

September 7, 2011

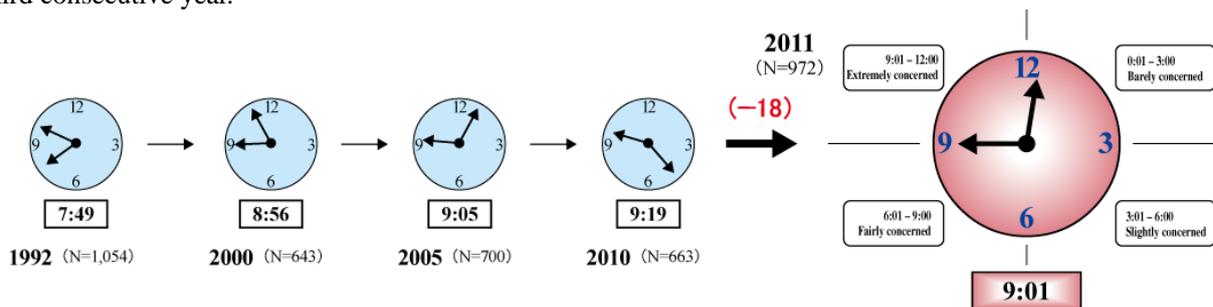
**The Asahi Glass Foundation Announces Results of the 20<sup>th</sup> Annual  
 “Questionnaire on Environmental Problems and the Survival of Humankind”**

- The average time on the Environmental Doomsday Clock retreated by 18 minutes from last year to 9:01, representing a retreat in the time for the third year in a row.
- Of all the regions, the sense of crisis was lowest among respondents from Japan.
- Respondents most often cited global warming as the main environmental concern in considering their response on the Environmental Doomsday Clock.
- Overall, respondents who "agreed" that "global warming was attributed to human activities" reached 85%, whereas only 7% "disagreed."
- Respondents from most regions indicated they had "no experience" with decreased supplies of drinking water, while the majority of respondents from India, Middle East and Africa selected "had experience."
- Responses to “abnormal shortages/increases in prices of meats and dairy products” showed disparities between developed and developing regions.
- Among environmental security issues, more than 90% of respondents stated that "water shortage." "food shortage." and "environmental pollution and contamination" were pressing.

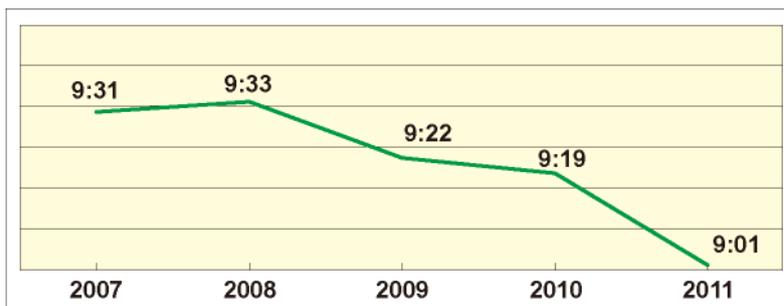
The Asahi Glass Foundation (Chairman: Tetsuji Tanaka) has conducted surveys with environmental experts around the world each year since 1992. This year, the Foundation received 1,000 responses from 77 countries. The following are the major findings of the survey. (Please refer to the attached appendix for details on the survey and this year’s results.)

**1. Awareness of the Crisis Facing Human Survival – The Environmental Doomsday Clock**

The average time on the Environmental Doomsday Clock retreated by 18 minutes from last year to 9:01, representing the largest retreat of the time since the survey started in 1992. The sense of crisis diminished for the third consecutive year.

