanese respondents was 9:07, comparable to the previous year.
- The average time for overseas respondents was 9:04, a reversal of 5 minutes compared to the previous year.

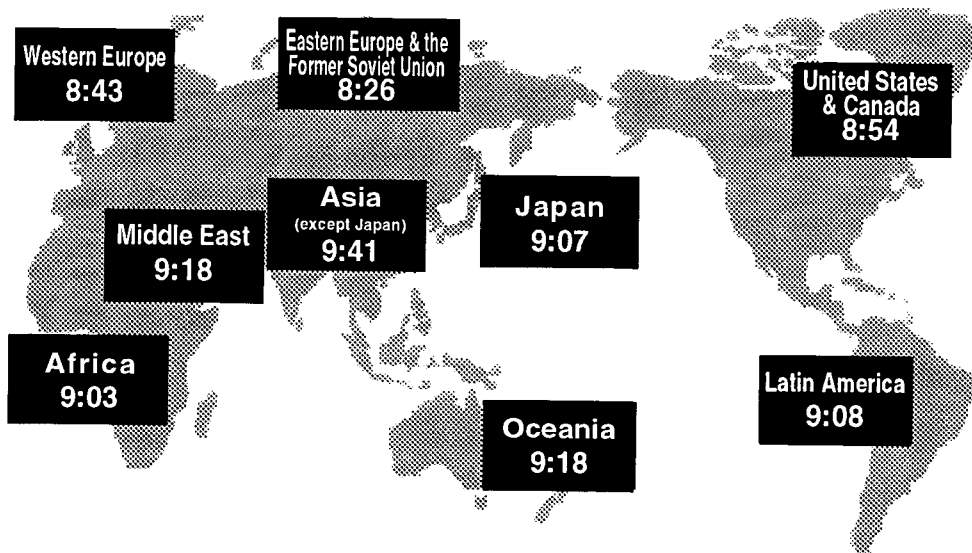
- Respondents from the United States and Canada, who had indicated an 11-minute advancement in the doomsday clock time last year, designated the largest reversal in the time by 20 minutes to 8:54. The sense of crisis also decreased among respondents from Western Europe, whose doomsday clock time receded by 13 minutes to 8:43. In marked contrast, the sense of crisis further progressed among respondents from Asia, where the needle advanced by nine minutes to 9:41.
- The doomsday clock time among male respondents was 9:05, with no change from last year. In contrast, the time among female respondents significantly receded, by 24 minutes, to 9:00. This marked the first time the sense of crisis among women fell below that of men.

**Changes in the Environmental Doomsday Clock**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	7:49	8:19	8:47	8:49	9:13	9:04	9:05	9:08	8:56	9:08	9:05	9:15	9:08	9:05
Japan	7:38	7:33	8:01	8:08	8:51	8:42	9:01	9:07	8:56	9:04	9:18	9:20	9:06	9:07
Overseas	8:44	8:33	9:16	9:22	9:34	9:27	9:09	9:10	8:56	9:11	8:51	9:12	9:09	9:04
Overseas - Japan (min.)	66	60	75	74	43	45	8	3	0	7	-27	-8	3	-3



**Regional Times**





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

	Developed Regions										Developing Regions					Other
	Japan (N=312)	United States & Canada (65)	Western Europe (91)	A4 (30)	RoA (62)	Latin America (32)	Africa (39)	Oceania (26)	Eastern Europe	Middle East & former Soviet Union (42)	Overseas Total (397)	Developed Regions (498)		Developing Regions (133)	Other (78)	Total (709)
General environmental problems	30	18	16	37	31	13	15	31	29	30	23	27	22	29	26	
Global warming	73	55	69	60	40	44	51	54	29	60	52	69	44	41	61	
Air pollution, water contamination, river/ocean pollution	21	32	31	67	52	44	46	27	45	30	41	27	48	37	32	
Water shortage, food problems	42	43	48	33	32	34	41	38	26	50	39	43	35	33	40	
Deforestation, desertification, loss of biodiversity	41	35	36	47	53	69	64	50	33	40	46	40	60	40	44	
Peoples' lifestyles, waste related problems	25	22	24	27	29	41	18	15	50	10	27	25	29	33	26	
Environmental problems and economic/trade related activities	16	15	16	7	8	16	15	23	43	0	17	16	12	31	17	
Population, poverty, status of women	16	51	33	0	37	25	36	35	29	50	34	23	34	33	26	
Other	6	11	10	10	2	0	3	12	7	0	7	8	2	8	6	
No response	2	3	2	0	5	3	0	4	0	10	3	2	3	3	2	

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

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

Please note that the totals for the various regions should add up to 300% since respondents were asked to select three items.

However, some respondents marked less than three items, causing the aggregate total to be less than 300%.

- The main environmental condition of concern among respondents from developed regions including Japan when recording the doomsday clock time was “global warming,” followed by “water shortage/food problems.”
- Similar to last year, respondents from developing regions most frequently cited “deforestation, desertification, loss of biodiversity,” followed by “air pollution, water contamination, river/ocean pollution.”
- A distinct characteristic of the responses this year was the increase in the regions that cited “water shortage/food problems” and “air pollution, water contamination, river/ocean pollution” as conditions of concern.

# 1. REPEAT TOPICS

## 1-1. PROGRESS TOWARD AGENDA 21 (QUESTIONNAIRE 2.)

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

**Comparison of Perceived Progress<sup>1</sup> between 2000 and 2005**

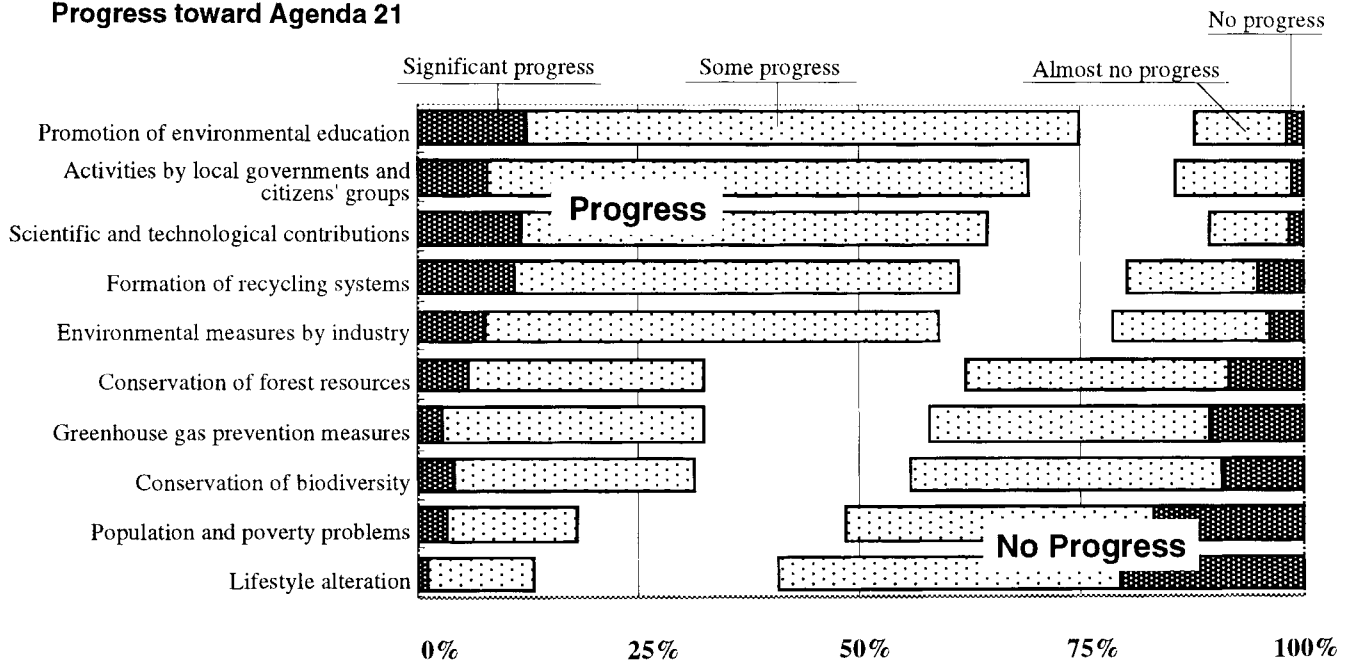
	Japan	United States & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Overseas Total	Total														
	2005	2000	2005	2000	2005	2000	2005	2000	2005	2000	2005	2000	2005	2000	2005	2000	2005	2000	(%)								
	[312]	[311]	[65]	[93]	[91]	[88]	[92]	[81]	[30]	[*]	[62]	[*]	[32]	[26]	[39]	[53]	[26]	[17]	[42]	[19]	[10]	[11]	[397]	[391]	[709]	[702]	
Promotion of environmental education	75	61	71	76	71	76	73	90	57	*	81	*	78	73	72	81	92	94	74	100	100	73	75	82	75	73	
Activities by local governments and citizens' groups	67	66	86	81	75	80	66	74	63	*	68	*	53	77	51	70	85	82	64	84	100	82	71	78	69	73	
Scientific and technological contributions	68	54	86	76	67	78	57	51	50	*	60	*	44	27	38	28	73	76	52	53	50	45	61	60	64	57	
Formation of recycling systems	67	51	71	77	75	70	51	46	63	*	45	*	38	46	23	28	81	71	33	37	60	27	56	57	61	54	
Environmental measures by industry	64	71	62	76	69	83	47	46	40	*	50	*	31	42	46	38	54	76	52	68	80	45	55	62	59	66	
Conservation of forest resources	13	10	35	38	54	38	46	47	20	*	58	*	59	31	49	60	54	65	45	47	40	45	48	44	32	29	
Greenhouse gas prevention measures	28	22	20	25	51	49	28	32	13	*	35	*	31	27	33	26	31	59	48	47	50	18	36	35	32	29	
Conservation of biodiversity	12	11	38	29	42	26	55	49	33	*	66	*	41	38	54	58	54	65	45	58	50	64	47	41	31	28	
Population and poverty problems	7	8	22	18	24	24	33	36	20	*	39	*	22	19	36	36	23	35	17	16	40	18	26	26	18	18	
Lifestyle alteration	11	7	14	17	10	14	27	26	33	*	24	*	0	12	15	15	15	29	12	26	10	18	15	18	13	14	

Note: <sup>1</sup> Progress is calculated as the combined total of the 'significant progress' and 'some progress' categories.

