

**Results of the 15th Annual  
 “Questionnaire on Environmental Problems and the Survival of Humankind”**

The Asahi Glass Foundation (Chairman: Hiromichi Seya) has conducted the questionnaire since 1992 asking the opinions of environmental experts in governments and private sectors worldwide regarding various environmental problems and efforts to resolve them. The survey is supervised by Professor Akio Morishima, chairman of the Institute for Global Environmental Strategies and a director of the Asahi Glass Foundation. This year, in addition to the issues addressed in previous years including queries about the Environmental Doomsday Clock and Agenda 21, an in-depth survey was conducted on the “Environmental Problems and Their Priority” from both global and local perspectives, based on the results obtained last year and received 307 responses to the questionnaire from within Japan, and 348 responses from 87 countries abroad.

This release summarizes the focal points within this year’s survey results. For all the results and for details, please refer to the Report.

**I. Repeat Topics**

**1. Environmental Doomsday Clock (Awareness of the Crisis Facing Human Survival)**

- The average time on the environmental doomsday clock for all respondents advanced twelve minutes from the previous year to 9:17, marking the furthest advanced time with a high sense of crisis.
- The average time on the environmental doomsday clock as marked by Japanese respondents advanced eight minutes from the previous year to 9:15.
- The average time for overseas respondents advanced fifteen minutes from the previous year to 9:19.

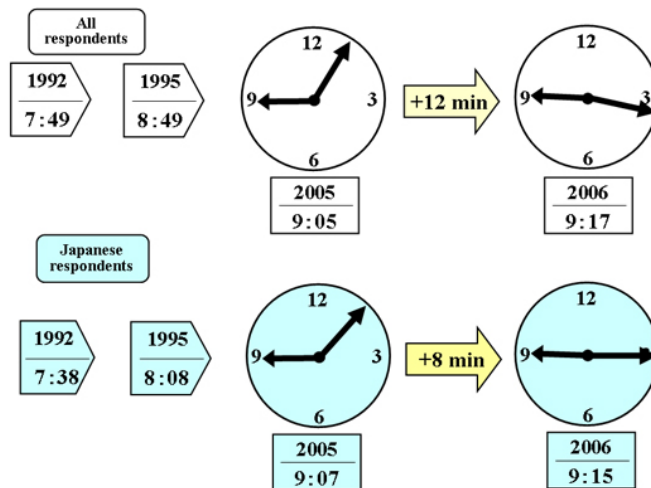


Fig. 1 Environmental Doomsday Clock since its origin

**2. Progress toward Agenda 21**

Overall the response this year was similar to last year. The category most frequently cited as having made progress was “promotion of environmental education” and in contrast, the least was “lifestyle alteration”.

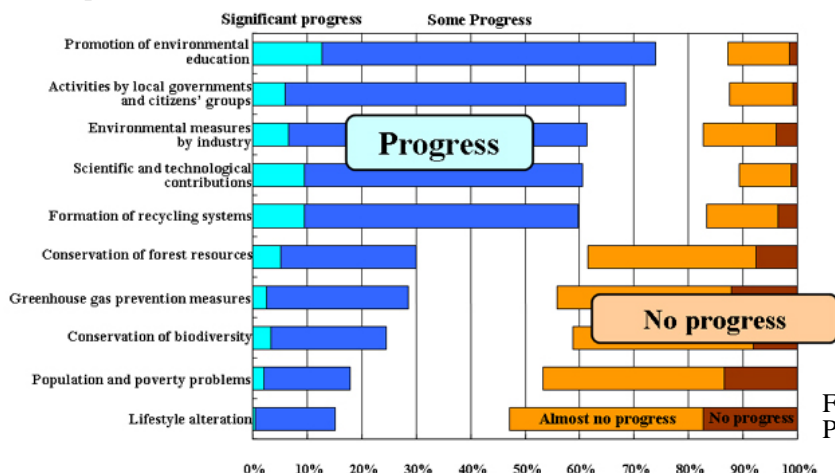


Figure 2. Progress toward Agenda 21

## II. Main Focus of the Current Year's Questionnaire

This year an in-depth survey was conducted on the “Environmental Problems and Their Priority” from both global and local perspectives, based on the results obtained last year.

### 3. Environmental Problems and Their Priority – Global Problems

Global environmental problems requiring prioritization included the following five issues:

1. climate change including global warming,
2. poverty,
3. energy problems,
4. preservation and restoration of ecosystems and biodiversity,
- and 5. population problems.

Summary of survey results for items 1 to 3 are as follows.