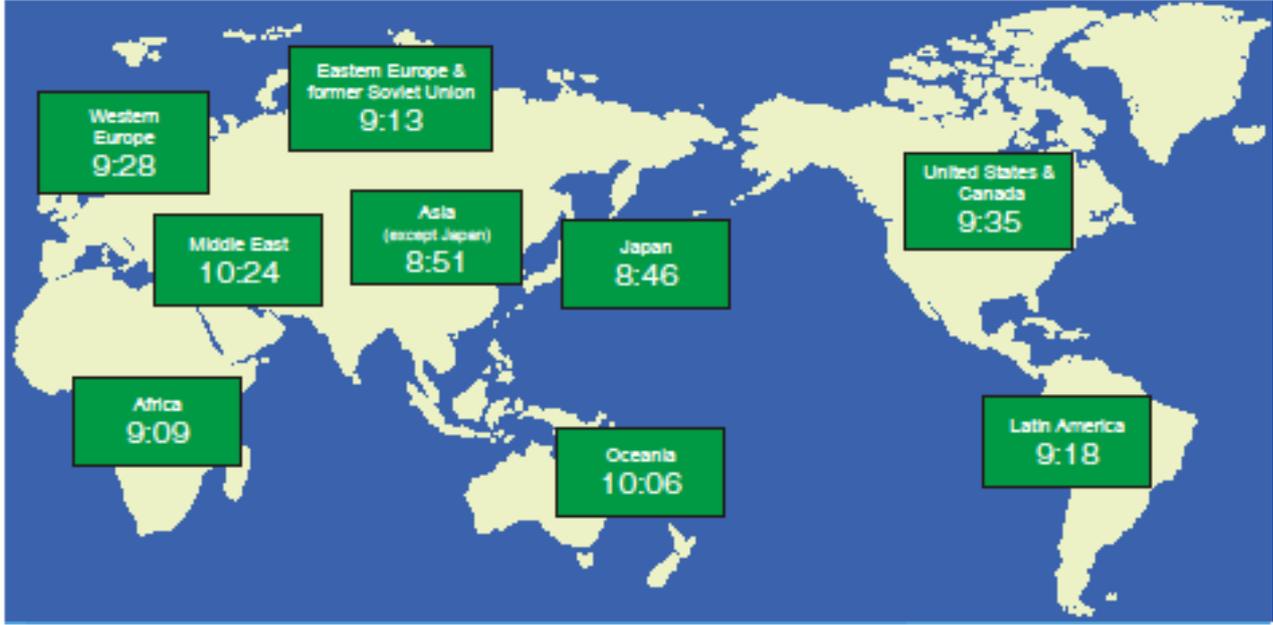


**Movements in the Environmental Doomsday Clock (1992-2011, Overall)**



**Movements in the Environmental Doomsday Clock( 2006-2011, Overall)**

Regionally, the average time on the environmental doomsday clock retreated more than 30 minutes from last year in four regions: Africa (from 10:24 p.m. to 9:09 p.m.), United States & Canada (from 10:13 to 9:35), Eastern Europe & former Soviet Union (from 9:47 to 9:13), and Latin America (from 9:48 to 9:18).



●Environmental Conditions of Concern

Overall, respondents most frequently cited "Climate Change" as the main environmental condition of concern upon selecting the time on the doomsday clock. This was followed by "Population" in developed regions, while their counterparts in developing regions cited "Pollution/Contamination" as the second environmental condition of concern.

	Total [2812]	Area										Overseas Total [1505]	Developed Regions [2168]	Developing Regions [515]	Others [126]	Asian Four [279]	Rest of Asia [374]	China [258]	Korea [177]	India [41]
		Japan [1307]	United States & Canada [360]	Western Europe [222]	Asia [653]	Latin America [78]	Africa [63]	Oceania [44]	Eastern Europe & former Soviet Union [72]	Middle East [10]										
Climate Change	23	23	25	21	25	23	30	23	14	30	24	24	23	18	29	22	20	29	17	
Biodiversity	10	8	13	15	9	14	14	14	0	11	10	10	13	9	9	8	10	15		
Land Use	7	6	6	9	7	13	11	14	0	8	6	10	13	4	9	8	2	12		
Pollution/Contamination	12	11	8	9	19	5	2	5	13	20	13	11	18	10	14	23	27	12	15	
Water Resources	9	7	12	11	10	10	14	7	11	10	11	8	13	10	5	13	13	2	10	
Population	12	15	15	14	6	10	5	16	4	10	10	14	7	9	6	6	5	6	10	
Food	7	9	4	6	5	3	10	2	1	10	5	8	4	2	7	3	3	7	0	
Lifestyle	7	8	4	5	6	5	2	9	6	0	5	7	5	6	8	5	5	9	12	
Global Warming Measures	3	3	1	2	6	1	2	2	6	10	4	3	2	5	10	3	2	15	2	
Environment and Economy	4	4	6	4	4	8	3	9	8	0	5	4	5	8	4	4	5	2	0	
Environment and Society	3	3	4	4	3	5	5	0	7	10	3	3	3	5	2	3	3	2	7	
Other	2	3	2	1	1	3	3	0	1	0	1	3	1	1	2	0	0	3	0	

