



**Results of the 23rd Annual  
"Questionnaire on Environmental Problems and the Survival of Humankind"**

Report

**THE ASAHI GLASS FOUNDATION**

September 2014

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## Foreword

This report summarizes the results of the 2014 Questionnaire on Environmental Problems and the Survival of Humankind, a survey conducted annually by the Asahi Glass Foundation since 1992. As in previous years, the Asahi Glass Foundation wishes to continue communicating the current thoughts and opinions of environmental experts around the world on the state of the global environment to as many people as possible.

Owing to the collaboration of our participants around the world, we received 2,343 responses to the questionnaire this year, far exceeding the 1,364 responses that we received last year. We would like to extend our heartfelt gratitude to all of those who shared their valuable insights.

The number of responses increased in most regions of the world, particularly in Africa, Latin America, and the Middle East. Regional discrepancies in the number of responses that had previously existed were minimized as a result, and we feel that the significance of the questionnaire as a global environmental survey covering all corners of the world has heightened. The increase in the number of responses has allowed for a more detailed regional analysis of the survey results, and contributed the increased statistical reliability of the data that enables us to create new countries and regions as independent area. Still, there are countries and regions where the threshold of the number of responses (50) is within reach but not yet attained, and thus cannot yet be analyzed independently. As such, we ask for the continued support and participation of as many respondents as possible.

This year, we continued to chart the relationship between the “environmental condition of concern” and the time on the Environmental Doomsday Clock based on responses from around the world using bubble graphs, a format implemented in 2012. In addition, we also made it possible to follow the changes from year to year. Lastly, we have provided bubble graphs by region, to make it easy to compare how the opinions of environmental experts change by country or region.

At the Foundation, we sincerely hope that we can contribute what we can towards the resolution of environmental problems using this questionnaire by raising environmental interest among as many people as possible, not limited to environmental experts.

Once again, we extend our deepest gratitude to the respondents for taking the time to share their valuable opinions and experiences through the survey. In closing, we appeal to readers of this report for advice on how to enhance the survey in the coming years.

Asahi Glass Foundation  
September 2014

# I. Facts about the 22nd Annual “Questionnaire on Environmental Problems and the Survival of Humankind”

Response period: Questionnaires were sent out in April 2014 with a return deadline of June 2014.

Questionnaire respondent pool: Environmental experts selected from members of government organizations, academic institutions, NGOs, corporations, and mass media (based on the Asahi Glass Foundation database).

Questionnaires mailed: 23,953

Questionnaires returned: 2,343

Response rate: 9.78%

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

Region	Number of responses	Percent of total
Oceania	98	4.2
United States & Canada	250	10.7
Central America, Caribbean countries	68	2.9
South America	144	6.2
Western Europe	277	11.8
Africa	215	9.2
Middle East	64	2.7
Eastern Europe & former Soviet Union	71	3.0
Asia	1156	49.3
<b>Total</b>	<b>2343</b>	<b>100</b>

Gender	Number of responses	Percent of total
Male	1693	72.3
Female	643	27.4
No response	7	0.3
<b>Total</b>	<b>2343</b>	<b>100</b>

Occupational Affiliation	Number of responses	Percent of total
National government, Local government	304	13.0
University or research institution	910	38.8
Nongovernmental organization	599	25.6
Corporation	216	9.2
Mass Media	43	1.8
Others	264	11.3
No response	7	0.3
<b>Total</b>	<b>2343</b>	<b>100</b>

\*1 Unless otherwise noted, the questionnaire calculated as 100% the total number of responses received for questions where respondents were only asked to choose one item. For questions with multiple selections, the questionnaire calculated the percentages based on the number of times a valid response was given.

\*2 Figures have been rounded to the first or second decimal places.

\*3 Each question was calculated based on the number of responses to that question and not the number of questionnaires that were returned.

## II. Summary of Questionnaire Results

### A. Repeat Topics

#### 1. Awareness of the Crisis Facing Human Survival —The Environmental Doomsday Clock

- The average time on the Environmental Doomsday Clock for all respondents was 9:23, an advancement of 4 minutes from last year's time of 9:19.
- Overall, "climate change" was most frequently selected as the top environmental condition of concern in determining the time on the Environmental Doomsday Clock, following the same pattern as last year. This was followed by "pollution/contamination," and "biodiversity" at a tie for second place with the same rate, and "land use" and "water resources" at a tie for third place with the same rate. (See Graph 1, page7)
- Overall, when arranging the top-ranked environmental conditions of concern in descending order of severity on the Environmental Doomsday Clock, "population" was followed by "biodiversity," then "environment and economy." (See Graph 1, page7)

### III. Questionnaire Results

#### 1. AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL (QUESTION1)

To what extent do you feel that the current deterioration of the environment has created a crisis that will affect the survival of the human race? Please select three environmental issues of greatest concern from the table below, and write a time for each category within the range of 0:01 to 12:00 corresponding to the extent of your concern. In selecting a time, please use units of 10 minutes for ease of calculation.

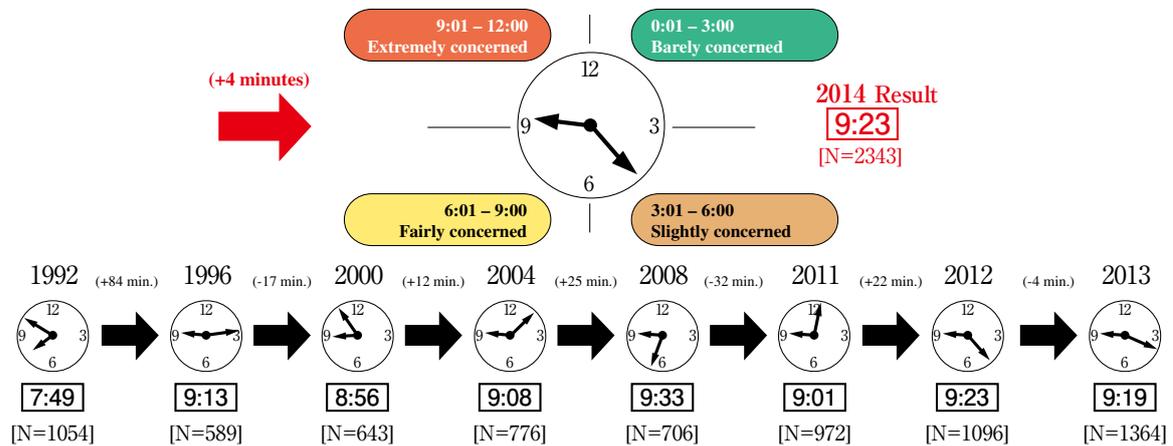
About the calculation of the time on the Environmental Doomsday Clock

The time on the Environmental Doomsday Clock will be determined by taking the weighted average of the data. The issue ranked in first place will be weighted at 50%, second place at 30%, and third place at 20%.

#### A The Environmental Doomsday Clock

- The average time on the Environmental Doomsday Clock for all respondents was 9:23, an advancement of 4 minutes from last year's time of 9:19.

#### Concern about Human Survival Prospects



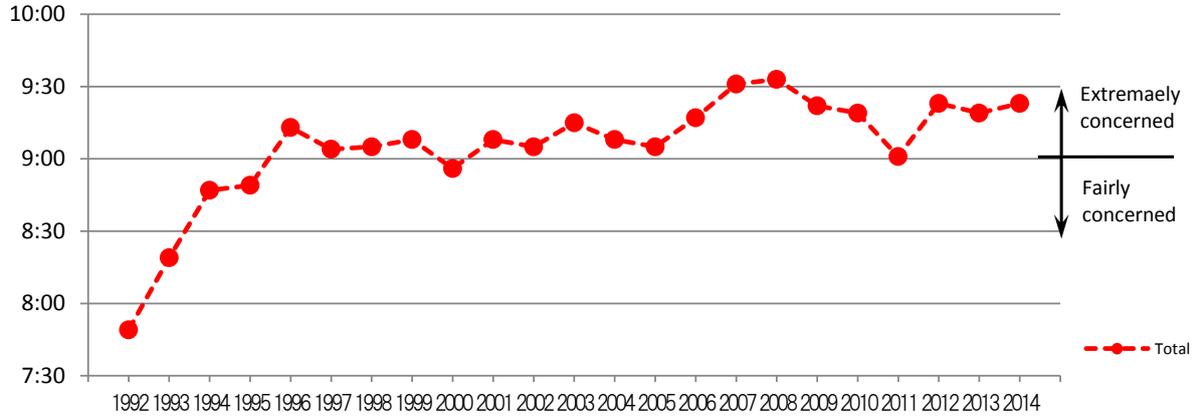
	Changes in time from year to year			Changes in average time by region			
	'14	→	'13	→	'14	'04 → '14	'13 → '14
Total	9:08	→	9:19	→	9:23	+15	+4
Oceania	9:08	→	10:01	→	10:08	+60	+7
United States & Canada	9:14	→	10:16	→	9:55	+41	-21
Central America, Caribbean countries	9:12 *	→	9:46 *	→	9:12	±0	-34
South America				→	9:23	+11	-23
Western Europe	8:56	→	9:40	→	9:33	+37	-7
Africa	9:04	→	9:42	→	9:09	+5	-33
Middle East	8:41	→	9:08	→	9:21	+40	+13
Eastern Europe & former Soviet Union	8:30	→	9:48	→	8:59	+29	-49
Asian	9:14	→	9:19	→	9:15	+15	+4

(Red indicates the advancement in time from last year; green indicates a reversal)  
 \*Central America, Caribbean countries and South America are comparisons with Latin America

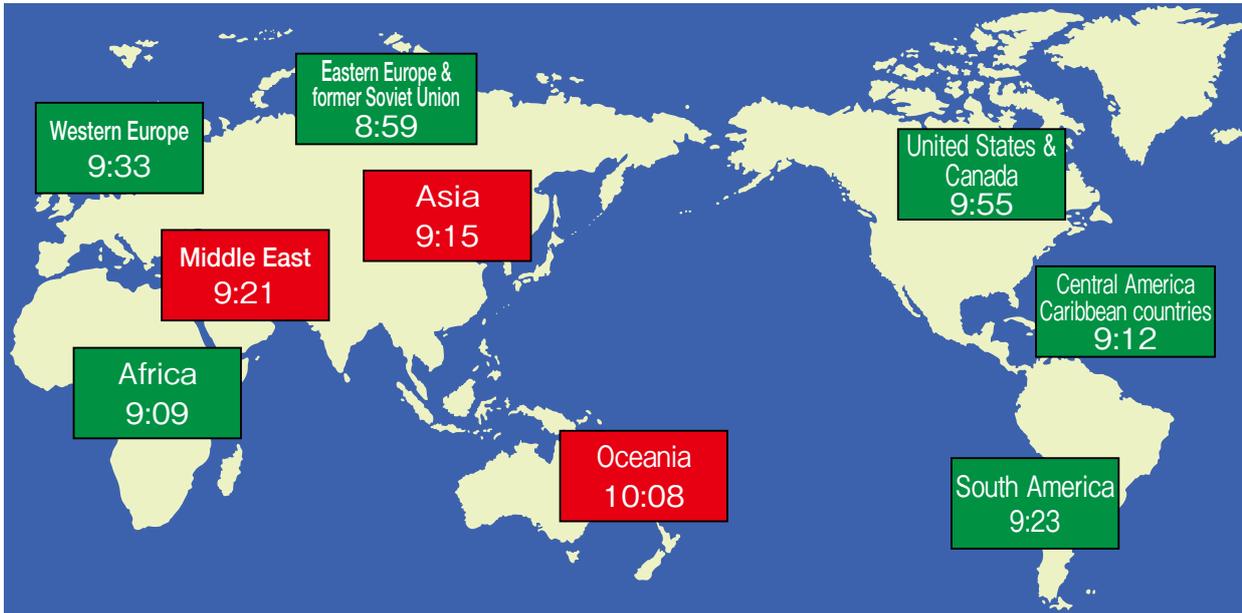
## Changes in the Environmental Doomsday Clock (Overall)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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	9:17	9:31	9:33	9:22	9:19	9:01	9:23	9:19	9:23

(The time marked in blue represents the lowest sense of crisis since the inception of the survey in 1992; the red marks the highest)



### Regional Times



(Red indicates the advancement in time from last year; green indicates reversal)