#### (1) Global warming

- More than 70% of respondents from both Japan and overseas selected “global warming is a serious and urgent environmental problem requiring an immediate response”. In particular, the regions where more than 80% of respondents selected this opinion were Asian Four, the Middle East, Western Europe and Latin America.
- More than 50% of the respondents from both Japan and overseas indicated “increase in frequency of aberrations in weather” as the most feared effect by global warming, followed by “the sinking of island countries and coastal regions due to rising sea levels” and “changes in ecosystems”.
- Twice as many respondents from Japan selected “negative impact on agriculture and food production”, compared to overseas respondents, reflecting a marked distinction.

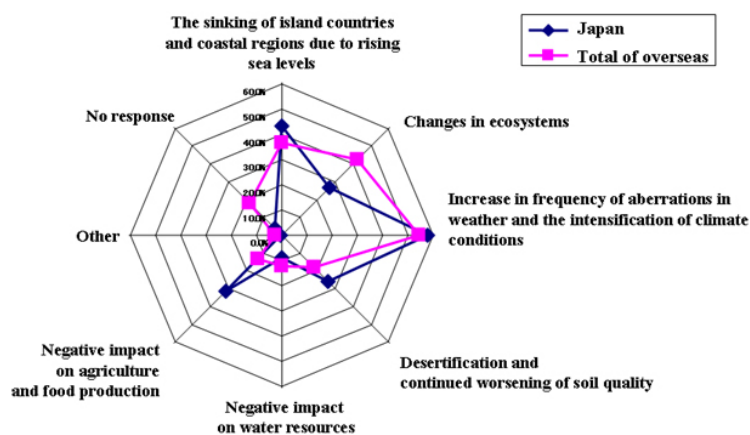


Fig. 3 Effect of Global warming

#### (2) Poverty

Respondents just short of 50% from overseas indicated “significant improvements to the current situation are possible”, while it was only 14% from Japan for the same response. Instead, 52% of Japanese respondents stated “poverty will worsen from the current situation”, reflecting a difference in view on the issue.

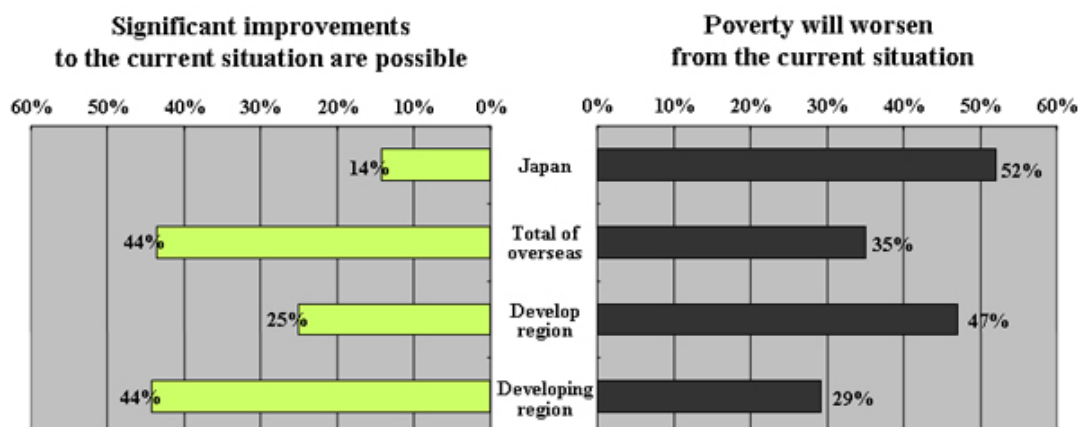


Fig. 4 View on Future Poverty Problem

### (3) Energy Problems

#### — Personal Energy Consumption —

- Respondents from all three regions (developed, developing, others) showed their determination to cut personal energy consumption from their current level of usage.
- Those responded “I would like a comparable amount or more to what I currently consume” was highest at 41% from the developing region compared to 15% from the developed region.