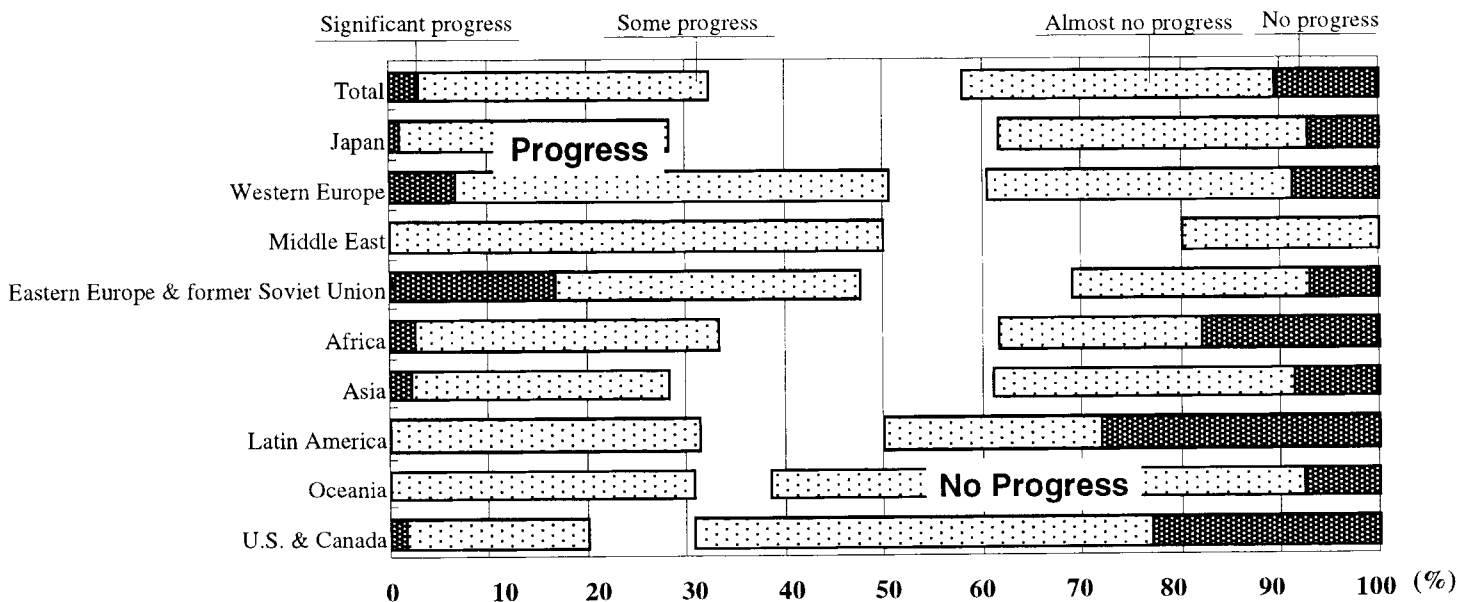
As in previous years, we polled respondents about the progress they felt had been achieved in ten categories taken from the Agenda 21 action plan. The results are listed in the chart in descending order, starting with categories with the greatest number of responses indicating “progress” (combines “significant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

- More than 70% of respondents from all regions including Japan but excluding the Asian Four indicated that progress had been made in the “promotion of environmental education.”
- While still low in terms of absolute percentage, more respondents, from all regions except Eastern Europe and the former Soviet Union, reported progress in the “conservation of biodiversity” compared to 2004.
- More than 60 percent of respondents from all regions, except Latin America and Africa, reported progress in “activities by local governments and citizens’ groups.” However, “lifestyle alteration” continued to receive the lowest percentage of responses indicating progress among all of the categories.

## Progress toward Agenda 21



## Progress toward Greenhouse Gas Prevention Measures



- In the categories of “conservation of forest resources,” “conservation of biodiversity,” “greenhouse gas prevention measures,” “population/poverty problems,” and “lifestyle alteration,” the percentage of respondents who indicated that there had been no progress surpassed those who stated that progress had been made. In particular, with regards to “population/poverty problems,” and “lifestyle alteration,” approximately more than 50% respondents responded that there had been no progress.
- Responses varied greatly by region for “greenhouse gas prevention measures.” More than 60 percent of respondents from the United States and Canada, and Oceania reported no progress. These regions include the United States and Australia, which have not ratified the Kyoto Protocol. In contrast, 50 percent of respondents from Western Europe and the Middle East reported there had been progress, exceeding those who indicated no progress.

## Comparison of Differences between 2000 and 2005

	Japan	United States & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Overseas Total	Total	(%)
Promotion of environmental education	+14	-6	-5	-17	*	*	+5	-9	-2	-26	+27	-7	+2	
Activities by local governments and citizens' groups	+1	+6	-5	-8	*	*	-24	-19	+2	-20	+18	-7	-4	
Scientific and technological contributions	+13	+10	-11	+6	*	*	+17	+10	-3	0	+5	+2	+7	
Formation of recycling systems	+16	-7	+4	+5	*	*	-9	-5	+10	-4	+33	-1	+7	
Environmental measures by industry	-7	-15	-14	+1	*	*	-11	+8	-23	-16	+35	-7	-7	
Conservation of forest resources	+3	-2	+16	-1	*	*	+29	-12	-11	-2	-5	+4	+3	
Greenhouse gas prevention measures	+7	-5	+2	-4	*	*	+4	+7	-28	0	+32	0	+3	
Conservation of biodiversity	+1	+9	+16	+6	*	*	+2	-5	-11	-13	-14	+6	+4	
Population and poverty problems	-1	+3	0	-3	*	*	+3	0	-12	+1	+22	0	0	
Lifestyle alteration	+4	-3	-4	+1	*	*	-12	0	-14	-14	-8	-4	0	

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

When comparing the responses this year to those from five years ago in 2000,

- Overall, there has been no change in the top five categories in which a high percentage of respondents reported progress, which included “promotion of environmental education,” “activities by local governments and citizens’ groups,” “scientific/technological contributions,” “formation of recycling systems,” and “environmental measures by industry.” The bottom five categories have also remained unchanged, and include “conservation of forest resources,” “conservation of biodiversity,” “greenhouse gas prevention measures,” “population/poverty problems,” and “lifestyle alteration.”
- There has been a 16-point increase in the percentage of responses from Japan indicating progress in the “formation of recycling systems.” In contrast, there has been a 1-point decrease among overseas responses. However, great differences exist regionally among overseas responses.
- There has been a 7-point decrease in the responses indicating progress for “environmental measures by industry.” The decrease is particularly noticeable among responses from Japan, the United States and Canada, and Western Europe.

## 2. MAIN FOCUS OF THE CURRENT YEAR'S QUESTIONNAIRE

### 2-1. ENVIRONMENTAL PROBLEMS AND THEIR PRIORITY (QUESTIONNAIRE 3.)

**Question:** Environmental problems have become widespread, and today they are experienced at global and local levels. Please select three from the following list of environmental problems that you feel need *to be prioritized and undertaken on a global scale by the world community*. In the next section, please assign numbers to the three items that you have selected in order of highest to lowest priority. Further, for each of the three problems, please mark one item from the list of possible solutions.

Table 1. Environmental Problems (Please select three.)	
① Climate change including global warming	⑨ Population problems
② Acid rain and air pollution	⑩ Poverty
③ Destruction of the ozone layer	⑪ Food security
④ Deforestation	⑫ Urbanization and transportation problems
⑤ Desertification and the deterioration of soil quality	⑬ Waste management and recycling
⑥ Issues related to ocean and fresh water supply	⑭ Diseases caused by environmental changes
⑦ Preservation and restoration of ecosystems and biodiversity	⑮ Other:
⑧ Energy problems	

**Table 2. Possible Solutions**

1. This problem, which was caused by human activity, should be resolved through lifestyle changes and increased education.
2. This problem should be resolved through political and economic measures rather than scientific or technological solutions.
3. Scientific and technological solutions are paramount to resolving this problem, and resources should be prioritized for their development.
4. Other: \_\_\_\_\_

### Environmental Problems Prioritized and Undertaken on a Global Scale by the World Community

Area	1st priority	%	2nd priority	%	3rd priority	%
Total	Global warming	<b>66</b>	Energy	<b>31</b>	Poverty	<b>26</b>
Overseas Total	Global warming	<b>53</b>	Poverty	<b>32</b>	Ecosystem	<b>30</b>
Japan	Global warming	<b>83</b>	Energy	<b>40</b>	Population	<b>28</b>

Lowest priority	
Urbanization	Diseases
Food security	Diseases
Urbanization	Diseases

Area	1st priority	%	2nd priority	%	3rd priority	%
Japan	Global warming	<b>83</b>	Energy	<b>40</b>	Population	<b>28</b>
U.S. & Canada	Global warming	<b>62</b>	Population	<b>37</b>	Ocean & fresh water Energy	<b>31</b>
Western Europe	Global warming	<b>69</b>	Ocean & fresh water	<b>37</b>	Poverty	<b>34</b>
Rest of Asia	Global warming	<b>42</b>	Ecosystem	<b>34</b>	Ocean & fresh water	<b>29</b>
Latin America	Global warming	<b>50</b>	Poverty	<b>44</b>	Desertification	<b>34</b>
Africa	Global warming	<b>51</b>	Poverty	<b>44</b>	Waste management	<b>26</b>
Oceania	Global warming	<b>62</b>	Ecosystem	<b>42</b>	Ocean & fresh water	<b>35</b>
Middle East	Global warming	<b>80</b>	Population	<b>40</b>	Poverty	<b>40</b>
Asian Four	Energy	<b>53</b>	Acid rain & air pollution	<b>40</b>	Ozone layer	<b>40</b>
Eastern Europe & former Soviet Union	Poverty	<b>43</b>	Global warming	<b>41</b>	Energy Ecosystem	<b>29</b>