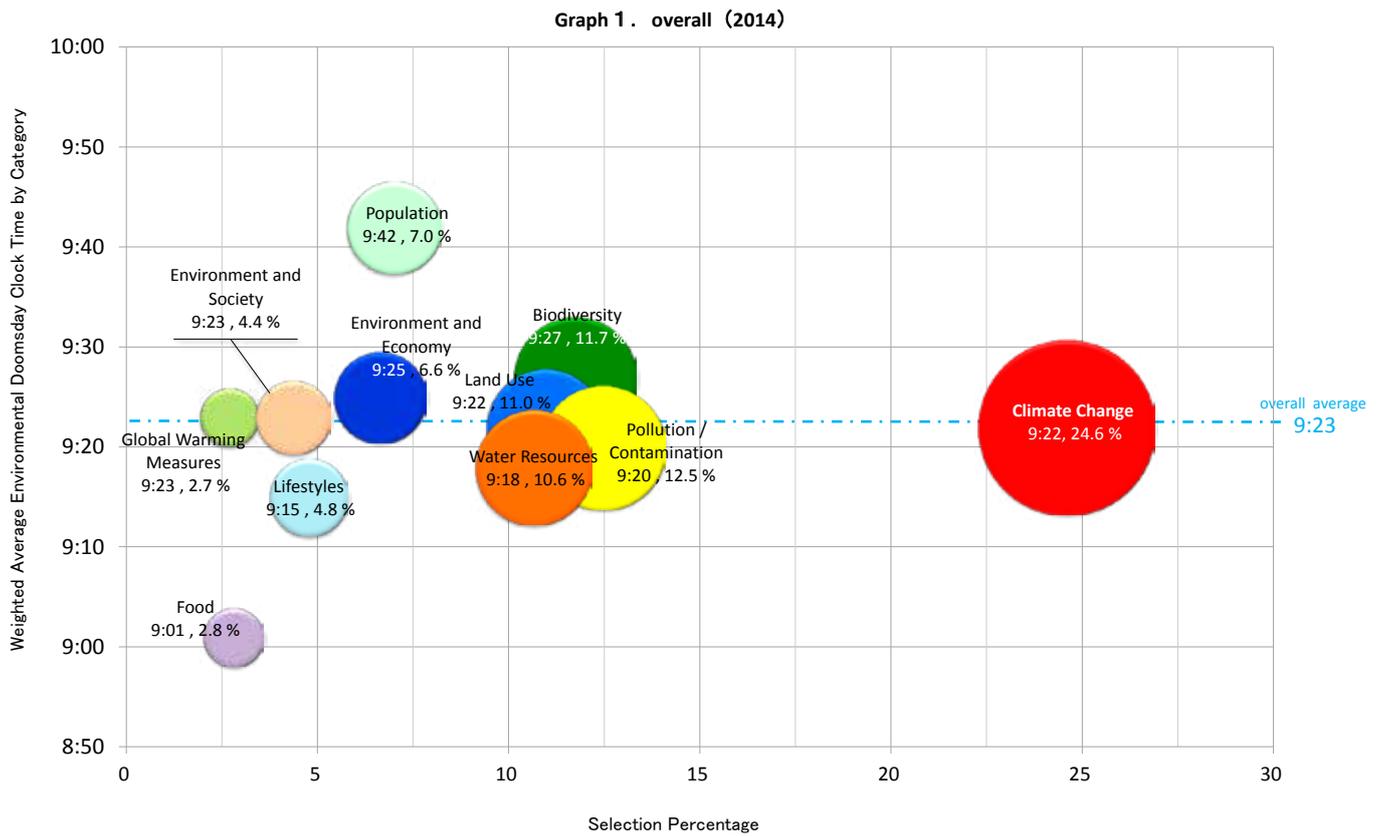
\*Central America,Carivvean countries and South America are comparisons with Latin America

## B Environmental Conditions of Concern

Table 1: Environmental issues to be taken into account

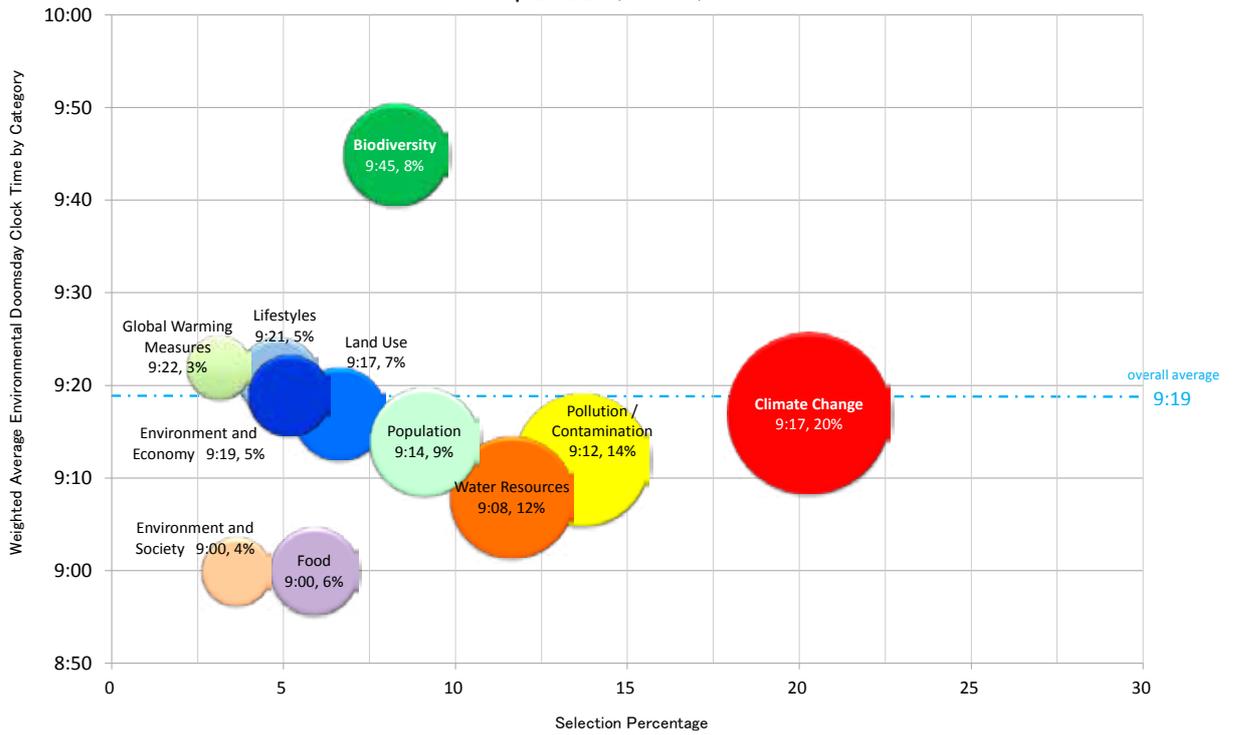
Category	Examples of Observable Changes in the Region in which You Reside
1. Climate Change	Increase in atmospheric concentration of CO <sub>2</sub> ; ocean acidification; climatic aberrations (droughts, torrential rains and flooding, severe storms, heavy snow, abnormal temperatures, drying of rivers and lakes, desertification, etc.)
2. Biodiversity	Acceleration of species extinction
3. Land Use	Expansion of cultivated land mass; destruction of forests due to erratic development; desertification caused by overgrazing; agriculture and land use without regard for the environment; urbanization
4. Pollution / Contamination	Increase in river and ocean pollution, soil contamination: eutrophication caused by excessive nitrogen and phosphorus and contamination by chemical substances; atmospheric pollution: particulates suspended in the atmosphere, soot and chemical substances
5. Water Resources	Diminution of usable fresh water resources (depletion, contamination)
6. Population	Regional and national population growth; Urban population growth unrelated to national trend
7. Food	Diminution of food supply from land and oceans
8. Lifestyles	Transformation of lifestyles away from excessive consumption of resources and energy
9. Global Warming Measures	Progress of measures for mitigation and adaption
10. Environment and Economy	<u>Progress towards implementing an economic system to reflect environmental costs,</u> the bearing of social costs: imposition of taxes for fossil fuels that emit CO <sub>2</sub> , which cause global warming-related damages; TEEB (The Economics of Ecosystems and Biodiversity), etc. <u>The operation of an environmentally conscious economy:</u> the realization of a green economy, sustainable economic development, etc.etc.
11. Environment and Society	Progress in environmental awareness at the individual and societal levels, and in environmental education; poverty eradication
12. Other	( )

1) Overall Analysis of the Environmental Conditions of Concern (Categories Ranked 1 -3)

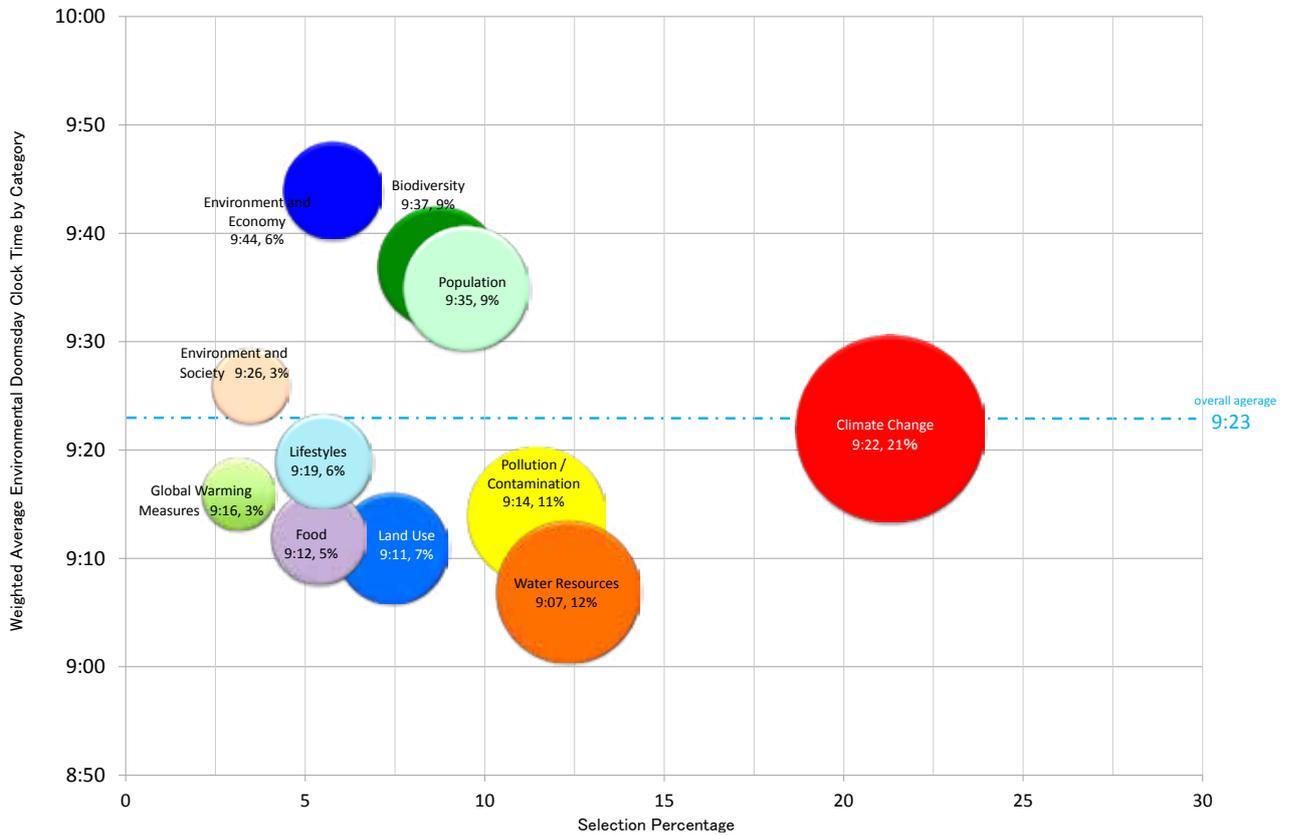


- Organizing the environmental conditions of concern in descending order showed that overall, climate change was the most frequently cited issue (24.5%), followed by pollution/contamination (12.5%), biodiversity (11.7%), land use (11.0%), and water resources (10.7%).
- Of the environmental conditions of concern, population carried a notably high sense of crisis with a time on the Environmental Doomsday Clock of 9:42. The Environmental Doomsday Clock time for all other categories were distributed between 9:01 and 9:27.