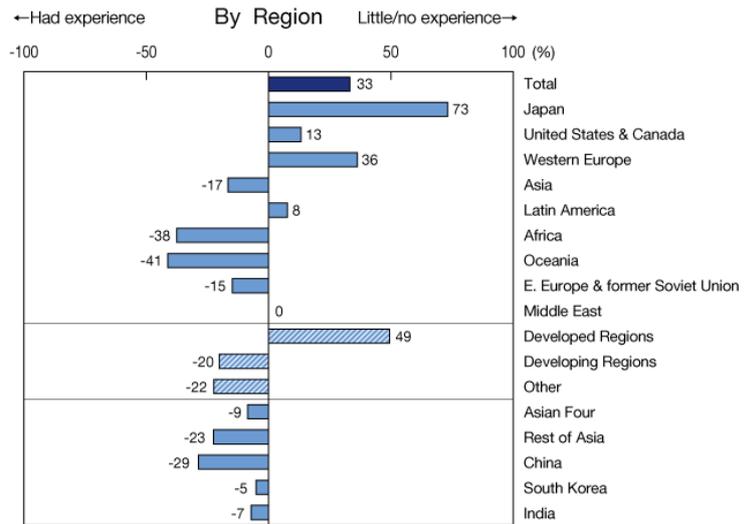
Notes: The % refers to the total number of valid responses while excluding any unknowns. The total is to be 100%.  
■ : Answer with the highest number of replies ■ : Answer with second highest number of replies

(For more information about the Environmental Doomsday Clock, please refer to P5~P7of the survey report)

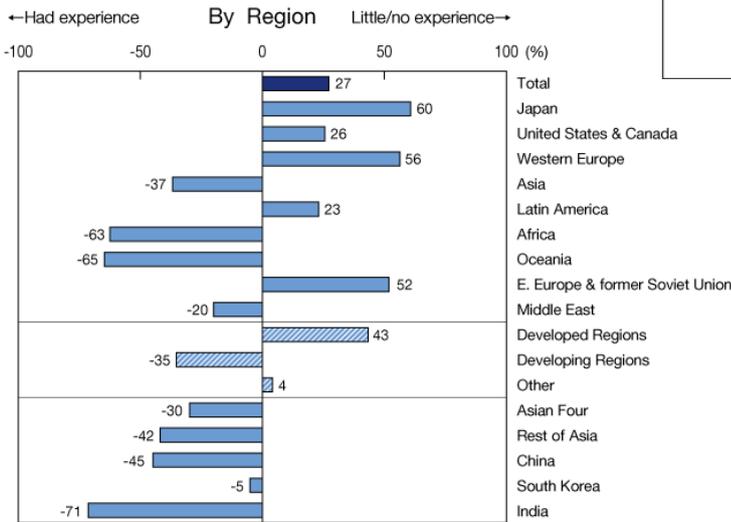
## 2. The Effects of Climate Change

### ● Experiences with Climate Change

A large majority of respondents from developed regions indicated that they had "no experience" with "frequent droughts and wildfires" and "significant declines in water levels or drying of rivers and lakes," whereas the majority of respondents in developing regions stated they "had experience."

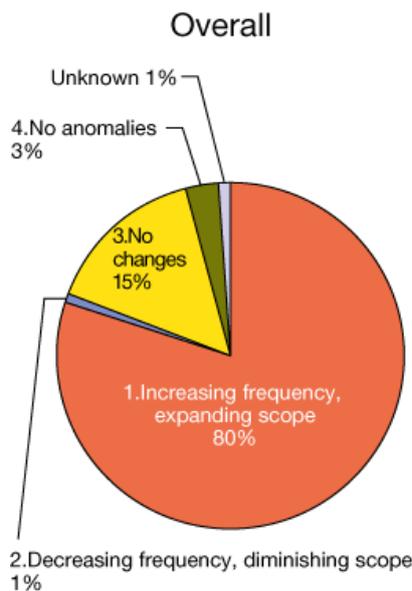


**Frequent Droughts and Wildfires**



**Significant Declines in Water Levels or Drying of Rivers and Lakes**

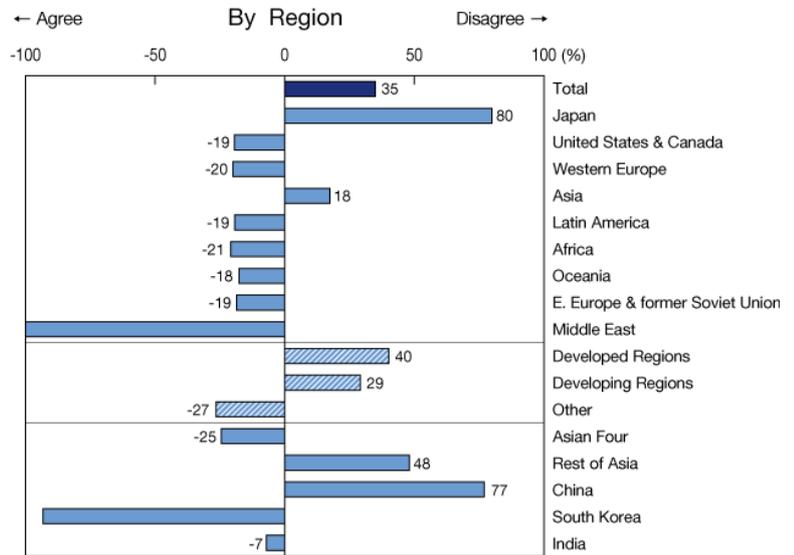
### ● Increases in Frequency or Scope of Climate-Related Anomalies



Overall, an overwhelming majority of respondents indicated that they were experiencing increased changes, with 80% selecting "increasing frequency" whereas only 1% selected "decreasing frequency."