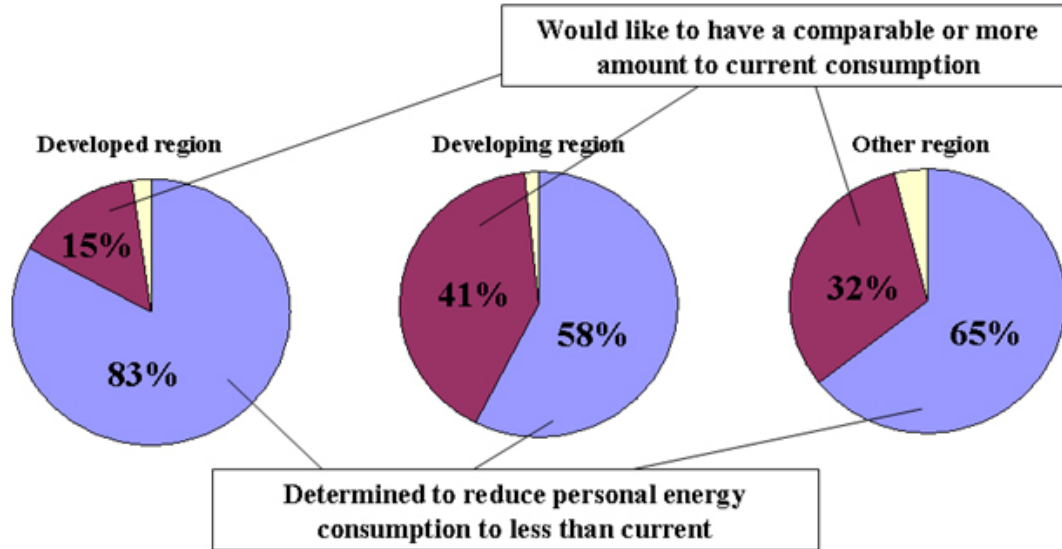


Fig. 5 Personal energy consumption

#### — Promising Energy Source to replace Fossil Fuel —

- Respondents from overseas selected “solar power” as the most effective source of energy to replace fossil fuel at 37%, followed by “nuclear energy” at 20%. In contrast, respondents from Japan selected “nuclear energy” as the most effective source of energy to replace fossil fuel at 34%, followed by “solar power” at 32%.
- Respondents from developing region chose “solar power” overwhelmingly as the most effective source of energy to replace fossil fuel at 42%, while “nuclear energy” lagged fourth after “hydraulic power” and “biomass” at 7%.

Table. 1 Effective sources of energy to replace fossil fuels

	[Develop region]	[Developing region]	[Other region]													
	Japan	U.S. & Canada	Western Europe	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Overseas Total	Develop region	Developing region	Other region	Total	(%)
	[N=303]	[46]	[63]	[37]	[42]	[21]	[30]	[21]	[26]	[19]	[305]	[449]	[93]	[66]	[608]	
Nuclear	34	22	27	30	9	0	8	18	39	10	20	32	7	25	27	
Wind energy	6	8	9	8	8	9	5	14	3	14	8	6	7	9	7	
Solar power	32	33	27	51	42	35	46	45	22	48	37	33	42	35	35	
Biomass	13	8	11	0	15	13	14	0	14	10	10	11	14	9	12	
Hydraulic power	7	8	11	5	17	22	14	5	3	0	10	7	17	3	8	
Other	1	14	10	5	6	9	3	14	6	0	8	4	5	6	5	
No response	7	6	4	0	4	13	11	5	14	19	7	6	8	13	7	

#### 4. Environmental Problems and Their Priority – Local Problems

Local environmental problems requiring prioritization included the following eight issues. The issues and the regions raised them are as follows:

1. acid rain and air pollution (Asian Four)
2. poverty (Rest of Asia, Latin America, Africa)
3. issues related to ocean and fresh water supply (Oceania)
4. deforestation (Latin America)
5. desertification and deterioration of soil quality (Africa, The Middle East)
6. waste materials/recycling (Japan, Western Europe, Asian Four, Rest of Asia, Africa, Eastern Europe & Former Soviet Union, The Middle East)
7. urbanization/transportation problems (Japan, North America, Western Europe, Asian Four, Eastern Europe & Former Soviet Union, The Middle East)
8. preservation and restoration of ecosystems and biodiversity deterioration of soil quality” (Western Europe, Latin America, Oceania, Eastern Europe & Former Soviet Union)

Number of regions raised items 6 and 7 as local problems. Summary of survey results for items 6 and 7 are as follows.

#### (6) Waste materials/recycling

- Most of the region indicated “household waste” and “industrial waste” as the issue regarding waste material management. Japan and Asian Four respondents raised “industrial waste” as an issue requiring priority. “Toxic and hazardous substances” also had a relatively high response from Asian Four and Western Europe respondents.
- Recycling is conducted in most regions. Western Europe had the highest response ratio for respondents indicating “recycling efforts are active” at 35% followed by Japan at 21%.
- Those indicated “recycling efforts are active” namely Western Europe and Japan also had a high response rate in having “progress” to respond to problems created by waste materials.