Graph2. 2013 (reference)



Graph3. 2012(reference)





### 3) Selection Patterns for “Environmental Conditions of Concern” By Region

Region	1.Climate Change	2.Biodiversity	3.Land Use	4.Pollution / Contamination	5.Water Resources	6.Population	7.Food	8.Lifestyles	9.Global Warming Measures	10.Environment & Economy	11.Environment & Society	12.Other
<b>Total</b>	<b>25</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>11</b>	7	3	5	3	7	4	1
<b>Oceania (except Australia)</b>	<b>34</b>	<b>18</b>	8	3	10	11	1	2	2	6	4	1
Oceania (Australia except)	<b>37</b>	<b>15</b>	11	4	9	11	4	0	0	6	2	0
Australia	<b>33</b>	<b>18</b>	8	2	11	11	1	3	2	6	5	1
<b>United States &amp; Canada</b>	<b>32</b>	<b>11</b>	7	5	<b>11</b>	<b>10</b>	2	6	3	7	3	1
USA	<b>31</b>	<b>11</b>	7	5	<b>12</b>	<b>11</b>	2	6	4	7	3	1
Canada	<b>38</b>	<b>10</b>	8	3	6	8	1	9	2	<b>10</b>	3	1
<b>Central America, Caribbean countries</b>	<b>26</b>	<b>21</b>	8	4	6	12	0	4	2	10	5	2
<b>South America</b>	<b>15</b>	<b>16</b>	<b>23</b>	9	11	4	0	4	1	7	8	2
<b>Western Europe</b>	<b>23</b>	<b>17</b>	12	7	6	8	1	7	2	10	5	1
UK	<b>26</b>	<b>21</b>	8	4	6	12	0	4	2	10	5	2
Western Europe (except UK)	<b>22</b>	<b>16</b>	14	8	6	6	2	8	1	10	6	1
<b>Africa</b>	<b>21</b>	<b>16</b>	<b>20</b>	6	14	7	4	2	1	3	4	1
<b>Middle East</b>	<b>15</b>	<b>16</b>	<b>23</b>	9	11	4	0	4	1	7	8	2
<b>Eastern Europe &amp; former Soviet Union</b>	<b>23</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>12</b>	7	2	4	2	6	4	1
<b>Asia</b>	<b>26</b>	8	8	<b>18</b>	10	6	4	5	4	6	4	1
Japan	<b>32</b>	8	5	<b>10</b>	6	6	6	7	6	7	4	3
India	<b>18</b>	<b>15</b>	12	10	<b>15</b>	13	3	2	1	4	5	1
China	<b>18</b>	4	7	<b>37</b>	14	5	2	2	3	7	3	0
Taiwan	<b>30</b>	5	13	<b>23</b>	7	3	2	2	5	6	3	1
Republic of Korea	<b>33</b>	9	5	12	4	2	4	<b>15</b>	1	6	5	4
Asia *	<b>23</b>	<b>17</b>	<b>17</b>	8	15	9	2	1	1	4	3	0

(Red indicates selection for rank 1, blue indicates rank 2)

\*with the exception of India, China, Taiwan, Republic of Korea, and Japan

- Overall, climate change was the most frequently cited issue (25%), followed by pollution/contamination and biodiversity (each at ca.12%), then land use and water resources (each at ca. 11%).
- While respondents in most regions ranked climate change as the most pressing environmental condition of concern, respondents in Latin America, Middle East, and Africa selected land use as the top issue. (Respondents in Africa selected land use and climate change at comparable rates.)
- Respondents in China most frequently selected pollution/contamination as the most pressing issue. Respondents in Oceania, North America, Central America, South America, Western Europe, Africa, Middle East, and Eastern Europe and the former Soviet Union selected biodiversity as the second most pressing issue.

#### 4) Regional Distribution of the Doomsday Clock Times of the Environmental Conditions of Concern

Region	Total	1.Climate Change	2.Biodiversity	3.Land Use	4.Pollution / Contamination	5.Water Resources	6.Population	7.Food	8.Lifestyles	9.Global Warming Measures	10.Environment & Economy	11.Environment & Society
<b>Total</b>	9:23	9:22	9:27	9:22	9:20	9:18	9:42	9:01	9:15	9:23	9:25	9:23
<b>Oceania</b>	10:08	10:16	10:10	9:36	11:10	9:28	10:35	8:29	10:27	-	10:16	10:35
Oceania (except Australia)	10:12	10:16	-	10:27	-	-	-	-	-	-	-	-
Australia	10:07	10:16	10:06	9:20	-	9:26	10:34	-	10:27	-	10:29	10:32
<b>United States &amp; Canada</b>	9:55	10:07	10:15	9:13	8:42	9:25	10:37	9:05	10:04	10:18	9:54	9:37
USA	9:57	10:12	10:18	9:14	8:39	9:27	10:34	8:45	10:13	10:20	10:05	9:40
Canada	9:43	9:31	9:55	9:06	-	8:30	11:04	-	9:32	-	9:14	-
<b>Central America, Caribbean countries</b>	9:12	9:04	9:00	9:14	9:21	8:25	10:04	-	9:38	-	9:21	9:13
<b>South America</b>	9:23	9:15	9:27	9:40	9:22	9:25	9:45	-	9:10	-	9:14	9:18
<b>Western Europe</b>	9:33	9:42	9:54	9:33	9:00	9:06	9:34	9:47	9:10	9:14	9:36	9:14
UK	9:49	9:42	10:04	10:14	9:51	9:58	10:11	-	9:11	8:59	9:10	10:08
Western Europe (except UK)	9:27	9:42	9:48	9:27	8:51	8:58	9:10	9:47	9:07	10:11	9:41	8:57
<b>Africa</b>	9:09	9:05	9:04	9:25	8:52	8:58	9:47	9:20	8:55	9:36	8:48	8:56
<b>Middle East</b>	9:21	8:46	8:32	9:39	9:06	10:06	8:32	-	-	-	10:40	11:03
<b>Eastern Europe &amp; former Soviet Union</b>	8:59	8:33	8:53	9:31	8:53	7:36	10:09	-	9:49	-	9:35	9:31
<b>Asia</b>	9:15	9:09	9:14	9:10	9:23	9:25	9:21	8:55	9:02	9:15	9:13	9:12
Japan	9:04	9:05	9:15	8:32	8:55	8:59	9:02	8:44	8:59	9:07	8:45	8:49
India	9:04	8:55	8:58	9:40	8:57	8:58	9:29	9:42	-	10:33	9:15	8:44
China	9:38	9:28	8:22	9:37	9:47	9:58	9:40	9:50	9:09	9:38	9:40	9:34
Taiwan	8:42	8:27	8:51	8:25	8:32	-	-	-	-	8:59	9:57	-
Republic of Korea	9:27	9:43	9:36	-	9:43	-	-	-	9:02	-	9:34	-
Asia *	9:11	8:38	9:12	9:20	9:14	9:16	9:14	9:07	10:33	-	9:38	10:38

(Red indicates the 10 o'clock hour, yellow the 9 o'clock hour, and green the 8 o'clock hour.)

\*with the exception of India, China, Taiwan, Republic of Korea, and Japan

- Similar to last year, respondents in Oceania continued to select an average Environmental Doomsday Clock time for all categories past 10 o'clock. For all other regions excluding Taiwan, the average fell in the 9 o'clock hour.
- Respondents in the United States and Australia each had more than 6 categories in which the Environmental Doomsday Clock time surpassed 10 o'clock, indicating a generally strong sense of crisis.

## C. Analysis of the selections for Environmental Conditions of concerns

### 1-2 .

For each of the three categories you selected in Question 1-1, please choose an item from Table 2 below that best reflects the rationale for your selection. If you have more than one reason, please separate them with a comma. For those selecting “Other” (item 6), please write in your reason.

Table 2: Selection Rationale for Category in Table 1

Item	Selection Rationale	Item	Selection Rationale
1	The number of observable cases (frequency) increased significantly	4	It is a fundamental problem with commonalities to many environmental issues
2	The level of deterioration (intensity) worsened significantly	5	It is the greatest factor slowing down the resolution of environmental problems
3	The level affected (scale and cost of the damage) was most significant	6	Others (please indicate your rationale below)

### Selection Rational

1-2	rationale for selecting #1 concerns					rationale for selecting #2 concerns					rationale for selecting #3 concerns					
	1.Fre- quency of anom- aly in- creased signifi- cantly	2.Sever- ity of deter- ioration increase	3.Sig- nificance of cost of the damage	4.Root of environ- mental problem	5.Big- gest ob- stacle for environ- mental problem	1.Fre- quency of anom- aly in- creased signifi- cantly	2.Sever- ity of deter- ioration increase	3.Sig- nificance of cost of the damage	4.Root of environ- mental problem	5.Big- gest ob- stacle for environ- mental problem	1.Fre- quency of anom- aly in- creased signifi- cantly	2.Sever- ity of deter- ioration increase	3.Sig- nificance of cost of the damage	4.Root of environ- mental problem	5.Big- gest ob- stacle for environ- mental problem	
Total	1055	1126	990	1272	683	943	1091	954	1134	599	901	937	907	1126	638	
Environmental Conditions of Concern	1.Climate Change	465	374	403	427	156	172	156	157	168	71	146	107	127	130	44
	2.Biodiversity	114	151	73	89	24	181	212	124	114	22	130	146	90	97	29
	3.Land Use	93	113	79	126	77	117	151	119	126	68	151	164	138	157	89
	4.Pollution / Contamination	178	239	203	204	136	144	170	141	139	75	107	110	93	91	41
	5.Water Resources	79	113	73	96	28	152	187	164	183	69	138	172	153	126	59
	6.Population	51	43	51	118	88	36	44	42	86	58	61	56	61	105	50
	7.Food	7	14	16	13	6	27	29	47	30	10	33	33	58	33	22
	8.Lifestyles	14	11	16	52	43	28	33	36	80	58	35	37	39	106	80
	9.Global Warming Measures	9	10	21	24	15	23	34	40	44	32	25	32	29	34	23
	10.Environment and Economy	32	38	44	74	71	40	50	57	105	85	35	41	66	133	103
	11.Environment and Society	13	20	11	49	39	23	25	27	59	51	40	39	53	114	98

(total number, red indicates rank 1, blue indicates rank 2)

An analysis of the results by the environmental condition of concern

- The most frequently cited rationale for selecting “climate change,” the top-ranked issue this year, was “the number of observable cases (frequency) increased significantly.” This was followed by “it is a fundamental problem with commonalities to many environmental issues.”
- Further, the most frequently cited rationale for selecting “population,” the environmental condition with the most advanced Environmental Doomsday Clock time, was “it is a fundamental problem with commonalities to many environmental issues.” This was followed by “it is the greatest factor slowing down the resolution of environmental problems.”(rationale for selecting #1 and #2 concerns)
- Similarly, the most frequently cited rationale for selecting “lifestyles,” “environment and economy,” or “environment and society” as one of the top three environmental condition of concern was “it is a fundamental problem with commonalities to many environmental issues.” Again, this was followed by “it is the greatest factor slowing down the resolution of environmental problems.” (rationale for selecting #1, #2, and #3 concerns)
- The most frequently cited rationale for selecting “biodiversity” as one of the top three environmental areas of concern was “the level of deterioration (intensity) worsened significantly.” This was followed by “the number of observable cases (frequency) increased significantly,” indicating a profound level of interest among respondents on the acute deterioration of the conditions.
- Overall, there were no significant differences in the selection rationales of the top three conditions of concern of the Environmental Doomsday Clock. It appears that respondents ranked the three conditions based on the severity and degree of the environmental problem and related phenomenon, and the depth of the root cause behind the issue.