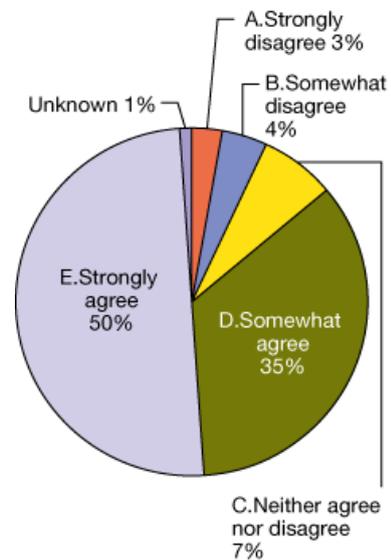
**Measures to Respond to Climate Change**

The majority of respondents in Japan and China "disagreed" with "measures and preparations should be implemented by governments, not individuals" with a large margin of nearly 80%. Compared with other regions, respondents in the two countries consider that measures to respond to climate change should be taken by individuals.



**Reasons for Climate Change**

Overall, respondents who "agreed" with "global warming is caused by the increased emissions of CO<sub>2</sub>, attributed to human activity" reached 85%, comprising the majority of responses.

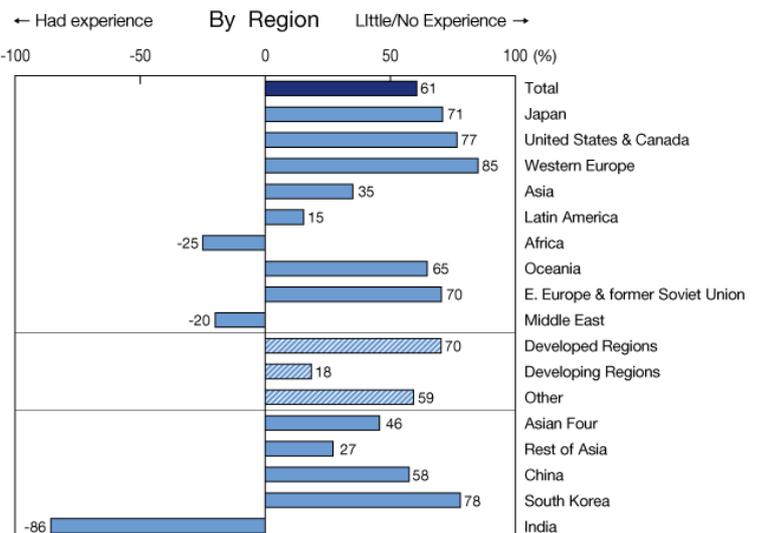
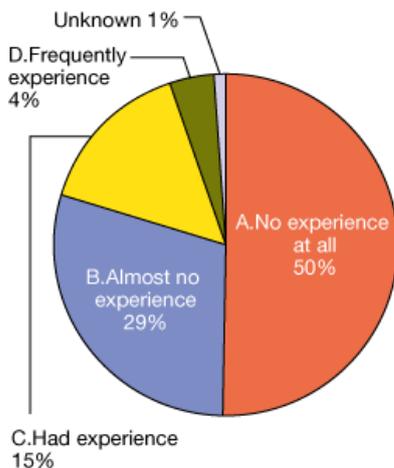


(For more information about the Effects on Climate Change, please refer to P8~P16 of the survey report)