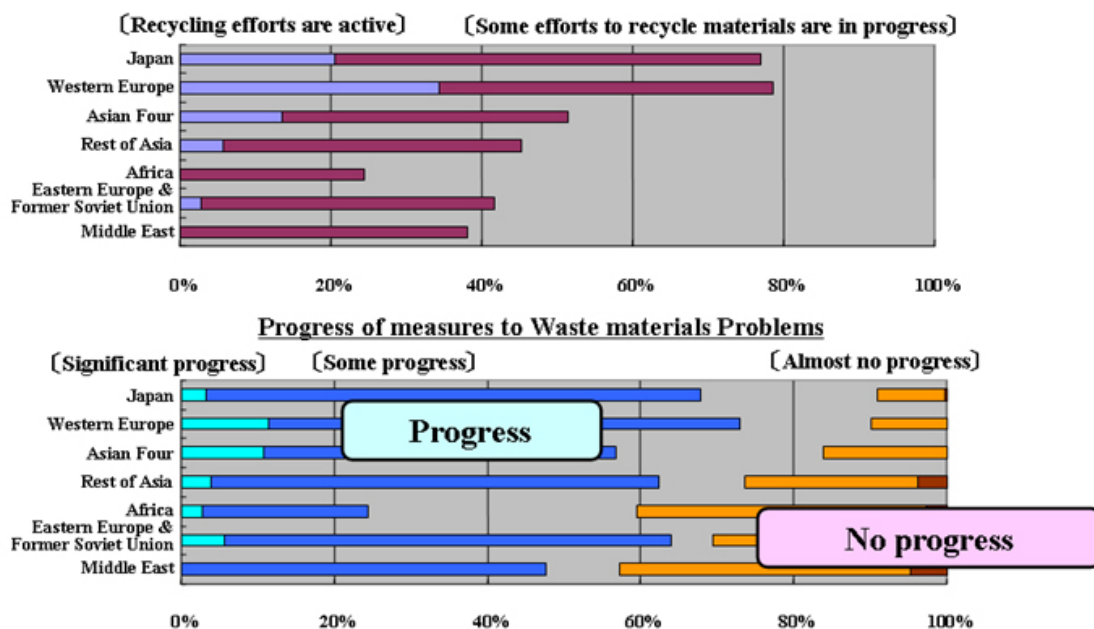


Fig. 6 Level of Recycling Endeavor

**(7) Urbanization/transportation problems**

- All of the region indicated “congestion and other obstacles to transportation created by an excessive concentration of automobiles” as the issue regarding transportation. Among other items, while Asian Four, Western Europe and Japan indicated “environmental destruction caused by transit vehicles” with relatively high response rate, North America , the Middle East and Eastern Europe & Former Soviet Union indicated “insufficient/poor quality of public transportation and distribution infrastructures.

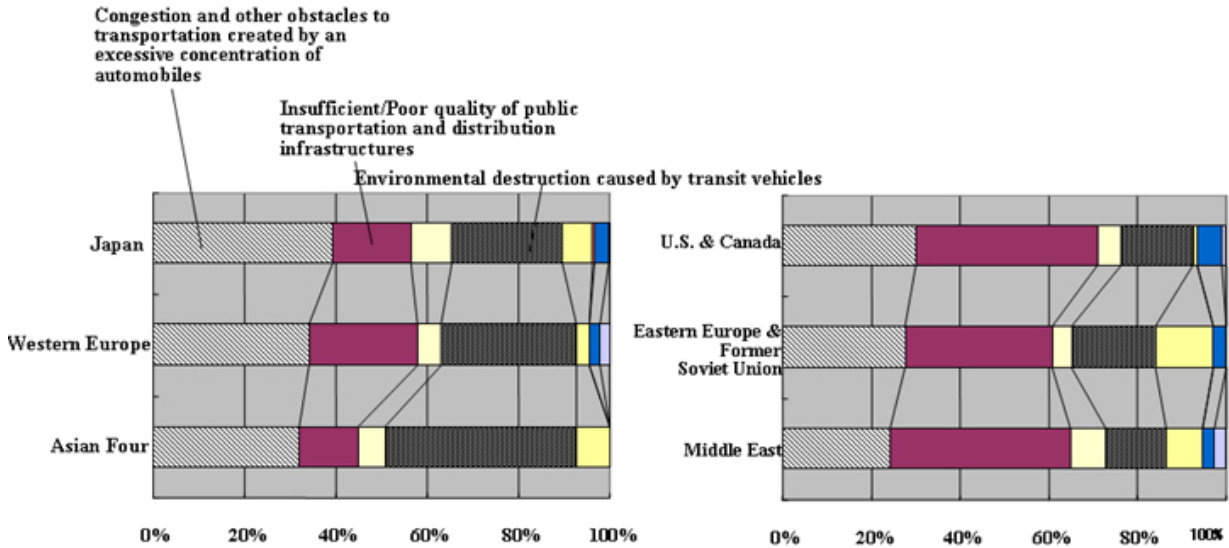


Fig. 7 Transportation Problems - Priorities

- There were differences among the regions regarding urban environment issue. North America indicated “urban sprawl” as the issue and that priority be put on “development and maintenance of transportation infrastructure”. Japan indicated “increase in waste” and “disappearance of greenery and natural environments” as the issue and that priority be put on “development and maintenance of waste processing facilities”.

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