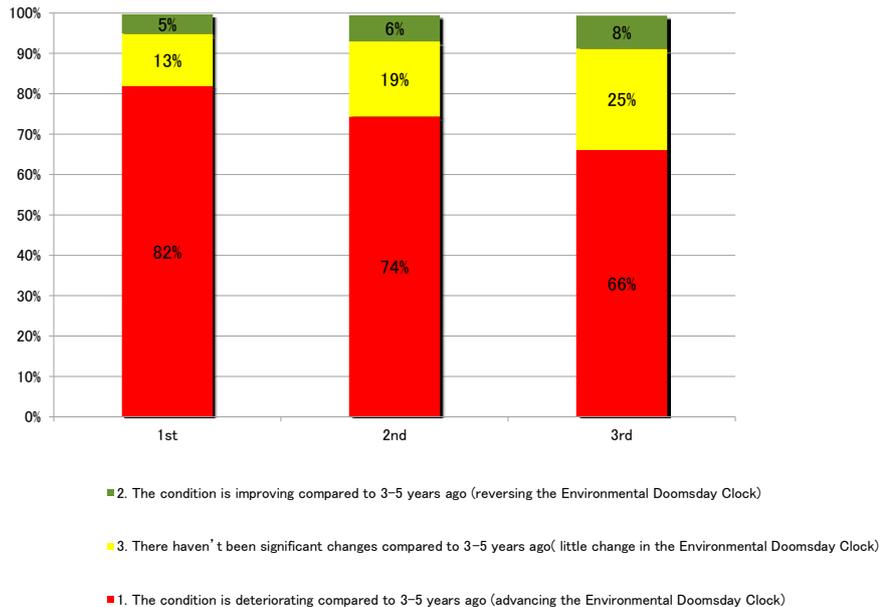
## D. Expected the recognition of the global environment in the near future

1 -3.

For each of the three categories you selected in Question 1-1, please select one of the following items that best describes its current condition and enter the corresponding number.

1. The condition is deteriorating compared to 3-5 years ago (advancing the Environmental Doomsday Clock)
2. The condition is improving compared to 3-5 years ago (reversing the Environmental Doomsday Clock)
3. There haven't been significant changes compared to 3-5 years ago( little change in the Environmental Doomsday Clock)

Opinions on the Current Condition of Items Ranked 1<sup>st</sup> through 3<sup>rd</sup>



- An overwhelming majority of respondents indicated that conditions were deteriorating for all three classes of conditions, with 82%, 74%, and 66% making that selection respectively. This result suggests that the criteria for selecting the top three conditions of concern depends on the degree in which respondents find that the conditions are deteriorating.

- A small percentage of respondents indicated that the conditions were improving for the first, second, and third-ranked conditions, at 5%, 6%, and 8% respectively. (However, taking into consideration the comments provided in Question 2, the improved conditions were limited to the respondents' respective regions, and in every case, the perception was that conditions were deteriorating on a global scale.)

## 2.A trend study on the descriptive answers

### Question 2-1-1. Analysis of Comments

If no measures are implemented to counter the issue you selected, what do you foresee happening to the environment in the country or region where you reside, or to the global environment, in 10 years from now? Please indicate what conditions you foresee.

Analysis of Comments for Question 2-1-1	Eruption of serious societal problems; migration, cost increases, epidemics, food problems, etc.	Increase in frequency and severity of weather abnormalities; rise in greenhouse gases	Increase in extreme phenomena and disasters; flooding, droughts, decrease in biodiversity, extinction of species, sea level rises, etc.	Reaching the tipping point; may surpass the point of no return
total number	1304	1208	912	47

(total number, red indicates rank 1, blue indicates rank 2)

- Overall, respondents most frequently wrote comments anticipating the “eruption of serious societal problems.” This was followed by “increased weather abnormalities” and “increase in extreme disasters.” This was a general pattern, and did not have a strong correlation with how respondents made their selections of the environmental condition of concern in determining the Doomsday Clock.

- The comments suggested that the respondents followed a thought process that assigned a causal relationship between #1. the increase in weather abnormalities, #2. the increase in extreme disasters, and #3. The eruption of serious societal problems. (Whether or not respondents made a comment on #2 depended on if they provided a detailed explanation of the mechanism leading to #3; it is deduced that there is not a fundamental difference.) On the tipping point, a little under 50 respondents indicated that “while they could not say definitively, it would be surpassed in 10 years.” Furthermore, a small number of respondents indicated that while the global environment continued to deteriorate, the environment in the region where they resided would improve.

### Question 2-1-2. Analysis of Comments

What actions do all of us need to take now in order to prevent the conditions you described above from materializing? Please write your thoughts freely

Analysis of Comments for Question 2-1-1	<b>Governments and international organizations;</b> political decision-makers, global action	<b>Recognition for environmental problems and the improvement in awareness;</b> education	<b>Transformation of the world economy;</b> industrial production and consumption	<b>Lifestyle changes;</b> individual value systems	<b>Suppression of greenhouse gases;</b> increasing efficiency and reducing utilization of devices, like fossil fuel reduction vehicles
total number	940	569	439	396	360

<b>Societal responses,</b> including nongovernmental organizations	<b>Adaptation of regulatory and tax systems</b>	<b>Mitigation strategies</b>	<b>Technology;</b> research, development, and transfers	<b>Adaptation strategies</b>	<b>Implementation of renewable energies</b>
346	344	153	152	149	141

(total number, red indicates rank 1, blue indicates rank 2, yellow indicates rank 3)

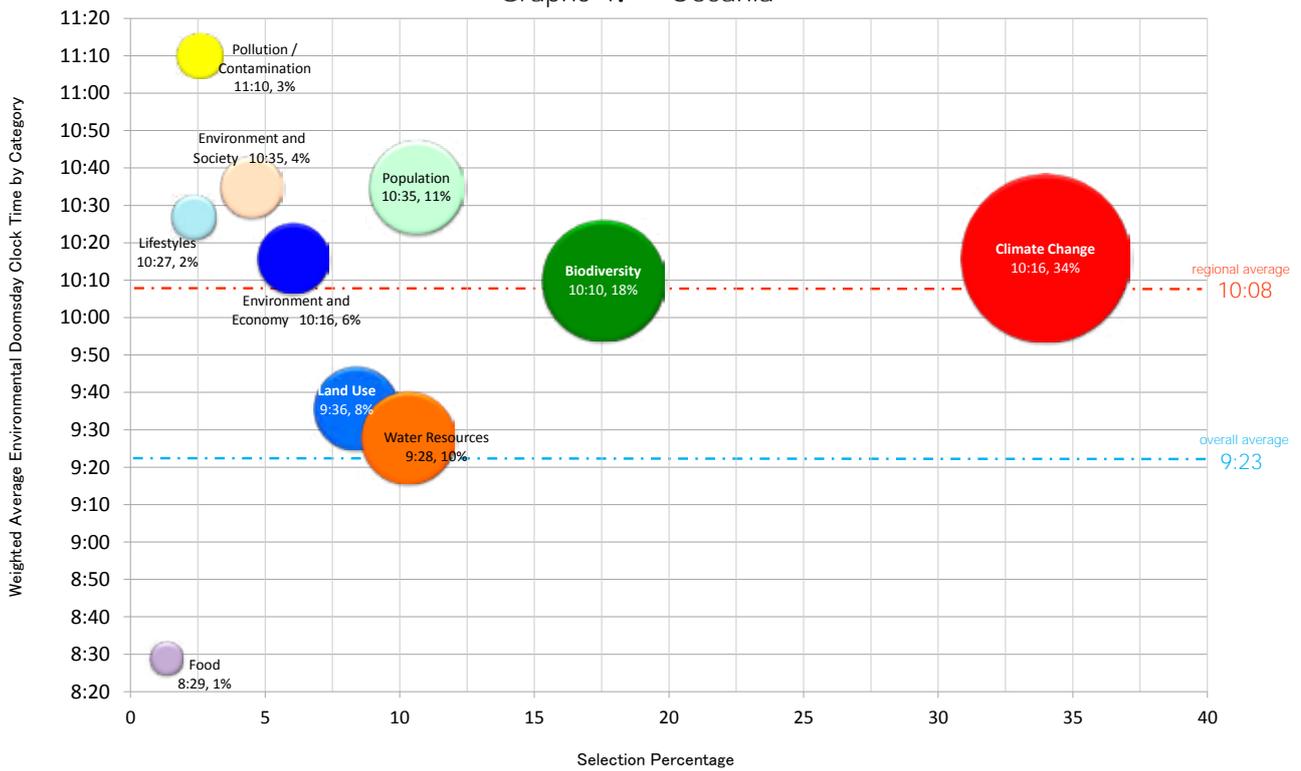
- Overall, respondents most frequently wrote comments expressing their hopes and expectations for the success of “governments and international organizations,” then “recognition for environmental problems and the improvement in awareness” stemming from education and public relations efforts. These were followed by “transformation of the world economy,” “lifestyle changes,” “suppression of greenhouse gases,” “societal responses,” “adaptation of regulatory and tax systems.” There were relatively few comments directly addressing “Mitigation strategies,” “Adaptation strategies,” the “research, development, and transfers of technologies,” and the “implementation of renewable energies.”

- In analyzing the thought process of the respondents, many comments envisioned a scenario in which the success of “governments and international organizations” led to the transformation of the economy into one which valued the environment, and specific environmental measures were implemented through the “adaptation of regulations and tax systems,” “suppression of greenhouse gases,” “Mitigation strategies,” “Adaptation strategies,” and the “research, development, and transfer of technologies.” Further, many comments expressed hope for improvements in the environment by correcting individual and societal thinking and belief through the “recognition for environmental problems and the improvement in awareness” and “societal responses,” and further, by appealing to governments to take action.

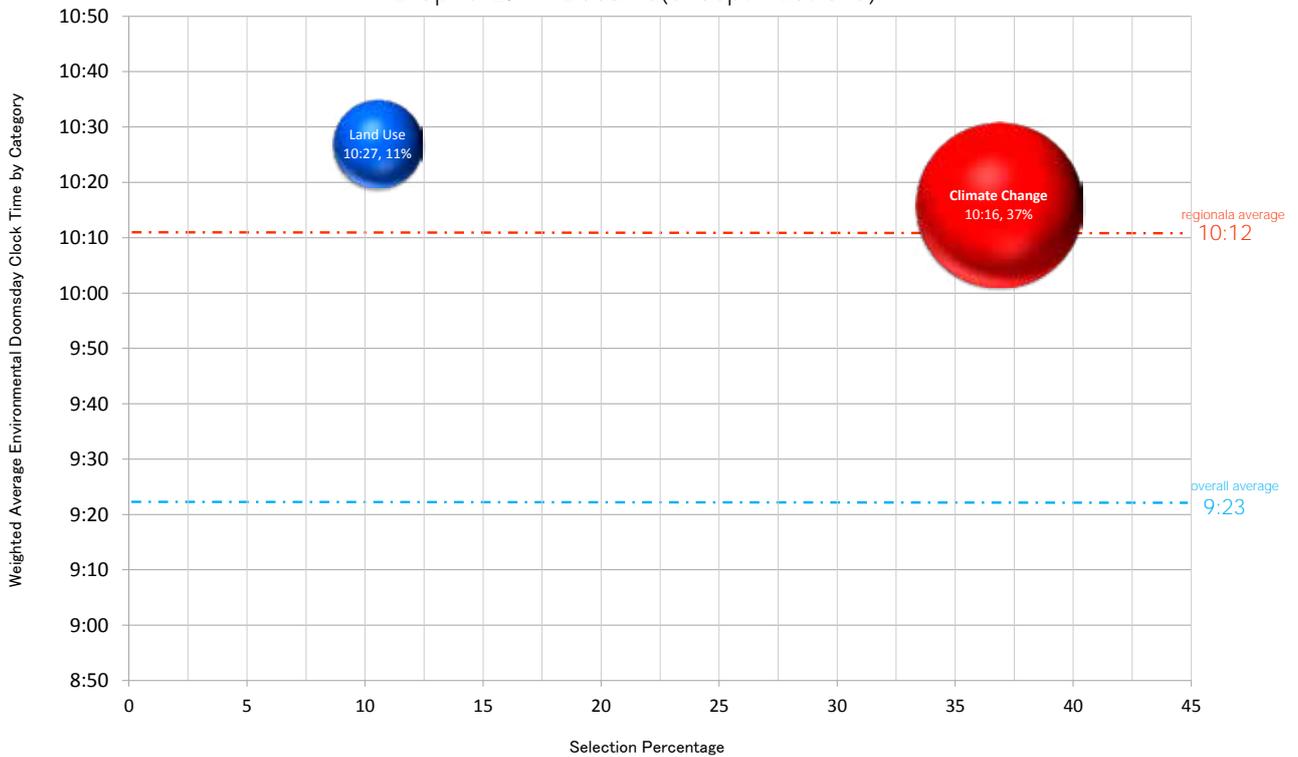
\*The description answer parts will be placed in our web site from this year. Therefore, as for the description answer parts such as 2-1-1, 2-1-2, 2-2 (free description), please refer to our web site, (<http://www.af-info.or.jp/questionnaire/result.html>).