**3. The Diminution of Water (Fresh Water) Resources**

**Decreased Drinking Water Supply on Occasional or Daily Basis**

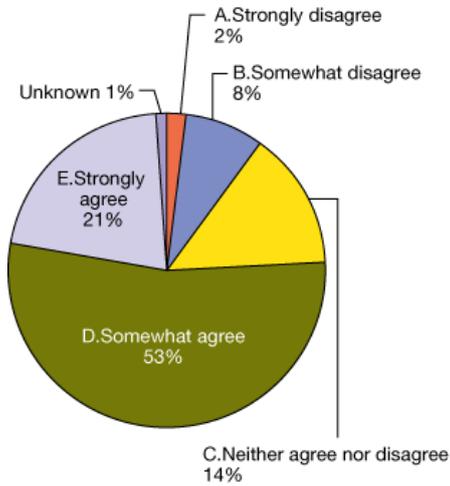
**Overall**



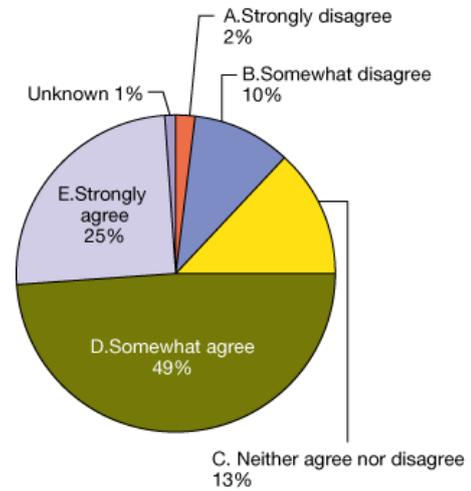
- Overall, 79% of respondents indicated they had "no experience" with "Decreased Supplies of Drinking Water."
- Regionally, the majority of respondents in India stated they "had experience" this phenomenon with a high margin of 86%. In addition, the majority of respondents in the Middle East and Africa also selected "had experience."

**• Reasons Behind Diminishing Water Supplies**

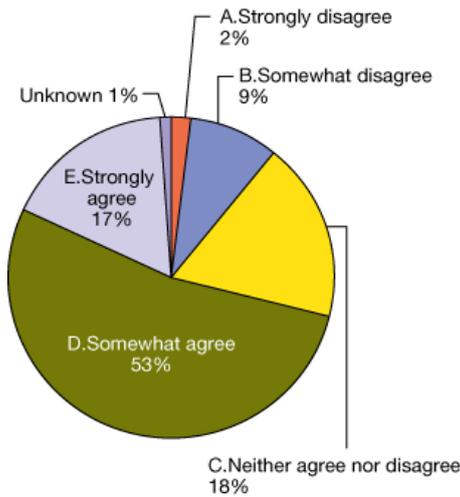
Overall, the majority of respondents stated that the following 6 items items comprised the reasons behind diminishing water supplies.



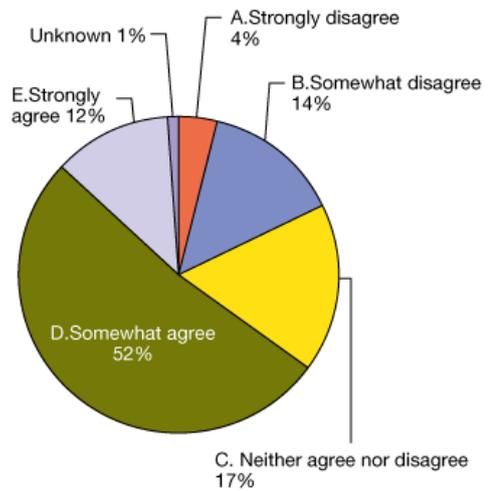
**Climate Change**



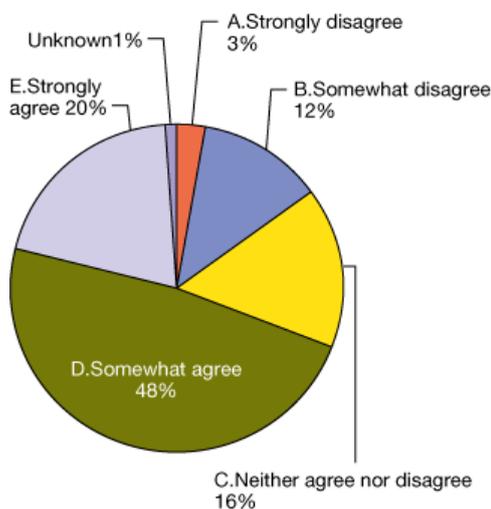
**Allocation of River and Groundwater Towards Massive Agricultural Irrigation**