Lowest priority	
Urbanization	Diseases
Ozone layer	Desertification
Ozone layer	Diseases
Food security	Diseases
Acid rain & air pollution	Energy
Urbanization	Diseases
Acid rain & air pollution	Diseases
Urbanization	Diseases
Ecosystem	Diseases
Food security	Population
Food security	Desertification

Area	1st priority	%	2nd priority	%	3rd priority	%
Developed Regions	Global warming	<b>73</b>	Energy	<b>38</b>	Population	<b>26</b>
Developing Regions	Global warming	<b>47</b>	Poverty	<b>34</b>	Ecosystem	<b>30</b>

Lowest priority	
Urbanization	Diseases
Urbanization	Diseases

Gender	1st priority	%	2nd priority	%	3rd priority	%
Male	Global warming	<b>69</b>	Energy	<b>33</b>	Population	<b>26</b>
Female	Global warming	<b>48</b>	Poverty	<b>26</b>	Ecosystem	<b>26</b>

Lowest priority	
Urbanization	Diseases
Urbanization	Diseases

The priority of environmental problems was determined by calculating the percentage each category was assigned for first, second, or third priority, totaling them, and placing them in descending order.

- Respondents cited the following conditions as global environmental problems requiring prioritization, in order of priority: “climate change including global warming,” “energy problems,” and “poverty.”
- Respondents from most regions, excluding the Asian Four, cited “climate change including global warming” as the global environmental condition of highest priority. It was listed as the second priority among respondents from Eastern Europe and the former Soviet Union.
- Respondents from developed regions cited “climate change including global warming” as the highest priority, followed by “energy problems” and “population problems.” In contrast, respondents from developing regions gave “climate change including global warming” the highest priority, followed by “poverty” and “preservation and restoration of ecosystems and biodiversity.”
- Differences were also seen between male and female respondents. After “climate change including global warming,” male respondents chose “energy problems” and “population problems” as conditions requiring prioritization, whereas female respondents chose “poverty” and “preservation and restoration of ecosystems and biodiversity.”
- Respondents in environmentally developed regions of the United States and Canada, and Western Europe gave a low priority to “destruction of the ozone layer,” indicating the problem had been resolved.

## Possible Solutions on a Global Scale

**Table 2**  
 Resolved through lifestyle changes and increased education  
 Resolved through political and economic measures  
 Scientific and technological solutions are paramount  
 Other  
 Unknown

							(%)
Total	[N=2127]	30	39	21	2	7	
Population problems	[173]	50	38	6	3	3	
Waste management and recycling	[82]	50	10	30	2	7	
Urbanization and transportation problems	[48]	35	27	23	4	10	
Poverty	[182]	14	74	5	0	6	
Food security	[93]	18	62	16	3	0	
Deforestation	[134]	34	50	11	1	4	
Climate change including global warming	[468]	36	40	19	2	3	
Desertification and the deterioration of soil quality	[94]	30	40	20	2	7	
Issues related to ocean and fresh water supply	[146]	23	40	27	3	6	
Preservation and restoration of ecosystems and biodiversity	[178]	37	38	19	2	5	
Acid rain and air pollution	[79]	30	33	29	1	6	
Diseases caused by environmental changes	[34]	12	12	62	6	9	
Destruction of the ozone layer	[105]	28	27	41	1	4	
Energy problems	[222]	20	33	41	2	3	

Note: Figures enclosed by a single circle represent the answer with the highest number of replies.

- Overall, a high percentage of respondents stated problems should be “resolved through political and economic measures”. However, those percentages were not particularly notable with the exception of “poverty” and “food security.” Indeed, few respondents stated it was possible to resolve any problem through any one solution; rather, the responses revealed the need for multiple measures.
- The problems for which “lifestyle changes and education” was cited as the solution comparatively frequently were “population problems” and “waste management and recycling.”
- “Poverty” and “food security” received the highest percentage of responses indicating they “should be resolved through political and economic measures.”
- Respondents indicated with relative frequency “scientific and technological solutions are paramount” to solve “diseases caused by environmental changes,” “energy problems,” and the “destruction of the ozone layer.”
- To solve “climate change including global warming,” which was cited as the environmental problem deserving the highest priority, 40 percent of respondents indicated this problem “should be resolved through political and economic measures.” A comparable number of respondents, or 36 percent, indicated this problem “should be resolved through lifestyle changes and increased education,” whereas 19 percent cited “scientific and technological solutions.”
- To solve “energy problems,” 41 percent of respondents chose “scientific and technological solutions are paramount to solving this problem,” whereas 33 percent stated this problem “should be resolved through political and economic measures,” and 20% stated the problem “should be resolved through lifestyle changes and increased education.”

**Question:** Please select three items from the list (Table 1: page 10) of environmental problems that *are critical in the region or local area where you reside*. After selecting the three items, please assign numbers to them in order of highest to lowest priority. Your responses may be the same as those to the previous question. Further, for each of these three selections, please mark one item from the list of possible solutions.

**Environmental Problems Critical in the Region or Local Area Where You Reside**

Area	1st priority	%	2nd priority	%	3rd priority	%
Japan	Waste management	78	Urbanization	49	Energy	35
Asian Four	Waste management	80	Urbanization	70	Acid rain & air pollution	40
Eastern Europe & former Soviet Union	Waste management	62	Urbanization	43	Ecosystem	36
Middle East	Waste management	60	Urbanization	40	Poverty Ocean & fresh water Energy	30
Western Europe	Urbanization	63	Waste management	42	Ecosystem	41
U.S. & Canada	Urbanization	57	Global warming	34	Energy	31
Africa	Poverty	51	Waste management	31	Desertification	28
Rest of Asia	Poverty	32	Waste management	31	Population	29
Latin America	Deforestation	50	Poverty	44	Ecosystem	31
Oceania	Global warming	50	Ecosystem	46	Ocean & fresh water	31

Lowest priority	
Ozone layer	Poverty
Ozone layer	Food security
Ozone layer	Food security
Ozone layer	Diseases
Ozone layer	Population Diseases
Ozone layer	Desertification
Ozone layer	Acid rain & air pollution
Ozone layer	Diseases
Ozone layer	Diseases
Food security	Diseases

Area	1st priority	%	2nd priority	%	3rd priority	%
Developed Regions	Waste management	65	Urbanization	54	Energy	34
Developing Regions	Poverty	41	Deforestation	32	Waste management	30

Lowest priority	
Ozone layer	Diseases Population
Ozone layer	Diseases

As in question on page 11, the priority of environmental problems was determined by calculating the percentage each category was assigned for first, second, or third priority, totaling them, and placing them in descending order.

- There was a marked difference between the responses from developed regions and those from developing regions regarding the local environmental problem that should be prioritized.
- “Waste management and recycling,” “urbanization and transportation problems,” and “energy problems” were cited as conditions requiring prioritization by respondents excluding those from developing regions, indicating that various problems arising as urbanization progresses are becoming local environmental problems.
- Respondents from developing regions most frequently cited “poverty” and “deforestation,” revealing a marked difference from the responses from developed regions. Nonetheless, these responses were followed by “waste management and recycling,” indicating that environmental problems that accompany urbanization are already taking place in developing regions as well.

## Possible Solutions in the Region or Local Area Where You Reside

Resolved through lifestyle changes  
and increased education  
Resolved through political and  
economic measures  
Scientific and technological  
solutions are paramount  
Other  
Unknown

			Resolved through lifestyle changes and increased education	Resolved through political and economic measures	Scientific and technological solutions are paramount	Other	Unknown	(%)
Japan	Waste management and recycling	[N=242]	63	29	5	2	2	
	Urbanization and transportation problems	[153]	21	70	6	1	2	
	Energy problems	[109]	37	34	26	2	2	
Asian Four	Waste management and recycling	[24]	83	8	0	0	8	
	Urbanization and transportation problems	[21]	38	43	10	0	10	
	Acid rain and air pollution	[12]	50	33	8	0	8	
Eastern Europe & former Soviet	Waste management and recycling	[26]	27	35	27	4	8	
	Urbanization and transportation problems	[18]	11	44	33	0	11	
	Preservation and restoration of ecosystems and biodiversity	[15]	27	47	20	0	7	
Middle East	Waste management and recycling	[6]	50	0	50	0	0	
	Urbanization and transportation problems	[4]	25	75	0	0	0	
	Desertification and the deterioration of soil quality	[3]	33	67	0	0	0	
	Preservation and restoration of ecosystems and biodiversity	[3]	33	0	67	0	0	
	Poverty	[3]	0	67	33	0	0	
Western Europe	Urbanization and transportation problems	[57]	26	53	12	4	5	
	Waste management and recycling	[38]	37	32	16	3	13	
	Preservation and restoration of ecosystems and biodiversity	[37]	16	65	14	5	0	
U.S. & Canada	Urbanization and transportation problems	[37]	27	57	11	0	5	
	Climate change including global warming	[22]	27	36	23	9	5	
	Energy problems	[22]	27	41	23	0	9	
Africa	Poverty	[20]	15	65	15	0	5	
	Waste management and recycling	[12]	50	8	17	0	25	
	Desertification and the deterioration of soil quality	[11]	27	27	18	9	18	
Rest of Asia	Poverty	[20]	15	65	10	0	10	
	Waste management and recycling	[19]	58	21	16	0	5	
	Population problems	[18]	50	44	0	0	6	
Latin America	Deforestation	[16]	38	56	6	0	0	
	Poverty	[14]	7	86	7	0	0	
	Preservation and restoration of ecosystems and biodiversity	[10]	50	40	10	0	0	
Oceania	Climate change including global warming	[13]	23	54	15	0	8	
	Preservation and restoration of ecosystems and biodiversity	[12]	17	58	17	0	8	
	Issues related to ocean and fresh water supply	[8]	13	50	38	0	0	
Developed Regions	Waste management and recycling	[N=324]	61	28	7	2	4	
	Urbanization and transportation problems	[268]	24	62	8	2	4	
	Energy problems	[169]	32	34	28	1	5	
Developing Regions	Poverty	[56]	13	68	11	0	5	
	Deforestation	[49]	39	29	10	2	6	
	Waste management and recycling	[45]	49	16	16	0	9	

Note: Figures enclosed by a single circle represent the answer with the highest number of replies.