# Reference) Distribution of the Environmental Conditions of Concerns by regions

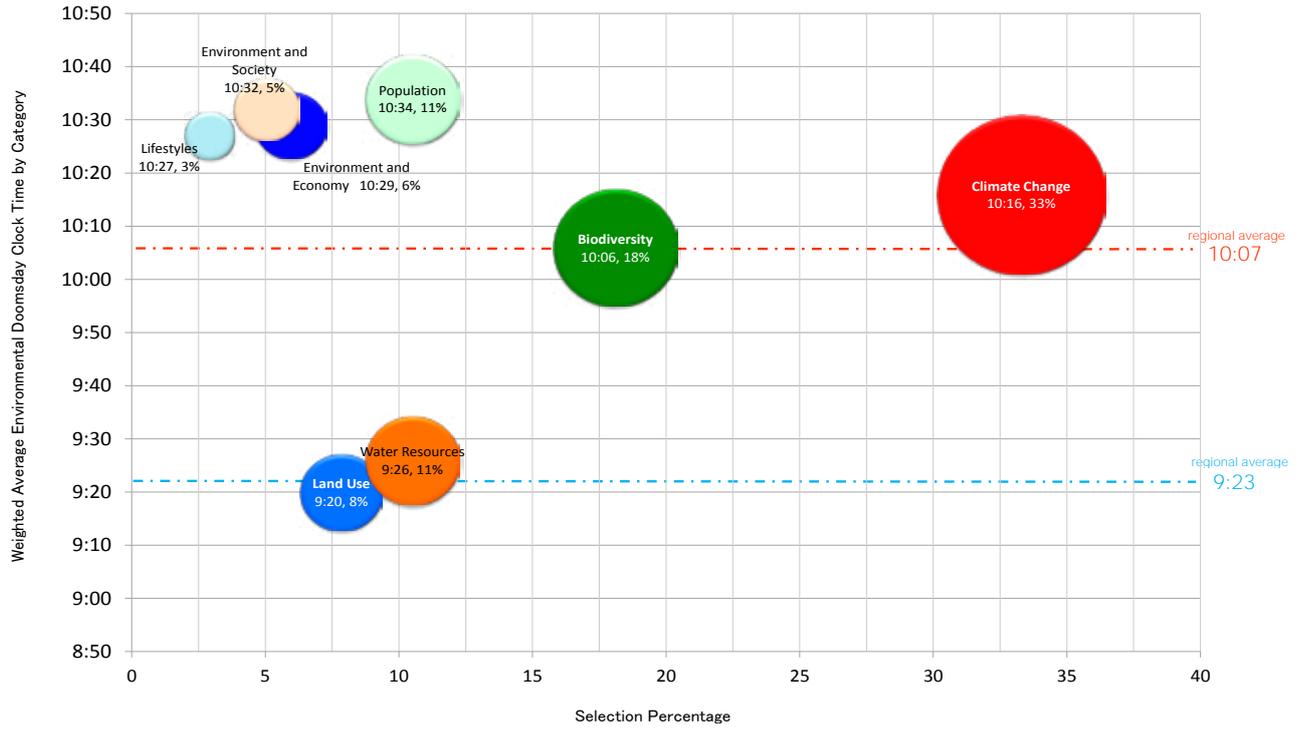
Graph5-1. Oceania



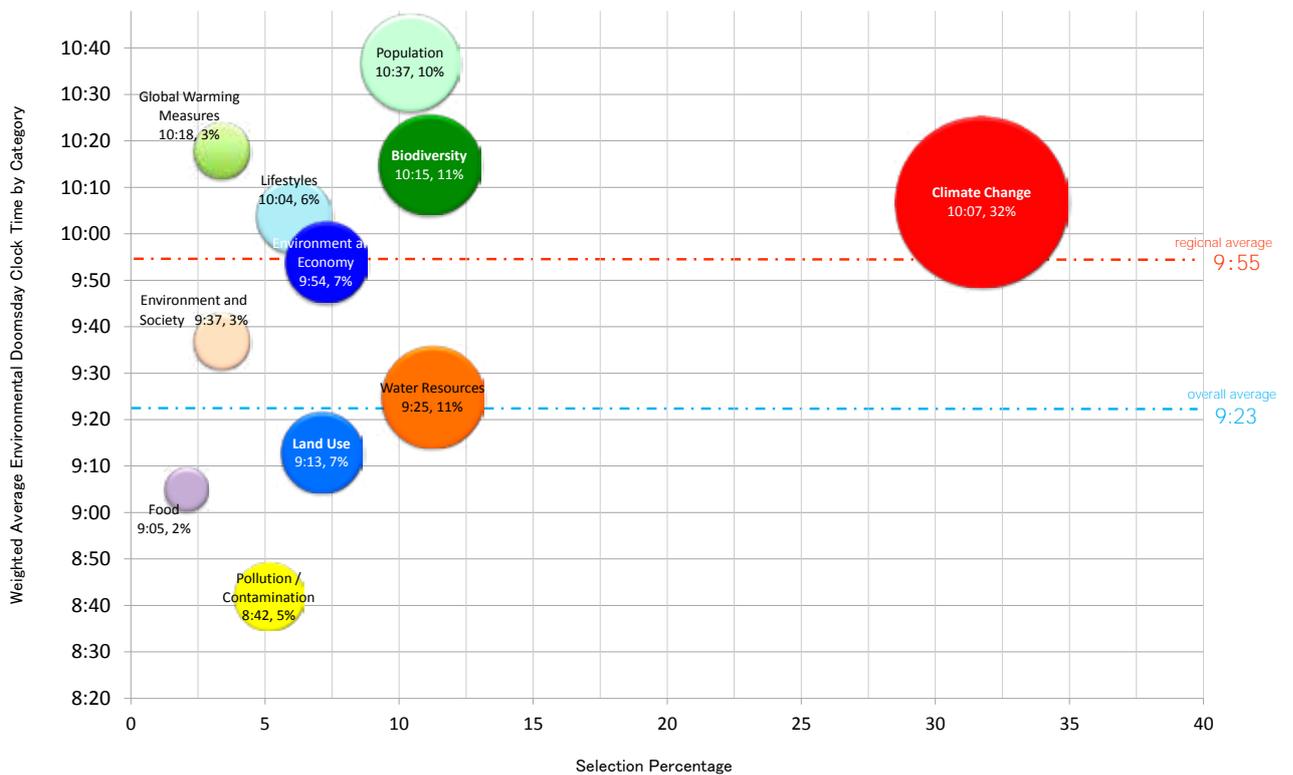
Graph5-2. Oceania(except Australia)