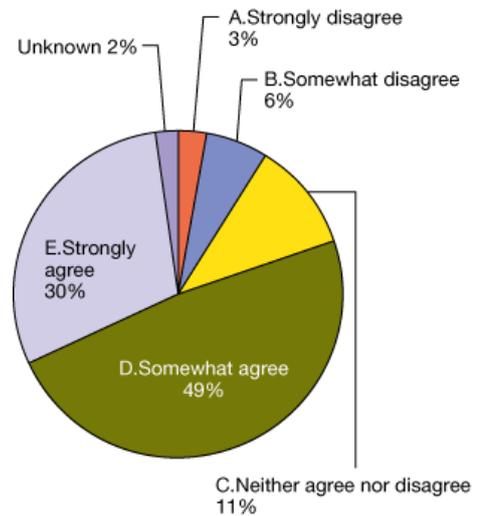
**Increased Industrial Use**



**Increased Domestic Use**

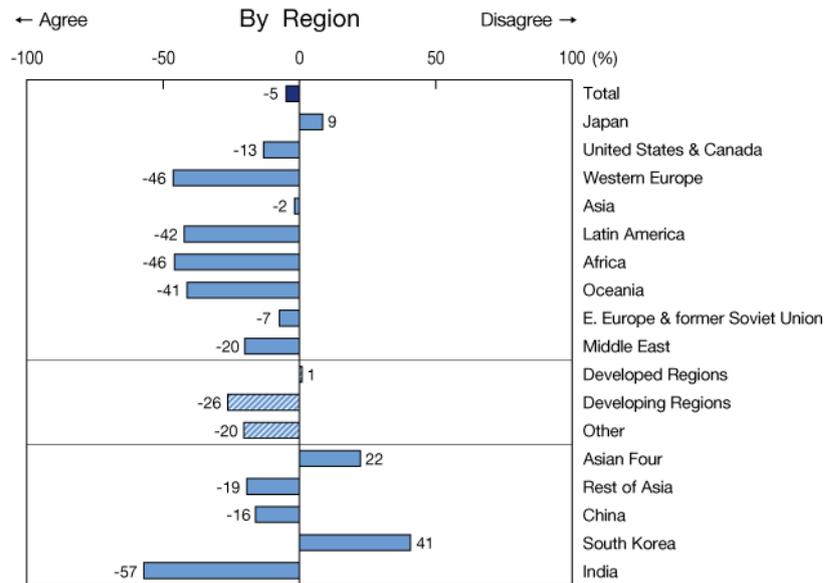


**Pollution and Contamination**



**Deforestation**

● **The Effects of Market Economy-Based Commerce on Water Resources**

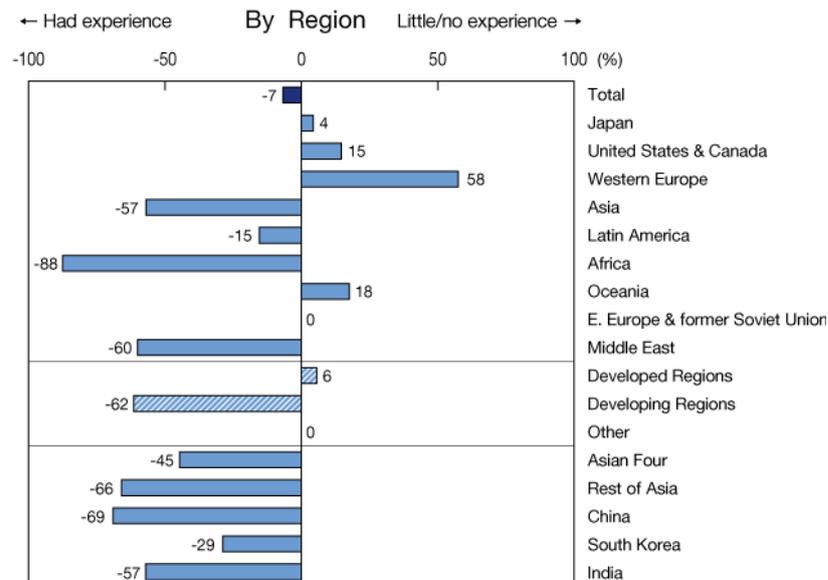


Except for South Korea and Japan, the majority of respondents in all regions selected "agree" with "securing water is the responsibility of countries producing agricultural and industrial products who use water resources."

(For more information about the Diminution of Water (Fresh Water) Resources, please refer to P17~P25 of the survey report)