The chart above outlines the solutions respondents stated to the three environmental problems of highest priority, organized by region.

- In regions that cited “waste management and recycling” as a local environmental problem deserving prioritization, a high percentage of respondents stated this problem “should be resolved through lifestyle changes and increased education.” On the other hand, a large number of respondents in both developed and developing regions chose this problem “should be resolved through political and economic measures” as a way to solve “urbanization and transportation problems.”
- More than 65 percent of respondents in Africa, Latin America, and Rest of Asia stated “poverty” should be “resolved through political and economic measures.”



## 2-2. FOOD PROBLEMS (QUESTIONNAIRE 4.)

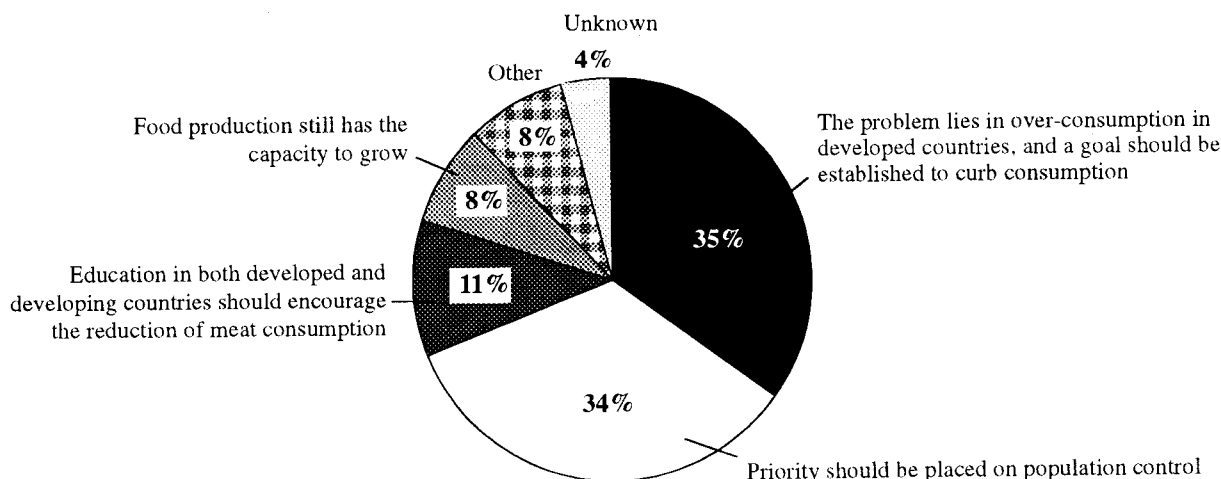
**Question:** In the approximately 50 years of the latter half of the 20<sup>th</sup> century, the amount of arable land only increased by 14 percent. In contrast, agricultural investment and technological development led to a 2.6 times growth in land productivity, in turn increasing food production by three times. These increases allowed for food production to meet the rising demand for food caused by population growth. However, the spread of desertification and the decrease in the levels of groundwater have caused the growth of food production to stagnate. Meeting continued population growth and accompanying rises in demand for food will require political strategies and technological developments. Please select one from each category that indicate a statement close to your opinion.

### Political Strategies To Solve Food Problems

	Developed Regions				Developing Regions				Other						
	Japan (N=312)				United States & Canada (65)				Western Europe (91)						
	Asian Four (30)				RoA (62)				Latin America (32)						
	Africa (39)				Oceania (26)				Eastern Europe & former Soviet Union (42)						
	Middle East (10)				Overseas Total (397)				Developed Regions (498)						
	Developing Regions (133)				Other (78)				Total (709)						
Priority should be placed on population control	34	45	30	20	40	19	38	46	29	40	34	34	35	36	34
Education in both developed and developing countries should encourage the reduction of meat consumption	13	8	10	27	6	6	3	4	14	0	9	13	5	9	11
The problem lies in over-consumption in developed countries, and a goal should be established to curb consumption	39	25	34	37	27	28	44	31	26	30	31	36	32	28	35
Food production still has the capacity to grow	3	11	14	7	13	25	5	4	19	0	12	6	14	12	8
Other	8	9	8	7	3	19	10	8	7	20	9	8	9	9	8
Unknown	3	3	4	3	10	3	0	8	5	10	5	3	5	6	4

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

### Political Strategies To Solve Food Problems (Total)



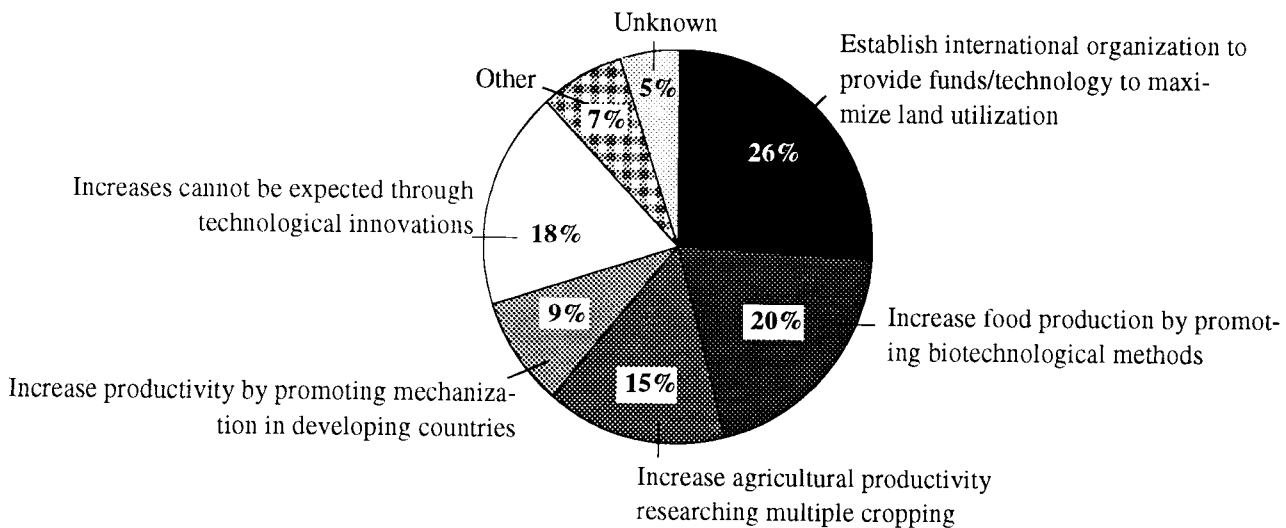
- Only 8 percent of respondents chose “food production still has the capacity to grow,” indicating that the majority of respondents saw a need for some type of political strategy to solve the problem.
- A comparable percentage of respondents chose “the problem lies in over-consumption in developed countries, and a goal should be established to curb consumption,” and “priority should be placed on population control,” at 35 percent and 34 percent respectively.
- 27 percent of respondents in the Asian Four chose “education in both developed and developing countries should encourage the reduction of meat consumption,” higher than in other regions.

## Technological Developments To Solve Food Problems

	Developed Regions				Developing Regions				Other				Total (%)		
	Japan (N=312)	United States & Canada (65)	Western Europe (91)	Asian Four (30)	RoA (62)	Latin America (32)	Africa (39)	Oceania (26)	Eastern Europe (26)	Middle East & former Soviet Union (42)	Overseas Total (397)	Developed Regions (498)	Developing Regions (133)	Other (78)	Total (709)
Establish international organization to provide funds/technology to maximize land utilization	29	22	13	37	29	28	15	8	40	30	23	26	25	28	26
Increase agricultural productivity researching multiple cropping	8	6	19	10	18	31	33	31	26	30	20	10	26	28	15
Increase productivity by promoting mechanization in developing countries	11	5	9	10	3	0	21	0	19	0	8	10	8	10	9
Increase food production by promoting biotechnological methods	22	12	22	37	18	22	23	15	5	10	18	22	20	9	20
Increases cannot be expected through technological innovations	20	35	20	3	13	9	3	27	0	20	16	21	9	12	18
Other	6	15	12	3	2	3	3	12	5	0	8	8	2	6	7
Unknown	3	5	5	0	18	6	3	8	5	10	7	4	11	6	5