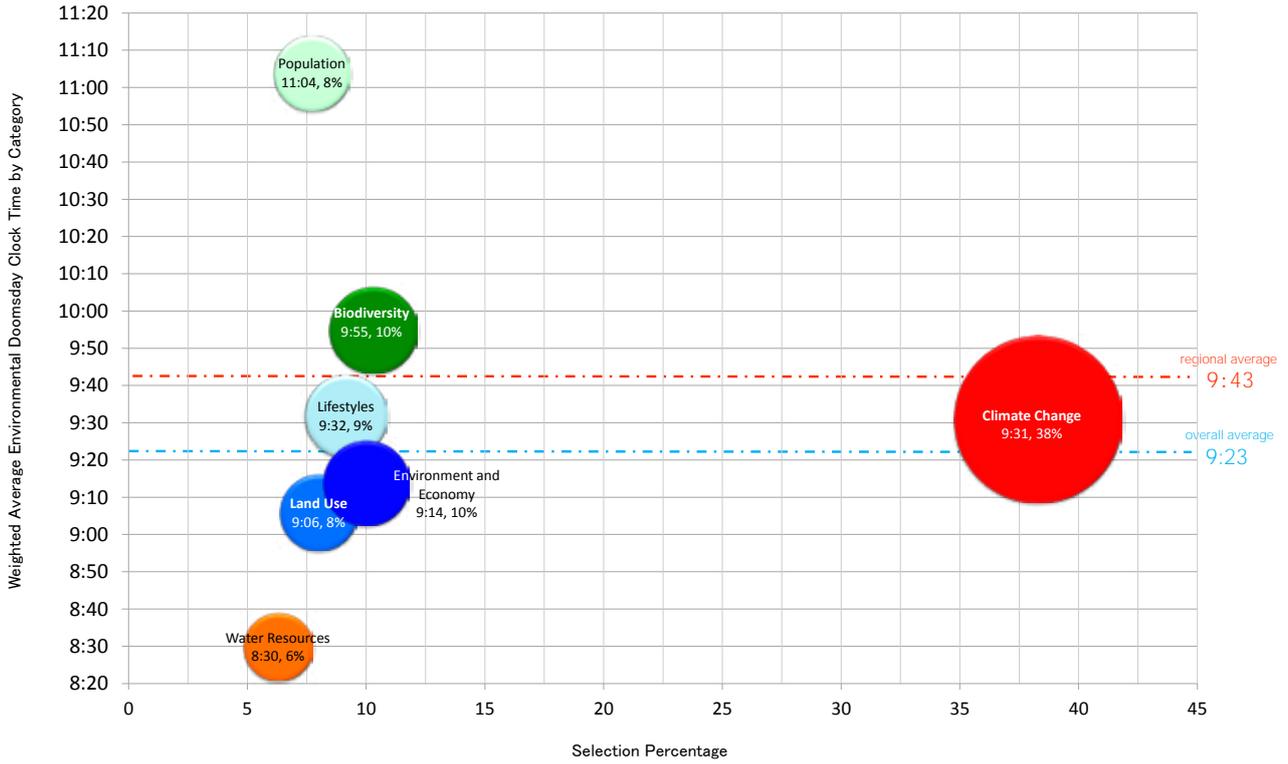
Graph5-3. Australia



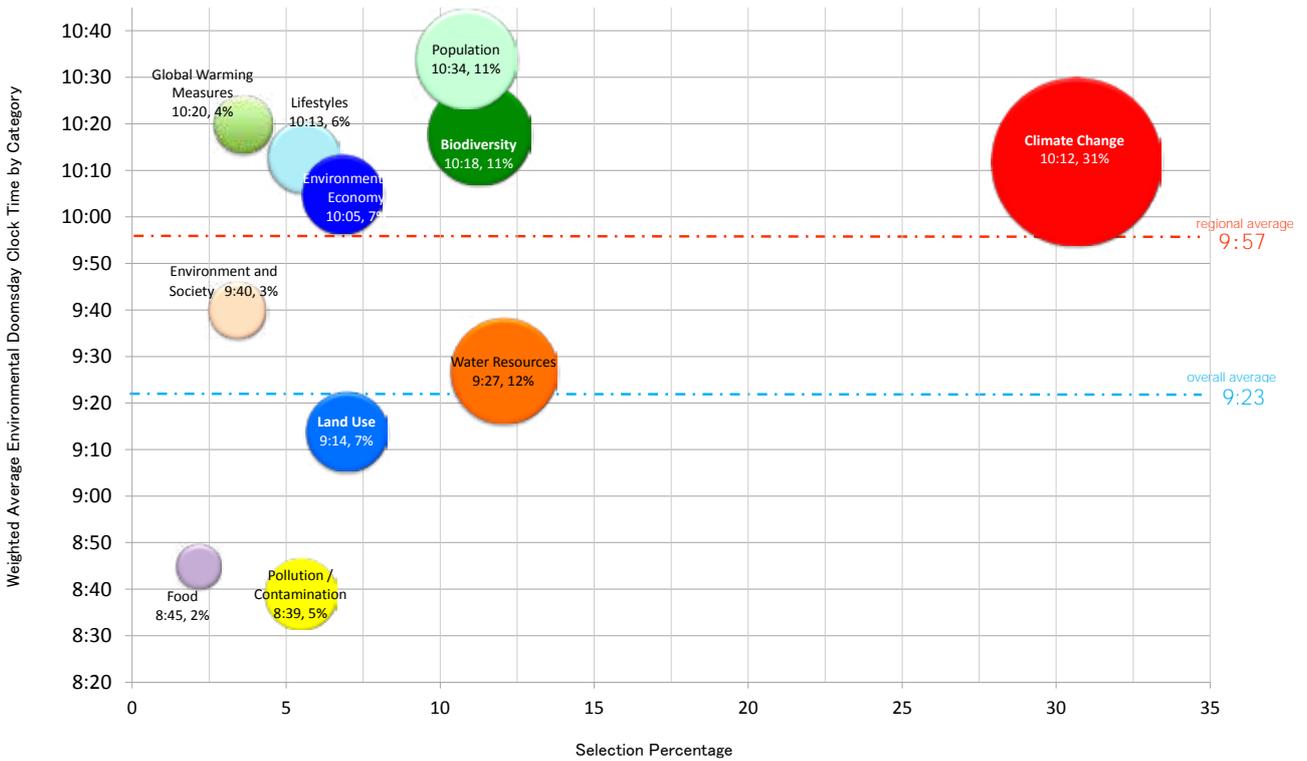
Graph6-1. United States & Canada



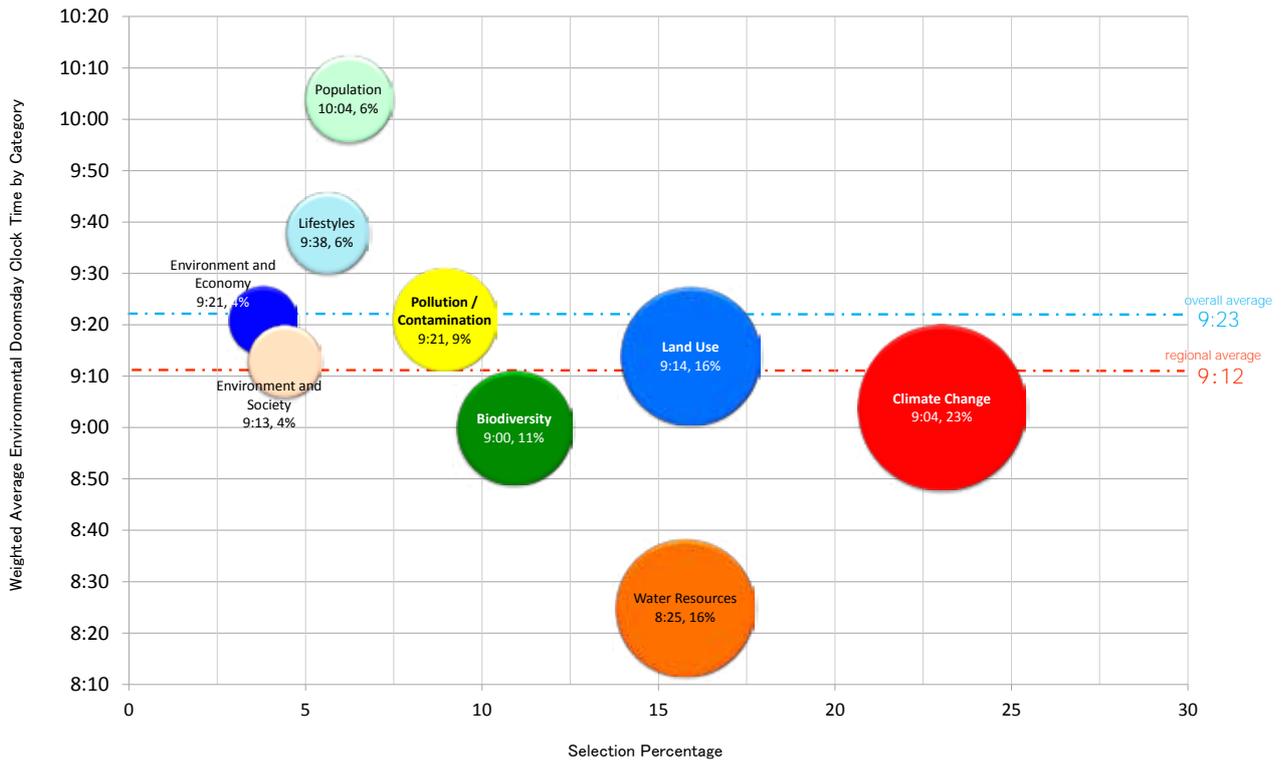
Graph6-2. Canada



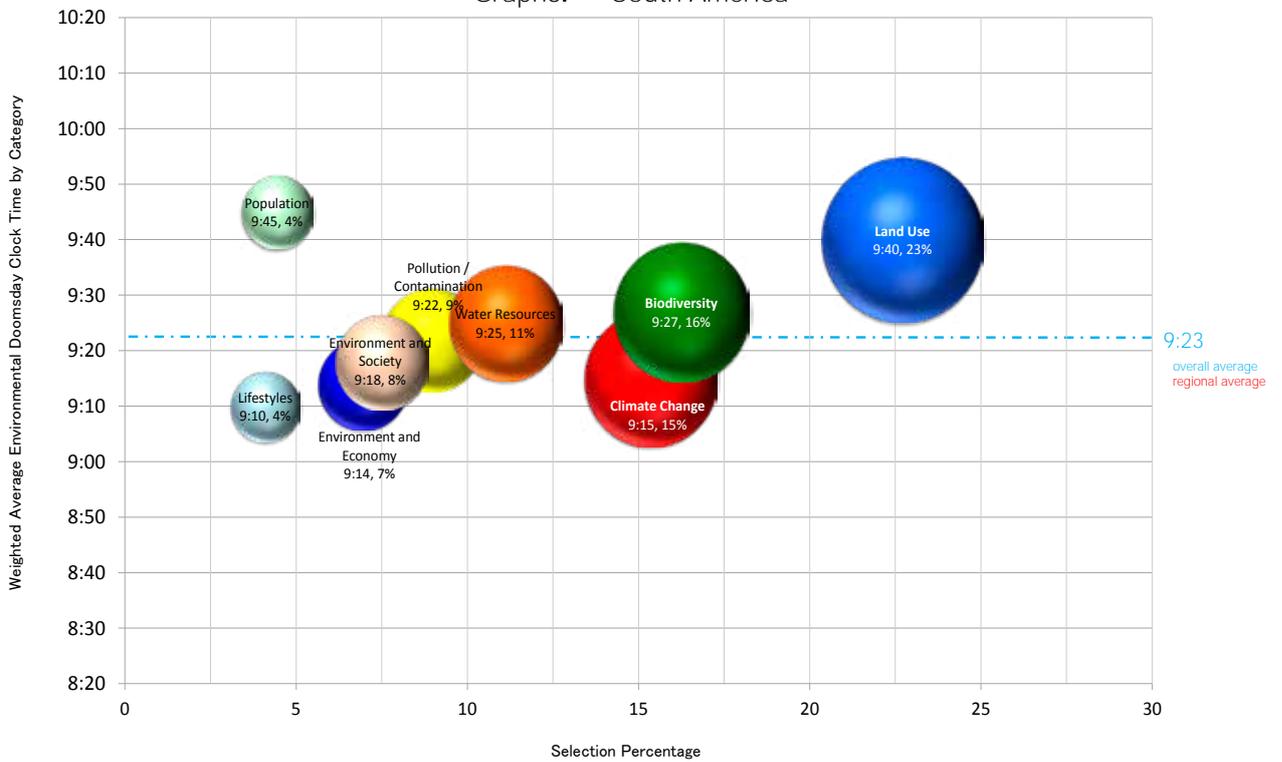
Graph6-3. USA



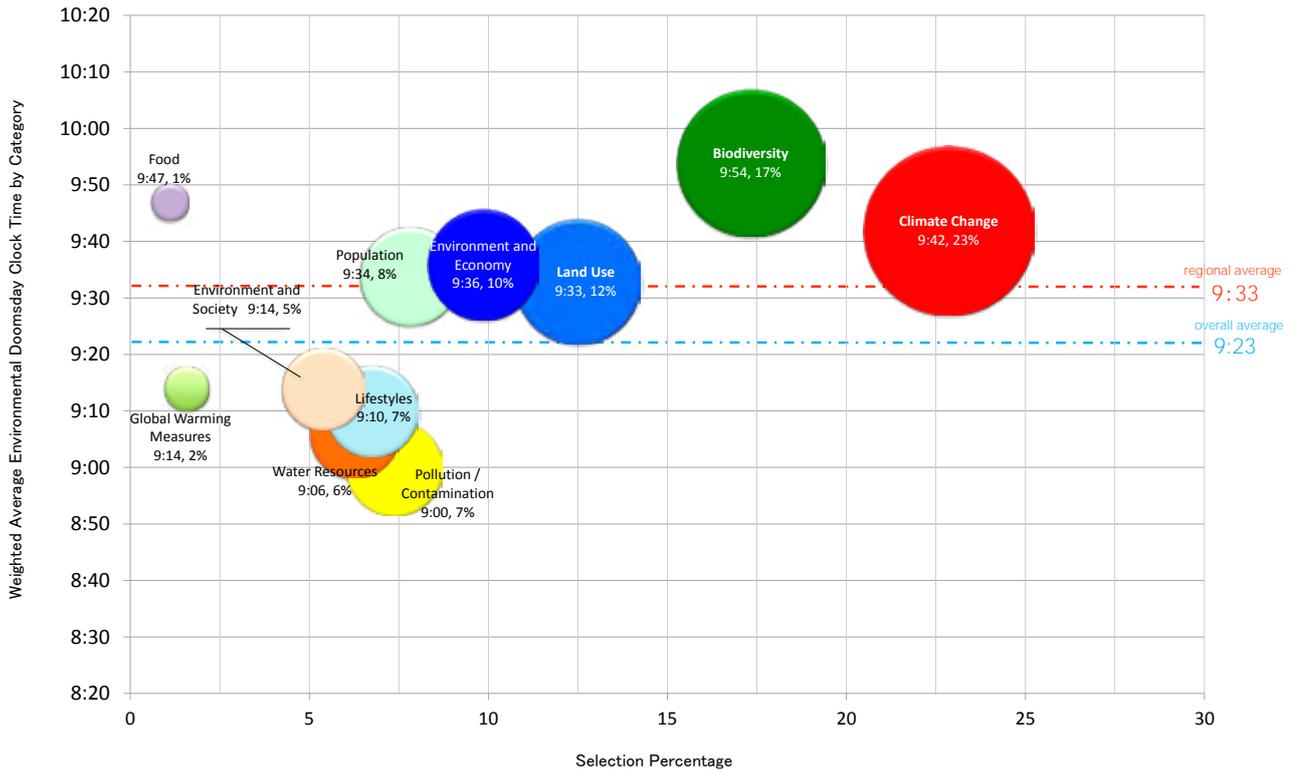
Graph7. Central America, Cribbean countries