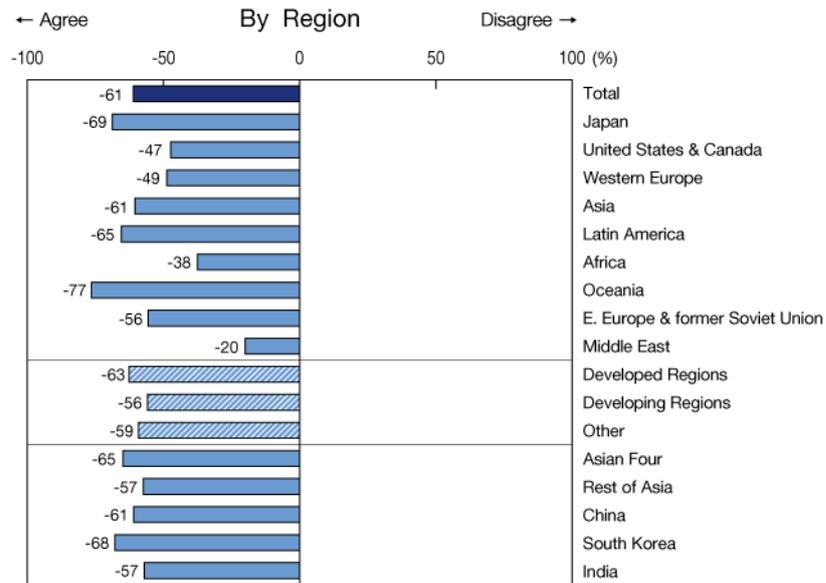
**4. Food Problems**

● **Experiences with Food Shortages**



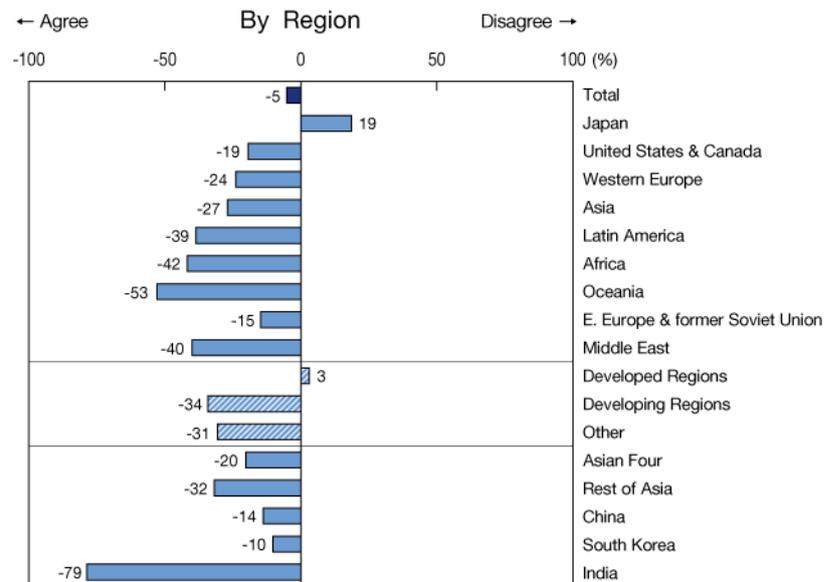
Respondents in developed regions who selected "no experience" with "shortages of meat, grains, vegetables, and dairy products" formed a small majority with a 6% margin. In contrast, those in developing regions who "had experience" formed the majority with a large margin of 62%, highlighting a discrepancy in the circumstances between developed and developing regions.

● **Reasons for Food Shortages and Price Increases**



Respondents who stated that "the massive speculation in the market for primary products (especially for agricultural and marine products) led to increases in the prices of food" comprised a majority in all regions.

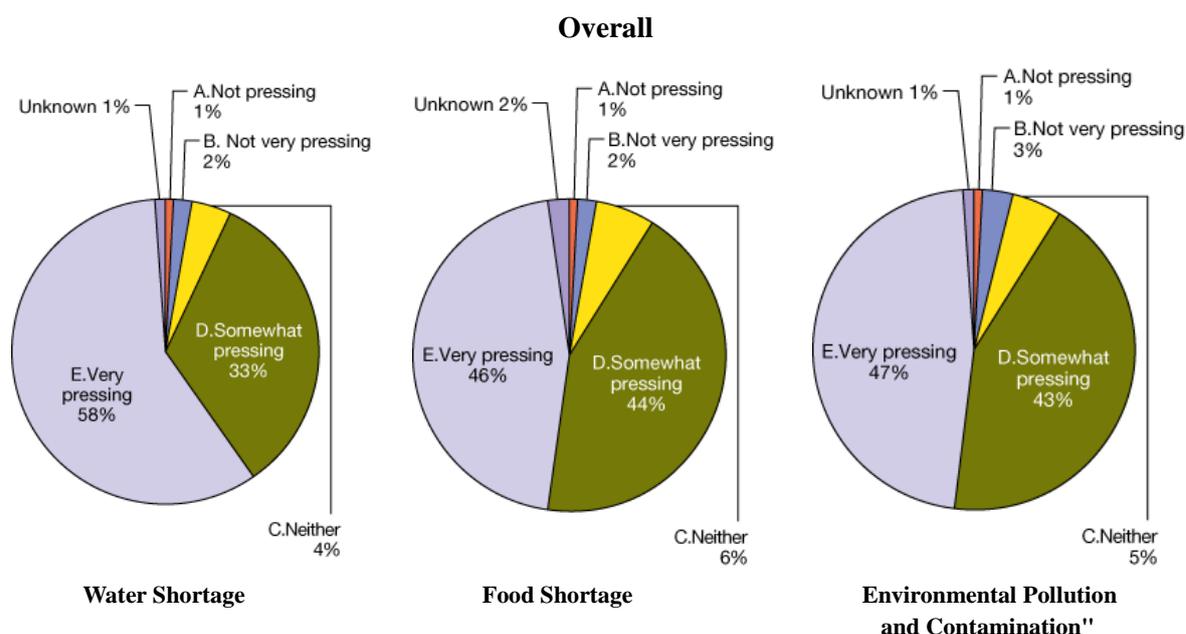
● **Measures to Alleviate Food Problems**



Japan was the only region in which respondents who selected "disagree" with "there should be no shortages considering absolute global food output; shortages can be solved by adequate distribution" reached the majority, with a 19% margin.