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

## Technological Developments To Solve Food Problems (Total)

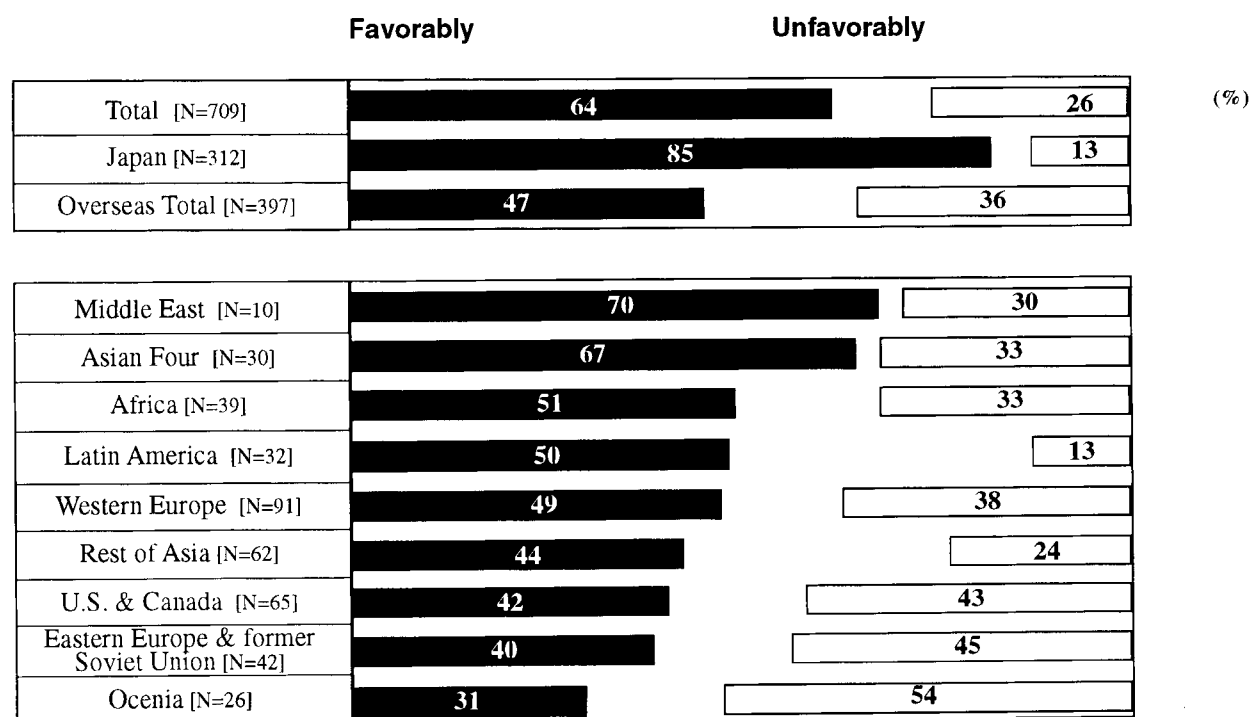


- While opinions varied, a comparably high number of respondents from all regions chose “an international organization should be established to maximize the utilization of land, and developed countries can provide funds and technology through this organization.” This choice received 26 percent of the responses overall, the highest among the options.
- A comparatively high percentage of respondents from developed regions stated, “technological innovations cannot be relied upon for further increases in agricultural productivity.” This figure was particularly high among respondents from United States and Canada, at 35 percent. In contrast, the percentage was lowest in Africa, indicating expectations for the contributions technological innovation can make.
- 20 percent of respondents chose “biotechnology should be aggressively pursued to increase food production,” second only to “an international organization should be established to maximize the utilization of land, and developed countries can provide funds and technology through this organization.”
- More than 30 percent of respondents from developing regions, particularly those from Africa and Latin America, chose “more research should be conducted on multiple cropping to increase agricultural productivity.”

## 2-3. THE IMPLEMENTATION OF THE KYOTO PROTOCOL AND THE SUPPRESSION OF GREENHOUSE GAS EMISSIONS (QUESTIONNAIRE 5.)

**Question:** Enforcement of the Kyoto Protocol (Became effective February 16, 2005)

The Kyoto Protocol went into effect on February 16<sup>th</sup> this year. How do you evaluate the treaty now as being effective? Please select one of the following choices.



- An overwhelming majority of Japanese respondents indicated they evaluated the implementation of the treaty “favorably.”
- There was a small discrepancy, of 12 percentage points, among overseas respondents who evaluated the implementation of the treaty “favorably” from those who evaluated it “unfavorably.”
- Regional differences existed in the responses, with more respondents from Oceania, Eastern Europe and the former Soviet Union, and the United States and Canada, evaluating the implementation “unfavorably” than those who evaluated it “favorably.”

**Question:** Please select one from the following list of statements that reflects why you favorably evaluate the Kyoto Protocol that came into effect. Please select one from the following statements that reflects why you evaluate the passage of the Kyoto Protocol unfavorably.

	Developed Regions				Developing Regions				Other						
	Japan (N=312)	United States & Canada (65)	Western Europe (91)	Asian Four (30)	RoA (62)	Latin America (32)	Africa (39)	Oceania (26)	Eastern Europe & former Soviet Union (42)	Middle East (10)	Overseas Total (397)	Developed Regions (498)	Developing Regions (133)	Other (78)	Total (709)
<b>Favorably</b>	85	42	49	67	44	50	51	31	40	70	47	72	47	41	64
<b>Reason</b>	[N=266]	[27]	[45]	[20]	[27]	[16]	[20]	[8]	[17]	[7]	[187]	[358]	[63]	[32]	[453]
A historical international strategy is being implemented and results from developed countries can be expected.	58	26	38	50	70	50	40	25	59	86	47	53	56	56	53
International plans to counter global warming will continue after 2012.	39	63	56	45	26	44	60	75	41	14	49	43	41	44	43
Other	3	11	7	0	0	0	0	0	0	0	3	4	0	0	3
Unknown	0	0	0	5	4	6	0	0	0	0	2	0	3	0	1
<b>Unfavorably</b>	13	43	38	33	24	13	33	54	45	30	36	23	24	46	26
<b>Reason</b>	[N=41]	[28]	[35]	[10]	[15]	[4]	[13]	[14]	[19]	[3]	[141]	[114]	[32]	[36]	[182]
The non-participation by the U.S. raises questions about the effectiveness of the protocol.	7	11	20	20	13	0	23	7	11	33	15	13	16	11	13
The effectiveness of the protocol is hampered by the non-participation of developing countries like China and India	73	43	57	70	60	50	46	57	63	67	55	61	53	61	59
Since the plan lacks mechanisms for corroboration, it cannot be evaluated favorably.	17	32	17	10	27	50	8	21	16	0	21	20	22	17	20
Other	2	11	6	0	0	0	8	7	11	0	6	5	3	8	6
Unknown	0	4	0	0	0	0	15	7	0	0	3	1	6	3	2
<b>Unknown</b>	2	15	12	0	32	38	15	15	14	0	17	5	29	13	10

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

- A moderately high percentage of respondents from Japan who favorably evaluated the implementation of the protocol chose as their reason “an international strategy to curb global warming has taken effect for the first time in human history, and significant efforts by developed countries can be expected as a result.” Overseas respondents chose “there is a greater likelihood that an international plan to counter global warming will continue after the protocol expires in 2012.”
- Like respondents from Japan, those from Asia, Eastern Europe and the former Soviet Union, and the Middle East also chose “an international strategy to curb global warming has taken effect for the first time in human history, and significant efforts by developed countries can be expected as a result,” favorably evaluating the protocol in itself. On the other hand, more respondents from the United States and Canada, Western Europe and Oceania chose “there is a greater likelihood that an international plan to counter global warming will continue after the protocol expires in 2012,” giving recognition to the secondary effects of the protocol. The two choices reflect a significant difference in the reasons behind the favorable appraisal of the treaty’s implementation.
- Respondents from all regions who evaluated the implementation unfavorably cited “the effectiveness of the protocol is hampered by the non-participation of developing countries like China and India” as the reason.

**Question: Programs beyond the Kyoto Protocol (post-2013)**

Many differences between countries emerged in the development of the Kyoto Protocol. In particular, only developed countries participated in the measures leaving developing countries behind, and among developed countries, the United States withdrew from the treaty. Please select one from the following list of statements that best reflects your opinion about what kind of international framework should be created to reduce greenhouse gas emissions after 2013 when the Kyoto Protocol expires.

	Developed Regions				Developing Regions					Other					
	Japan (N=312)	United States & Canada (65)	Western Europe (91)	Asian Four (30)	RoA (62)	Latin America (32)	Africa (39)	Oceania (26)	Eastern Europe & former Soviet Union (42)	Middle East (10)	Overseas Total (397)	Developed Regions (498)	Developing Regions (133)	Other (78)	Total (709)
There should be an extension of the fundamental measures established in the Kyoto Protocol.	43	29	41	43	23	34	23	23	40	50	33	41	26	36	37
A substantial revision of the Kyoto Protocol is needed to address its numerous problems.	37	38	33	30	29	38	44	31	24	20	33	36	35	26	35
A new framework that is completely separate from the Kyoto Protocol should be developed.	12	23	14	17	6	6	10	27	12	0	14	14	8	15	13
No new framework should be established until a technological solution is developed.	3	3	9	10	29	13	18	4	14	10	13	4	22	10	8
Other	4	3	3	0	0	6	3	4	0	0	2	3	2	1	3
Unknown	2	3	0	0	13	3	3	12	10	20	5	2	8	12	4

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

- Among overseas respondents, “there should be an extension of the fundamental measures established in the Kyoto Protocol” and “a substantial revision of the Kyoto Protocol is needed” each received more than 33 percent of the responses. Less than a third of the respondents agreed with establishing a new framework that is separate from the Kyoto Protocol.
- Among respondents from developing regions, 22 percent stated “there should not be a new international framework to reduce greenhouse gas emissions until a technological solution is developed.” This choice garnered nearly as much support as “there should be an extension of the fundamental measures established in the Kyoto Protocol,” revealing a significant difference from developed regions.

**Question:** One of the challenges in reducing greenhouse gas emissions is to establish a target emission level for each country. Please select two items from the following list of statements that reflect your opinion.