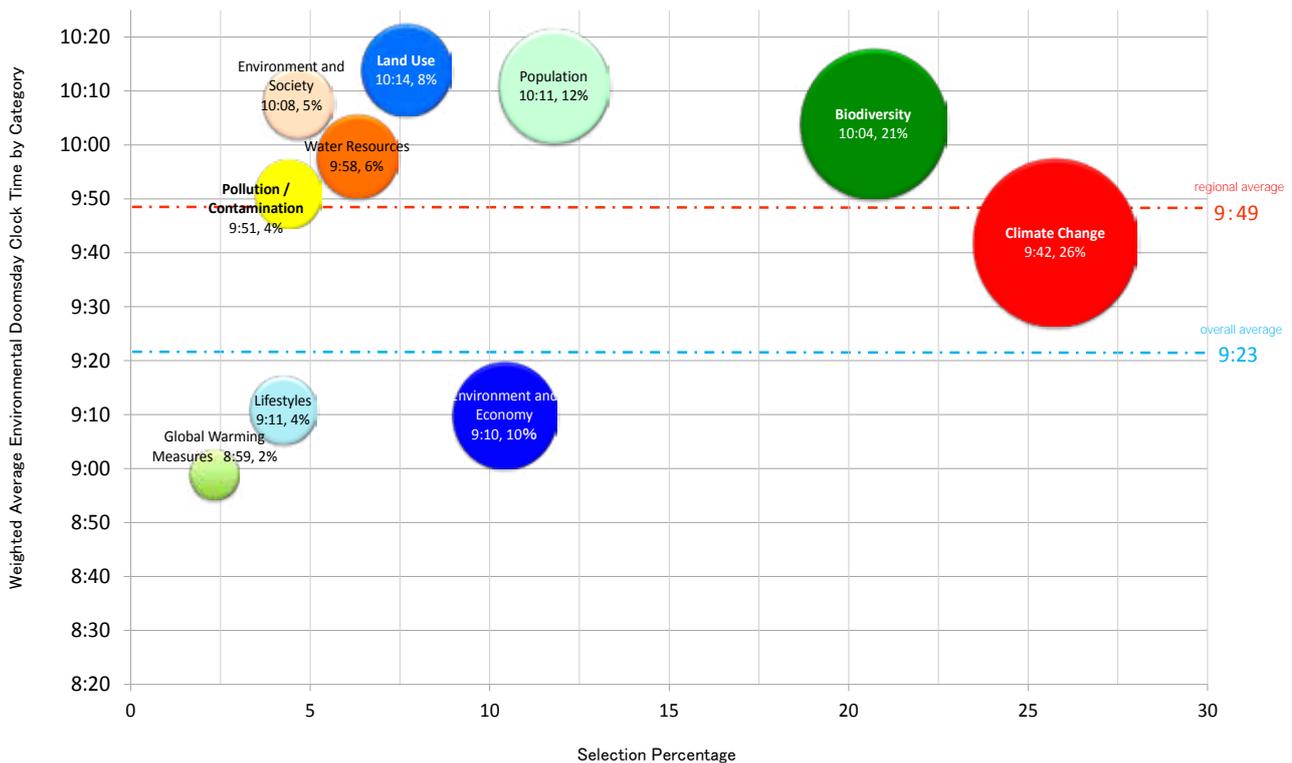
Graph8. South America



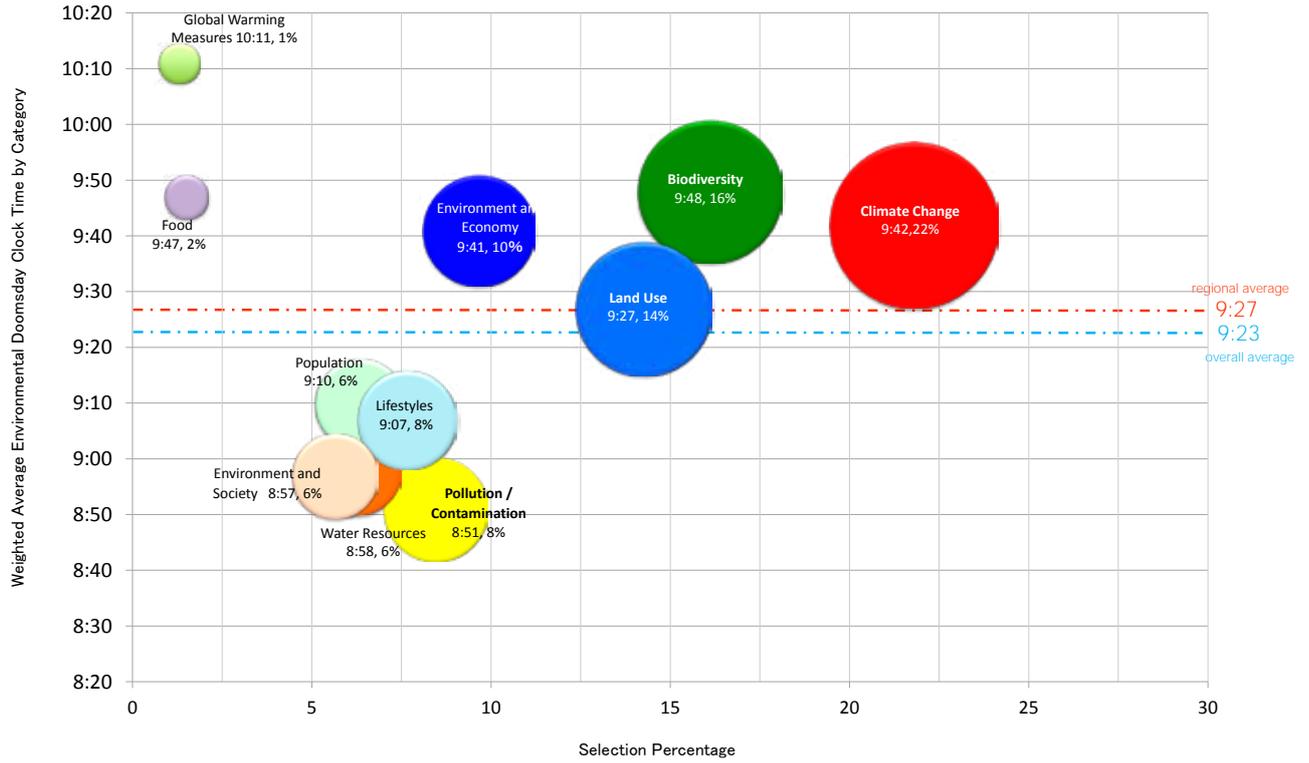
Graph9-1. Western Europe



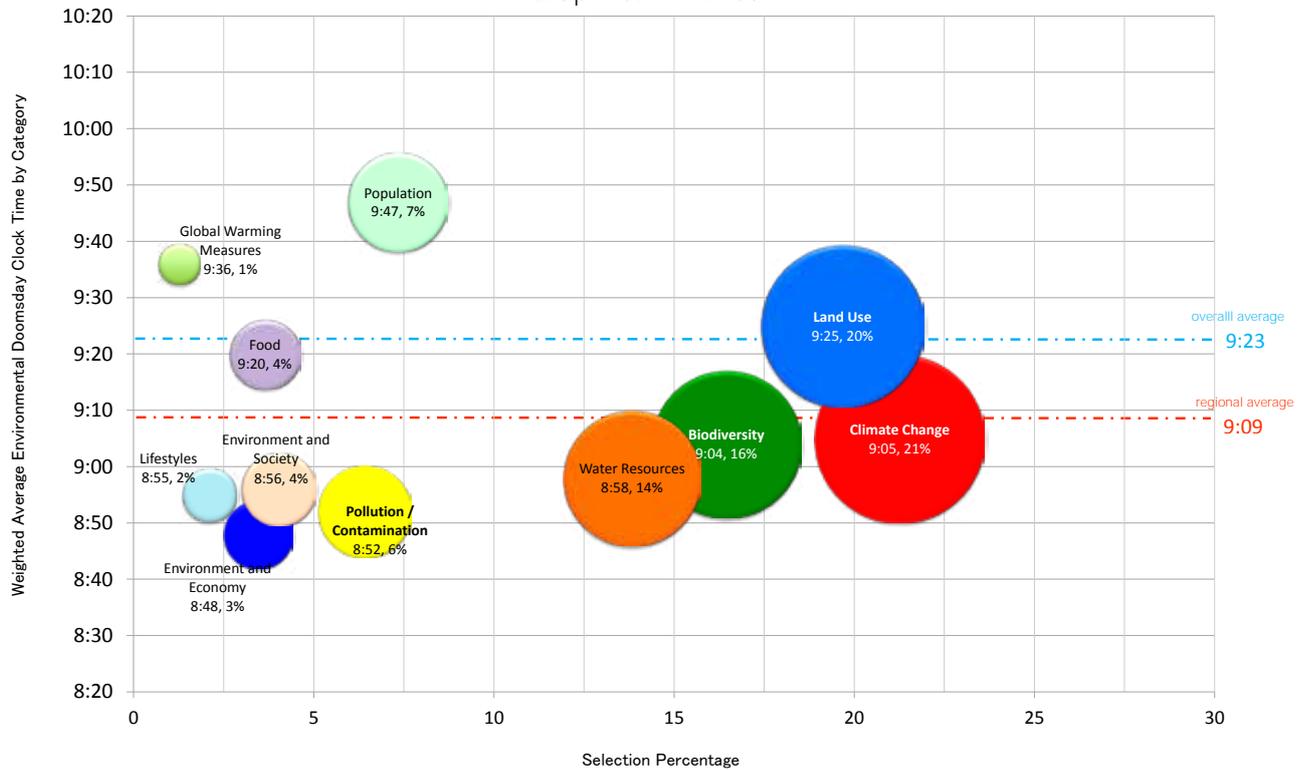
Graph9-2. UK



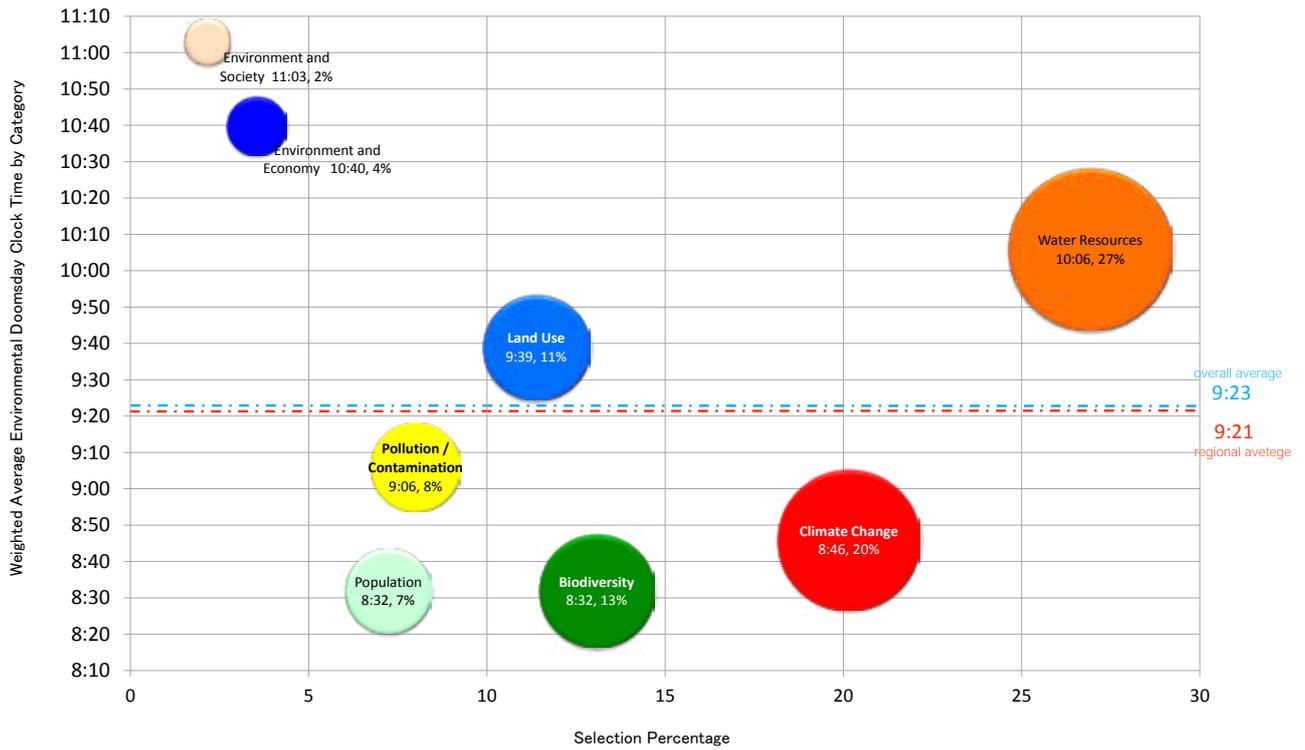
Graph9-3. Western Europe(except UK)