(For more information about the Food Problems, please refer to P26~P33of the survey report)

## 5. Critical Issues of Environmental Security



- More than 90% of respondents stated that the environmental security issues of "water shortage," "food shortage," and "environmental pollution and contamination" were "pressing," comprising an overwhelming majority.

(For more information about the Food Problems, please refer to P37~P41 of the survey report)

The survey also requested respondents to write comments on any topic related to environmental problems. This year we received 156 comments from 45 countries and 173 from Japan, totaling 317. From among them, 47 comments from Japan and all comments from overseas are contained in the report, except for advice or suggestions on the questionnaire.

\* Please refer to the report for the full results and details of the survey.

\* The results are also available at our website, at [www.af-info.or.jp](http://www.af-info.or.jp), starting from 3:30pm on September 7<sup>th</sup>.

For more information, please contact:

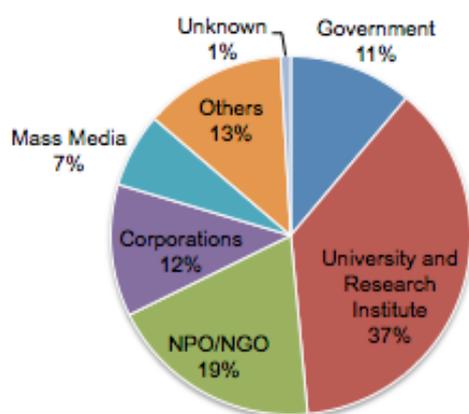
---

Tetsuro Yasuda, Secretary General  
 The Asahi Glass Foundation  
 2<sup>nd</sup> Floor, Science Plaza 5-3 Yonbancho Chiyoda-ku Tokyo 102-0081 Japan  
 Phone: +81-3-5275-0620 Fax: +81-3-5275-0871, e-mail: [post@af-info.or.jp](mailto:post@af-info.or.jp)  
 URL: <http://www.af-info.or.jp>

## Appendix

### • About the “Questionnaire on Environmental Problems and the Survival of Humankind”

Since 1992, the Asahi Glass Foundation has conducted a survey each year with experts around the world who are knowledgeable and are involved in environmental issues. The respondent pool includes government officials and those in universities and research institutions, nongovernmental organizations, corporations and mass media, and is queried about various endeavors to counter environmental problems. (The survey is supervised by Professor Akio Morishima, Special Research Advisor of the Institute for Global Environmental Strategies and board member of the Foundation.) The questionnaires are sent out to approximately 4,000 respondents every April and collected by June. After the responses are compiled, compared, and analyzed, the survey results are announced in September. The questionnaire, as well as the report, is available in Japanese, English, Chinese, Korean, and Spanish. The pie chart below shows the affiliation of the questionnaire respondents in descending order. The questionnaire was sent to respondents in 170 countries including Japan, with responses returning from 77 countries.



Regions	Countries
Asia	23
Africa	47
Oceania	9
Western Europe	20
Eastern Europe & former Soviet Union	23
Middle East	14
U.S.A & Canada	2
Latin America	31
<b>Total</b>	<b>169</b>

### • Facts about This Year's Questionnaire

Survey period: Questionnaires were sent out in April 2011 with a return deadline of June 2011.  
 Questionnaire respondent pool: Environmental experts selected from members of government organizations, academic and research institutions, NGOs, corporations, and mass media.

(based on the Asahi Glass Foundation database)

Questionnaires mailed: 7,164 (6,209 to 169 countries and 955 within Japan)

Questionnaires returned: 1,000

Response rate: 14%

Breakdown of respondents by region:

Region	Number of responses	Percent of total
Japan	468	46.8
United States & Canada	129	12.9
Western Europe	80	8.0
Asian Four*	94	9.4
<b>Developed Regions (Including Asian Four)</b>	<b>771</b>	<b>77.1</b>
Rest of Asia (Excluding Japan, Asian Four)	129	12.9
Latin America	26	2.6
Africa	24	2.4
<b>Developing Regions</b>	<b>179</b>	<b>17.9</b>
Oceania	17	1.7
Eastern Europe & former Soviet Union	27	2.7
Middle East	5	0.5
Others	49	4.9
Overseas Total	532	53.2
<b>Total</b>	<b>1000</b>	<b>100.0</b>

\*Asian Four: South Korea, Hong Kong, Taiwan and Singapore