	Developed Regions					Developing Regions					Other				
	Japan (N=293)	United States & Canada (61)	Western Europe (80)	Asian Four (29)	RoA (44)	Latin America (26)	Africa (31)	Oceania (24)	Eastern Europe (24)	Middle East & former Soviet Union (36)	Overseas Total (340)	Developed Regions (463)	Developing Regions (101)	Other (69)	Total (633)
Developed countries (Annex I countries) should further reduce their greenhouse gas emissions.	56	48	64	55	52	50	52	58	56	78	56	56	51	59	56
Developed countries should maintain the same level of greenhouse gas emissions established by the Kyoto Protocol.	7	2	0	14	11	8	3	4	11	11	6	5	8	9	6
Developing countries (Non-annex I countries) should be required to reduce or maintain their emissions.	51	34	35	52	23	19	26	25	31	33	31	46	23	29	41
Regulations should be established that would also be applied to developing countries.	15	5	6	17	9	19	13	4	8	0	9	12	13	6	12
There should be no emissions regulations for developing countries.	0	0	3	0	2	0	6	0	0	0	1	0	3	0	1
Regulations should be established that apply to all countries, regardless of whether it is a developed or developing country.	43	49	39	21	27	46	42	25	47	33	38	42	37	38	40
Other	4	5	6	3	0	0	3	4	0	11	4	5	1	3	4
Unknown	3	7	5	0	16	4	3	13	8	11	7	3	9	10	5

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

- Overall, the highest number of respondents stated “developed countries should further reduce their greenhouse gas emissions,” at 56 percent, followed by “developing countries with particularly high emission levels should be required to reduce or maintain their levels,” at 41 percent, and “regulations should be established to set a ceiling in emissions levels that apply to all countries, regardless of whether it is a developed or developing country,” at 40 percent.
- A relatively high percentage of respondents from developing regions stated “developed countries should further reduce their greenhouse gas emissions,” whereas respondents in developed regions indicated greenhouse gas emissions should be reduced or maintained in both developed and developing regions.

## IV. Comments from Respondents

This year's questionnaire elicited a total of 222 free comments, including 117 from 50 countries outside Japan and 105 from Japan. The respondents kindly commented on the state of environmental problems in various regions worldwide and thought of policies and ideas for alleviating environmental problems. The themes touched upon in the comments varied widely. We attempted to group them according to topic, but this was difficult because some addressed more than one topic. Some comments also contained suggestions and requests for future survey questions, which we will gratefully take into consideration in designing the next questionnaire. Owing to space considerations, we are only able to list a portion of the comments, including 28 representing 22 countries and 24 from Japan. The name (excluding title), organization, country and processing number of the respondent is included with the comment. Comments from respondents requesting anonymity are marked with an M or F to denote male or female.

### Comments from overseas

The Kyoto protocol is making the challenge of Rio become real: a mechanism that made possible that developed countries would help non developed countries fund their local Agendas 21. In Chile, it is beginning to work.

*Ms. Ximena Abogabir, President, Casa de la Paz, CHILE 004*

Non-participation of the US in several (inter alia environmental) treaties and their skepticism vis-a-vis international cooperation, including the UN, belong to the biggest political problems of today.

*Mr. Veit Koester, Professor, DENMARK 047*

While there are significant success stories visible, primarily at the local or corporate levels, there remains great reluctance at the national levels to take significant steps in a competitive environment where competitors are outside the program. Where the marketplace rewards environmentally ethical behavior, most are prepared to change behaviors. The challenge is to provide the carrot; - remember we are trying to change their behavior, not their religion. That is why education, and the messages provided by the marketplace are so critical. Some sectors have already created a situation where there is a green premium (e.g., tourism, organic foods) and this is a good first step. How can we expand this to other sectors and to nations where these messages are not clear? In regions where there are few options, can the developed world better help in the provision of environmentally sustainable options? As well, how can we be clearer on the key indicators which can serve as performance measures relative to global and regional sustainability?

*Dr. Ted Manning, President, Tourisk Inc., CANADA 057*

A key reason why most environmental strategies do not work is because most of the world's population do not understand how connected everything is, so base nearly all their life decisions on local considerations. Unless these changes happen on an "I can do that ..." basis (because it is deemed beneficial to the person or their family and is good practice even if simple) then we have little hope. We need a radical rethink about how individuals, within their various constraints (rural, rich, poor, urban, cultural, political, religious, etc), can create a globe-saving-daily-life best practice.

*Mr. Charles Stirton, Self-employed, UK 062*

Most politicians have not been addressing severe environmental issues because they prefer to provide the public with "good news" stories. Human beings have a built-in bias for happy endings and are inclined to believe the more positive interpretations of environmental decline; and, as a result, matters have become much worse. Unless we humans have the courage to accept the unvarnished truth of the extreme perils of our current environmental situation, solutions will elude us and chaos, collapse, and die-off are inevitable.

*Mr. J. Anthony Cassils, CANADA 079*

The population pressure by the increasing population of many countries (e.g., in Africa and in the Middle East, but also in other countries) is a fundamental problem that causes most of the existing global environmental problems. By taking wise and humane measures to stabilize the size of the population, at the national level, many environmental problems may be solved, and for sure will be easier to tackle. However, a huge problem that I see with any attempt to stabilize the population of countries with increasing populations, is that it may require a drastically new approach and commitment to this issue by the Christians, Muslim and Jewish religions (and perhaps other religions too). Success to stabilize the national population could also address the opposite problem that has recently started to arise in some countries, which also could have serious environmental implications, namely, the decline of the national population. The solution in both cases is a change in life style. It goes without saying that such a change is extremely difficult to achieve, and in any case very slow.

*Dr. Michael Graber, Retiree, United Nations, ISRAEL 080*

Need greater attention to small scale solutions that the poor can implement.

*Mr. Stephen Karekezi, AFREPREN, KENYA 107*

However profitable it may be, projects that affect the ecological balance should be discouraged. Cottage industries that are eco-friendly and natural resources based and ensure local indigenous people economic development should be encouraged.

*Dr. S.N. Patro, Director, House of Nature, Environment and Society Trust (HONEST), INDIA 132*

We cannot reach both ecological sustainability and eradication of global poverty through free economic competition without political regulations.

*M, Independent Author, NORWAY 138*

Without political consensus between major countries it is not possible to solve the most serious environmental threats. Only through that consensus will it be possible to curb the pattern of today's consumption in developed countries.

*Mr. Joao M. A. Soares, Adviser of the Board, Forestry and Environment, Portucel Soporcel Group, PORTUGAL 156*

Wisdom is the highest outcome of applied knowledge, hands on experience and open mindedness. When multinational organizations that deal in leading-edge environmental technology begin working in true partnerships with grassroots organizations in both developed and developing countries, we can look forward to a new paradigm of environmental wisdom. To reach this point, all parties must learn to put aside prejudice, ownership and personal gain in order to truly hear each other; to be free enough dip their minds and hands into new pools of shared knowledge; to be dedicated only to the search for benign and compassionate solutions to global crises.

*Ms. Carole Douglas, AUSTRALIA 160*

This survey does not consider the link between new-colonialism and conservation. If we don't ground conservation into the poor people, it will remain as a practice of elite. There is no way our world is going to change if the "developed" countries don't change their mind. And I use the quotation marks because the main product they have developed is misery in the world.

*Mr. David Ascanio, VENEZUELA 161*

It is impossible to answer properly these questions if one does not believe in Global Warming. That belief has no scientific basis. The work of the late 19<sup>th</sup> Century, published in German, gave the correct view in what was called the Glasshouse Effect which keeps the world ca. 35°C warmer than would be expected given our distance from the sun. CO<sub>2</sub>, etc. alters physically the nature of infrared rays as they pass through the atmosphere like glass in a glass house. The rays are unable to escape, and their contained heat warms the world. The effect requires only the presence of CO<sub>2</sub>, etc. Increasing their quantity does not heat the world. That is a natural climate change since the Little Ice Age of 1500-1700AD.

Global Warming is an environmental disaster in that it diverts money, scientists time and enthusiasm away from real environmental problems with known solutions.

*Mr. David Kear, Director-General, NZ DSIR(retired) NZ 169*

I am most concerned about the potential use of nuclear weapons. Environmentalist need to be proactive on this issue.

*Mr. Andrew B. Lindstrom, Research Scientist, National Exposure Research Lab. United States Environmental Protection Agency, USA 185*

In the 12 years that I have been answering this questionnaire, diagnosis on social and environmental problems has improved greatly, but the basic problems are still growing. Some hopeful societal mechanisms to cope with the social-environmental crisis have developed, but the imperial outlook of the United States in their aggressive competition with other economic powers and their dominion over poor, resource-rich countries is very, very worrying indeed. Uncertainty and risk have grown and the hope of efficiently and sensibly addressing the root of our world's troubles (the amazingly unsustainable lifestyles of hundred of millions of people in rich countries) has diminished. So-called environmental education has proved unable to counter this huge problem and so-called free market reigns unchallenged. Still in the terms of H.G. Wells, the old race between education and catastrophe is on.

*Mr. Juan P. Ruiz, Senior Lecturer, Ecology Department, Autonoma University, SPAIN 200*

Some effects in human health could be critical for humankind as problems in reproductive behavior with hormone disrupters – some chemicals need to be addressed at the global level in this issue.

*Mr. Sergio Musmanni, Executive Director, National Cleaner Production Center, Costa Rica 222*

It is difficult to separate some problems from others since all of them are related. Food shortage is related to world population, and world population and food needs are related to soil degradation, deforestation, etc. And all of them are related to a perverse economic systems and to present human values.

*Mr. J. D. Etchevers, Professor, Natural Resource Institute, Colegio de Postgraduados, MEXICO 223*



The developed countries should help developing countries to control their population growth and provide them with enough funds to alleviate poverty, otherwise a severe crisis and unrest would happen that will destroy everything on this planet including the ordinary and normal life of the rich people. Unfortunately the leaders of the rich people of the world are blind to this threat.

*Mr. Hamid, Managing Director, Management, Taravat Bahar Toos NGO, IRAN 265*

The political agenda, worldwide, has reverted to security and global trade issues. Environment is not given the high priority it requires for substantial progress to be made in all areas: economics, politics, education, lifestyle/culture and social institutions. The environmental movement is more marginalized than it has been in decades. Recovery will depend on greater international cooperation of people and organizations dedicated to environmental stewardship.

*Mr. Arthur Goldsmith, Partner, Fair Surveys, CANADA 267*

Water and air pollution must be faced seriously to help also alleviate the problem of poverty and social diversity - only with basic needs covered can democratic evolutions take place. Combating corruption at all levels is also needed to create a better and more "just" world and develop trust between people, countries and religions.

*M, Falck Group, SWITZERLAND 272*

The population issue is a key problem in preventing further environmental degradation. Japan with her demanding environmental policy inside the highly populated island country in many fields could be a pattern for other states and for international bodies. My feeling is that more should be done to make Japan's experience and policy (including the history of both) achievable for other countries, for their officials and public opinion.

*Mr. Ze'ev Wolfson, Researcher / Editor, Environmental Science, Hebrew University, ISRAEL, 274*

Forests in the tropics are carbon sinks. Developing countries should be assisted to establish more by developed countries to combat global warming threatening humankind existence, now and in future.

*Mr. Michael E. Sizomu-Kagolo, National Forestry Authority, UGANDA 300*

Additional efforts should be pursued by the international community to address the real capacity building, technology transfer and knowledge assimilation needs of developing countries with regard to MEA's as well as environmental standards and criteria in general. This should be done instead of focusing on compliance and enforcement issues that many developing countries not only lack the financial and technical requirements to fulfill, but also the knowledge and expertise to comprehend.

*Mr. Mootaz Ahmadein Khalil, Director, Environment & Sustainable Development, Ministry of Foreign Affairs, EGYPT 324*

I was aware you did not provide choices that include concerns about endocrine disrupting chemicals. Recent fieldtrips confirm serious long-term impacts on the brain, intelligence, and behavior, and reproductive impairment – loss of fertility.

*F, TEDX, Inc. USA 337*

Developing countries need help to set environmental laws and regulations, as many multinational corporations operating in poor countries use dangerous systems which have already been prohibited in their own home country.

*M, PT Inti karya Persada Teknik, INDONESIA 339*

The non participation of the United States casts doubt on the success of the protocol but, what is important is that the majority of American citizens are concerned about global warming. The U.S. government should be tackled from a different angle.

*Mr. Olinpio Nhulips, Resource Economist, Directorate of Environmental, Ministry of Environment and Tourism, NAMIBIA 355*

Developed countries should support and finance environmental education in developing countries.

*M, Volunteer, SOUTH KOREA, 387*

I believe there is a need to rethink the way the World Trade Organization is currently structured, which is primarily centered on economic growth and competition.

*Sung Heon Chung, President, South North Kangwon Province Cooperation Society Commission, SOUTH KOREA, 392*

### **Comments from Japan**

Like with other international problems, the 21<sup>st</sup> century has seen the intensification of international pressure exerted by superpowers and the growing influence of international energy, military, and financial strategies on environmental problems. At the same time, the power of democratic forums of discussion like the United Nations, researchers, local communities and citizens has diminished. What appears more important today is the international political climate rather than topics that have to do with scientific technology.

*Tai Harada, Senior Researcher, National Metrology Institute of Japan, JAPAN, 004J*

Behaviors that minimize the burden on the environment and structures that make large profits possible are indispensable for eliminating free riders and promoting technological development.

*M, Kajima Corporation, JAPAN, 006J*

Citizens tend to turn their eyes towards problems that are close to home, like recycling waste. This is also the case with volunteering, which tend to stop at activities like cleaning trash, making it difficult to gain a real sense of rising popular awareness towards global environmental problems. I hope that the public information office of the government can be used to educate individual citizens and encourage them to actively participate in contributing towards solving global environmental problems.

*M, Oita Prefectural Government, JAPAN, 017J*

There is too much discrepancy between countries that are responding to the problems seriously and those that are not, and companies that are responding seriously and those that are not. There needs to be more rigorous supervision by the United Nations at the international level and by government agencies to regulate companies within countries. We need to eliminate the tendency where the squeaky wheel and the non-participants profit from their inaction.

*Shinichirou Namiki, General Manager, Environment Solution Center, Nichiwa Co. Ltd., JAPAN, 021J*

Forms of energy that are gentler to the environment, such as solar power, wind power, temperature difference, and biomass should be more aggressively developed at an international level. We also need to rethink how we educate our children in that direction. The same can be said for food.

*Minoru Yoneda, Executive Advisory Engineer, Earther Co., Ltd., JAPAN, 024J*

Each and every citizen and company must re-acknowledge the need for global warming countermeasures. Additionally, there is a need for a new way of thinking that supports the efforts of individuals.

*Isao Sakamoto, Non-profit Organization, JAPAN, 030J*

A considerable amount of environmental destruction is caused by corporate activity. Large global businesses need to set an example by leading the effort in environmental consideration to prevent the destruction of the environment. Consumers can be an important driving force towards environmental preservation by closely monitoring corporate activity.

*M, JAPAN, 036J*

There needs to be an expansion and intensification of the approach we take towards the United States and its citizens to persuade them to participate in the Kyoto Protocol and take a leadership position (in environmental issues). Persuading and having discussions with the federal government is essential. But it is also important for Japanese and European governmental members, lobbyists, think tanks, nongovernmental organizations, and academics to make a concerted effort to convince their U.S. counterparts of the errors of America's ways and their future responsibility towards the earth.

*Tsutomu Yamaguchi, Chairman&CEO, Examination Center for Electrical Engineer (ECEE), JAPAN, 054J*

Global environmental problems should be tackled by establishing rules that engage countries that have not agreed to participate in the Kyoto Protocol and haven't been subject to emissions regulations, like China and the United States.

*M, Agency for Natural Resources and Energy (ANRE), Ministry of Economy, Trade and Industry (METI), JAPAN, 068J*

It seems as though responding to an environmental change after it has occurred is responding too late. I believe there is a need for widespread recognition of the value of the earth's existence in itself, above and beyond the interests of local communities, industries, and countries.

*Noriyoshi Furuichi, Office of the President, The Japan Atomic Power Company, JAPAN, 083J*

The root of all environmental problems lies in the question, whether or not people would be able to accept a decline in their standards of living.

*Nobuyuki Sekino, Senior Officer, Recycling-Oriented Society Promotion Division, Gifu Prefectural Government, JAPAN, 085J*

I don't think it is possible to do too much in measures to alleviate environmental problems. So all imaginable solutions should be put into practice around the world to the extent possible. After all, spaceship earth as a whole is facing the danger of crashing.

*M, Halex Corporation, JAPAN, 111J*

Because of the need to survive, economics play a fundamental role when considering global environmental problems. Measures that lack economic consideration have an extremely low likelihood of materializing. What solves this problem is technology. It is necessary to aggressively develop technology, and bring projects to fruition with an assessment of its technology. There needs to be a recognition of the underlying premises, of the

finite nature of the earth's resources and the influence people have on it, as well as education towards lifestyle changes, for which the government can play an important role.

*Sekio Higuchi, Executive Director, Society of Automotive Engineers of Japan Inc. (JSAE), JAPAN, 122J*

The Kyoto Protocol does have significant problems, but those will need to be improved upon gradually. The signatories to the protocol need to take responsibility for having ratified the treaty and give their greatest efforts towards satisfying its requirements. I hope the Kyoto Protocol provides the opportunity for the development of a truly global society where countries are engaged in solving problems around the world.

*M, Citizen Watch Co. Ltd., JAPAN, 123J*

The nature of global environmental problems is such that if countries around the world do not engage in solving them, they will each become their victim. This creates the underlying assumption that each country must do their fair share. In addition, because improvements do not become visible overnight, I believe many problems will require sustained dedication. I think there needs to be an emphasis on flexible and innovative responses.

*Keiichi Yokobori, Professor, Teikyo University School of Law, JAPAN, 141J*

Because war and terrorism have a considerable effect on the environment, global environmental problems cannot be solved in the absence of peace and collaboration.

*Yushi Sakuragi, JAPAN, 152J*

Environmental preservation and economic globalization are not compatible. In particular, there should be a line drawn for trading goods between agricultural produce and other products from the standpoint of self-sufficiency in food and environmental preservation.

*M, Research Institute for Environmental Sciences and Public Health of Iwate Prefecture, JAPAN, 179J*

I believe our country will not be able to meet the required reduction in carbon dioxide emissions established in the Kyoto Protocol without an extraordinary effort. As such, the government should put into place detailed legal regulations including penalties for violators. Emissions trading should only be considered as a last resort.

*Hiroshi Nasu, JAPAN, 211J*

Solving global environmental problems requires the efforts and policy mix of all types of entities at all levels and in all directions. It is not a problem that can be left only for further scientific and technological developments to solve.

*Hisakazu Kato, Professor, Graduate School of Law, Nagoya University, JAPAN 213J*

There is a need to seek the understanding of U.S. citizens, not only about the Kyoto Protocol, but also about the urgency with which countries around the world must cooperate to solve global problems. At the same time, there is a need to establish a private sector forum with international authority and to pursue private sector diplomacy at every opportunity. These undertakings can be directed towards forcing American citizens to take the lead in furthering an international effort to develop a new paradigm that is not based on American premises about growth and development.

*Masaharu Yagishita, Professor, Graduate Division of Global Environmental Studies, Sophia University, JAPAN, 214J*

Japan should put more efforts towards satisfying the millennium development goals and bringing to fruition the 10 years of sustainable development education.

*Katsunori Suzuki, Senior Visiting Fellow, Institute of Advanced Studies(IAS), United Nations University(UNU), JAPAN, 257J*

There needs to be more detailed research and publicity on how people, as animals, suffer damages from the effects of the natural environment.

*Michiko Imai, President, Le Verseau Inc., JAPAN, 266J*

Japan has strengthened its rules regulating nonnative plants and animals. On the other hand, there has been an increase in agricultural damage from the proliferation of animals like the Japanese serow and the Japanese macaque, whose capture is regulated by the wildlife protection law. The problem of biodiversity requires a careful response.

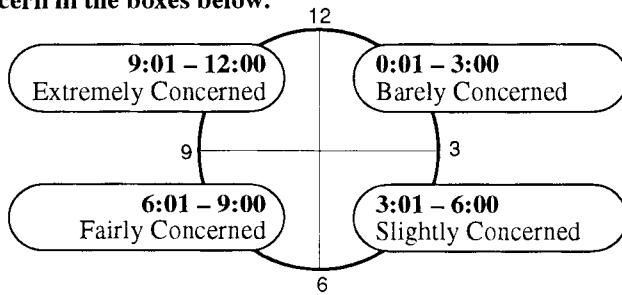
*Tomoaki Fujii, Deputy Director, The Tokyu Foundation for Better Environment, JAPAN, 282J*

There is no other way towards a solution than the choice "B" in questions 3-1 and 3-2. Waiting for progress in scientific technology is to chase after a distant possibility and is the equivalent of postponing the problem into the future. It is time for developed countries to put an end to making economic growth their national purpose. I look forward to the birth of a political party that would make this philosophy their pledge to the public. Concerning question 5-2-2, per capita emission levels should also be checked.

*Soki Oda, Director, WorldWatch Japan, JAPAN, 296J*

## V. Questionnaire as Distributed to Respondents

1-1. To what extent do you feel that the current deterioration of the global environment has created a crisis that will affect the continuance of the human race? Write a time within the range 0:01 to 12:00 corresponding to the extent of your concern in the boxes below.



Please write your time here.

:

(Example  : )

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

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

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

Significant progress  
Some progress  
Cannot determine  
Almost no progress  
No progress

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

3. Environmental problems have become widespread, and today they are experienced at global and local levels. Please share your opinion about *global* environmental problems in question 3-1, and from a *local* perspective in question 3-2.

3-1. Please select three from the following list of environmental problems that you feel need *to be prioritized and undertaken on a global scale by the world community*. In the next section, please assign numbers to the three items that you have selected in order of highest to lowest priority. Further, for each of the three problems, please mark one item from the list of possible solutions.

3-2. Please select three items from the following list the environmental problems that *are critical in the region or local area where you reside*. After selecting the three items, please assign numbers to them in order of highest to lowest priority. Your responses may be the same as those to the previous question. Further, for each of these three selections, please mark one item from the list of possible solutions.

① Climate change including global warming	⑨ Population problems
② Acid rain and air pollution	⑩ Poverty
③ Destruction of the ozone layer	⑪ Food security
④ Deforestation	⑫ Urbanization and transportation problems
⑤ Desertification and the deterioration of soil quality	⑬ Waste management and recycling
⑥ Issues related to ocean and fresh water supply	⑭ Diseases caused by environmental changes
⑦ Preservation and restoration of ecosystems and biodiversity	⑮ Other: _____
⑧ Energy problems	

1. This problem, which was caused by human activity, should be resolved through lifestyle changes and increased education.
2. This problem should be resolved through political and economic measures rather than scientific or technological solutions.
3. Scientific and technological solutions are paramount to resolving this problem, and resources should be prioritized for their development.
4. Other: _____



**<Answers>**

<b>3-1. Global perspective</b>	
Environmental Problems (Please select three items from Table 1)	Possible Solutions (Please select each solution from Table 2)
First priority ( _____ )	Concerning the 1st priority ( _____ )
Second priority ( _____ )	Concerning the 2nd priority ( _____ )
Third priority ( _____ )	Concerning the 3rd priority ( _____ )

<b>3-2. Local perspective</b>	
Environmental Problems (Please select three items from Table 1)	Possible Solutions (Please select each solution from Table 2)
First priority ( _____ )	Concerning the 1st priority ( _____ )
Second priority ( _____ )	Concerning the 2nd priority ( _____ )
Third priority ( _____ )	Concerning the 3rd priority ( _____ )

**4. In the approximately 50 years of the latter half of the 20<sup>th</sup> century, the amount of arable land only increased by 14 percent. In contrast, agricultural investment and technological development led to a 2.6 times growth in land productivity, in turn increasing food production by three times. These increases allowed for food production to meet the rising demand for food caused by population growth. However, the spread of desertification and the decrease in the levels of groundwater have caused the growth of food production to stagnate. Meeting the continued population growth and the accompanying rises in demand for food will require political strategies and technological developments. Please select one from each category that indicate a statement close to your opinion.**

**Political Strategies**

- <sup>(1)</sup> Because agricultural improvements cannot be expected to yield a significant increase in land productivity, priority should first be placed on population control.
- <sup>(2)</sup> Because a large amount of grain is required to produce meat, education both in developed and developing countries should encourage the reduction of meat consumption.
- <sup>(3)</sup> The problem lies in over-consumption in developed countries. A goal should be established to curb consumption, in particular to reduce the over-consumption of meat in developed countries.
- <sup>(4)</sup> Food production still has the capacity to grow at a global level. As such, population growth and increasing the food supply do not need to be prioritized as a problem.
- <sup>(5)</sup> Other: \_\_\_\_\_

**Technological Developments**

- <sup>(1)</sup> An international organization should be established to maximize the utilization of land that still has the potential to increase agricultural output. Developed countries can provide funds and technology through this organization.
- <sup>(2)</sup> Because increasing farmland is not easy, more research should be conducted on multiple cropping to increase agricultural productivity.
- <sup>(3)</sup> Agricultural productivity should be increased by promoting mechanization in developing countries.
- <sup>(4)</sup> Biotechnology should be aggressively pursued to increase food production.
- <sup>(5)</sup> Technological innovations cannot be relied upon for further increases in agricultural productivity.
- <sup>(6)</sup> Other: \_\_\_\_\_

**5-1. Enforcement of the Kyoto Protocol (Became effective February 16, 2005)**

The Kyoto Protocol went into effect on February 16<sup>th</sup> this year. How do you evaluate the treaty now as being effective? Please select one of the following choices.

- Favorably                      Please answer question 5-1-1  
Unfavorably                    Please answer question 5-1-2

**5-1-1. Please select one from the following list of statements that reflects why you favorably evaluate the Kyoto Protocol that came into effect.**

- <sup>(1)</sup> It is highly favorable that an international strategy to curb global warming has taken effect for the first time in human history. Significant efforts by developed countries (Annex I countries) to undertake this challenge can be expected as a result.
- <sup>(2)</sup> By the Kyoto Protocol coming into effect, there is a greater likelihood that an international plan to counter global warming will continue after the protocol expires in 2012.
- <sup>(3)</sup> Other: \_\_\_\_\_

**5-1-2. Please select one from the following statements that reflects why you evaluate the passage of the Kyoto Protocol unfavorably.**

- <sup>(1)</sup> The Kyoto Protocol going into effect does not change the status of non-participation by the United States. This raises questions about the effectiveness of the protocol.
- <sup>(2)</sup> In addition to the non-participation by the United States, the effectiveness of the protocol is hampered by the non-participation of developing countries like China and India where greenhouse gas emissions are on the rise.
- <sup>(3)</sup> The targets established through the Kyoto Protocol are a product of political compromise. Thus, the plan lacks in mechanisms for corroboration or establishing scientific grounds, and cannot be evaluated favorably regardless of whether or not the protocol went into effect.
- <sup>(4)</sup> Other: \_\_\_\_\_

**5-2-1. Programs beyond the Kyoto Protocol (post-2013)**

Many differences between countries emerged in the development of the Kyoto Protocol. In particular, only developed countries participated in the measures leaving developing countries behind, and among developed countries, the United States withdrew from the treaty. Please select one from the following list of statements that best reflects your opinion about what kind of international framework should be created to reduce greenhouse gas emissions after 2013 when the Kyoto Protocol expires. If you select statement 1, 2, or 3, please answer question 5-2-2.

- <sup>(1)</sup> There should be an extension of the fundamental measures established in the Kyoto Protocol.
- <sup>(2)</sup> A substantial revision of the Kyoto Protocol is needed to address its numerous problems.
- <sup>(3)</sup> A new framework that is completely separate from the Kyoto Protocol should be developed.
- <sup>(4)</sup> Because it is uncertain that the goals established by the Kyoto Protocol will be met, there should not be a new international framework to reduce greenhouse gas emissions until a technological solution is developed.
- <sup>(5)</sup> Other: \_\_\_\_\_

**5-2-2. One of the challenges in reducing greenhouse gas emissions is to establish a target emission level for each country. Please select two items from the following list of statements that reflect your opinion.**

- <sup>(1)</sup> Developed countries (Annex I countries) should further reduce their greenhouse gas emissions.
- <sup>(2)</sup> Developed countries should maintain the same level of greenhouse gas emissions established by the Kyoto Protocol.
- <sup>(3)</sup> Developing countries (Non-annex I countries) with particularly high emission levels should be required to reduce or maintain their emissions.
- <sup>(4)</sup> Regulations should be established to set a ceiling in emissions levels that would also be applied to developing countries with low emission levels.
- <sup>(5)</sup> There should be no emissions regulations for developing countries.
- <sup>(6)</sup> Regulations should be established to set a ceiling in emissions levels that apply to all countries, regardless of whether it is a developed or developing country.
- <sup>(7)</sup> Other: \_\_\_\_\_

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

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**Results of the 14th Annual  
"Questionnaire on Environmental Problems and the Survival of Humankind"**

**REPORT**

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