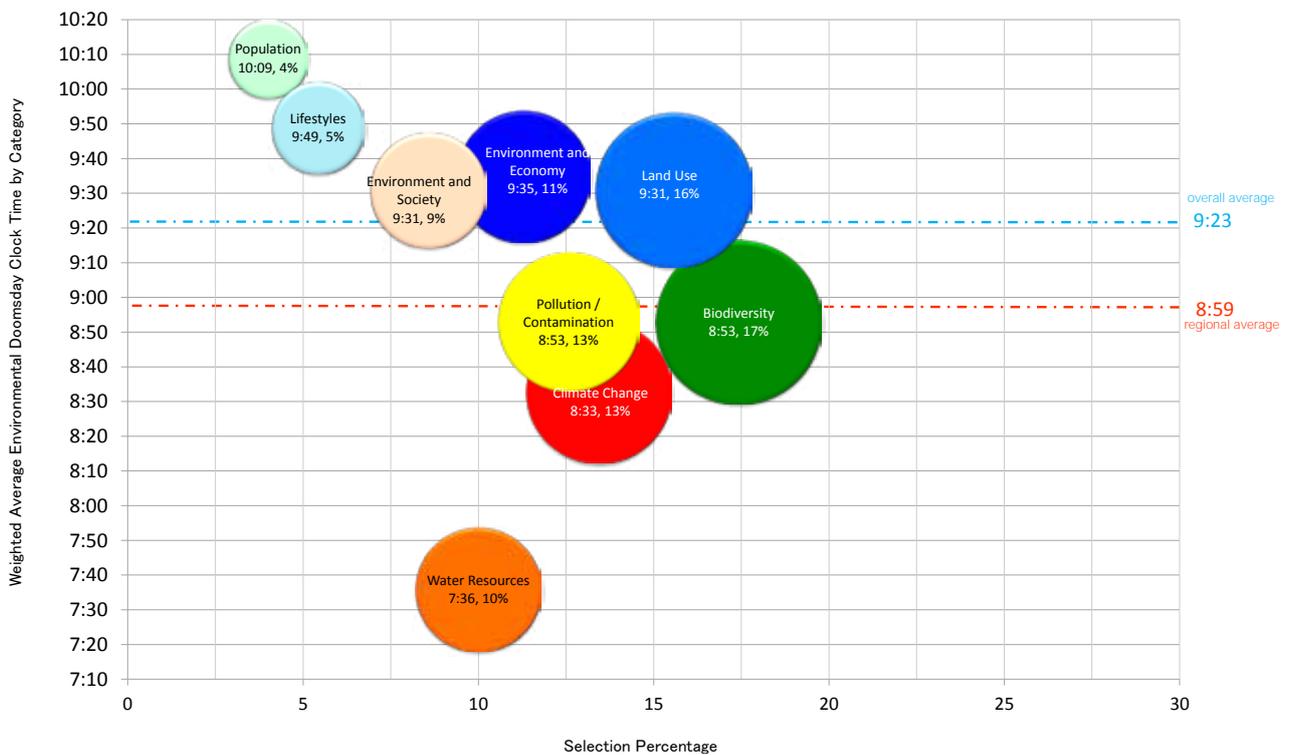
Graph10. Africa



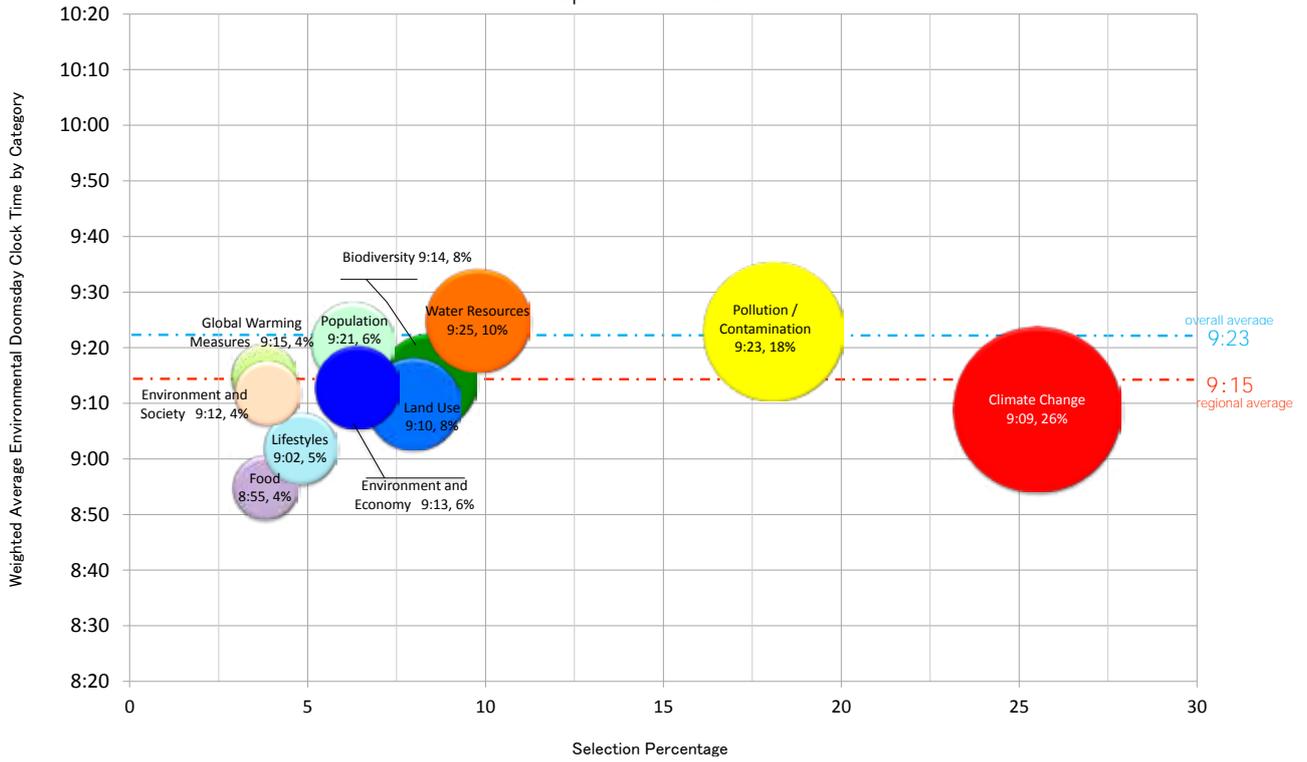
Graph11. Middle East



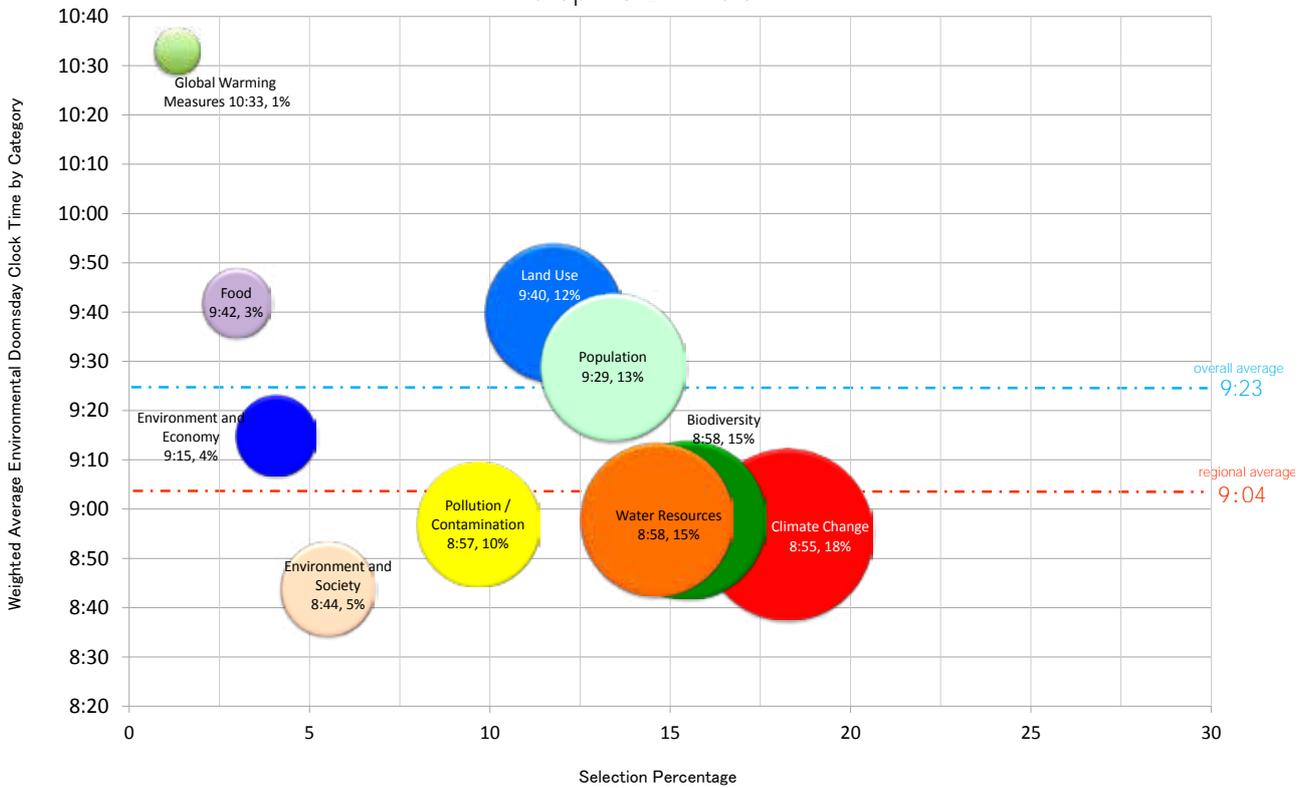
Graph12. Eastern Europe & former Soviet Union



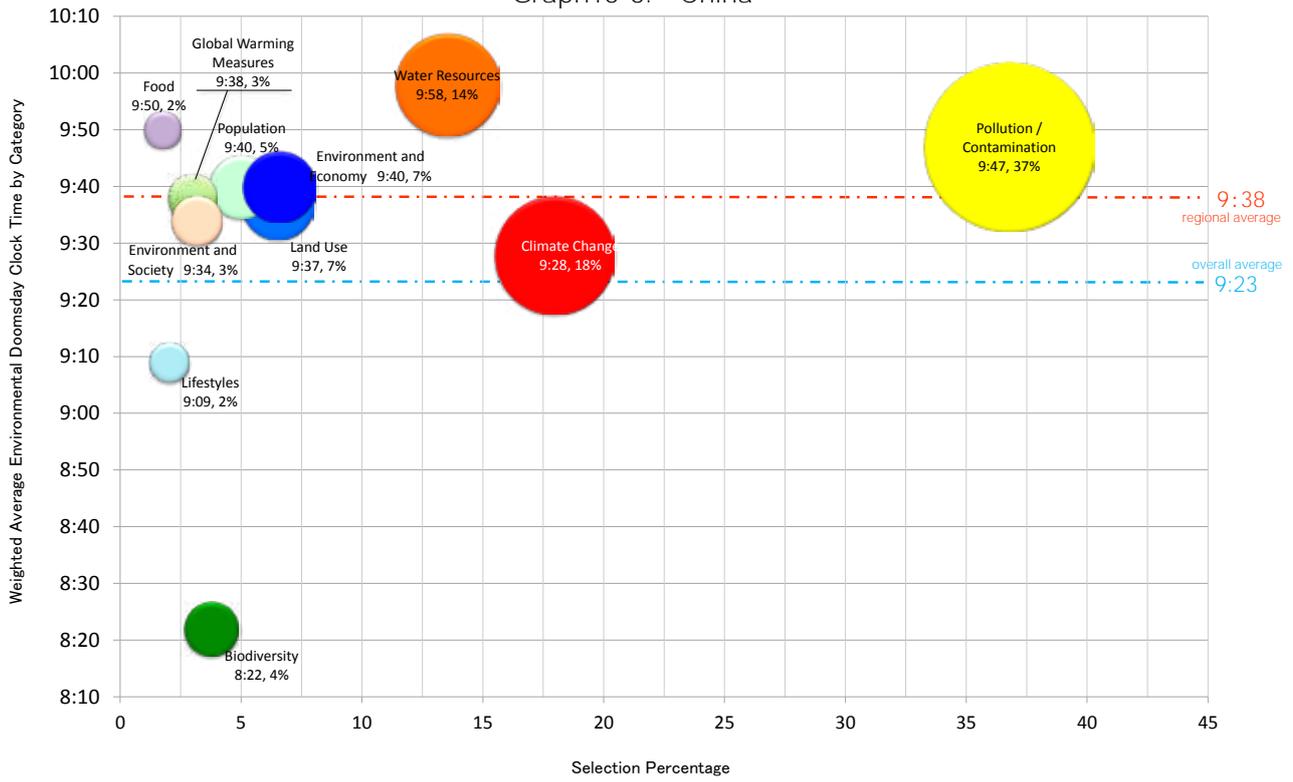
Graph13-1. Asia



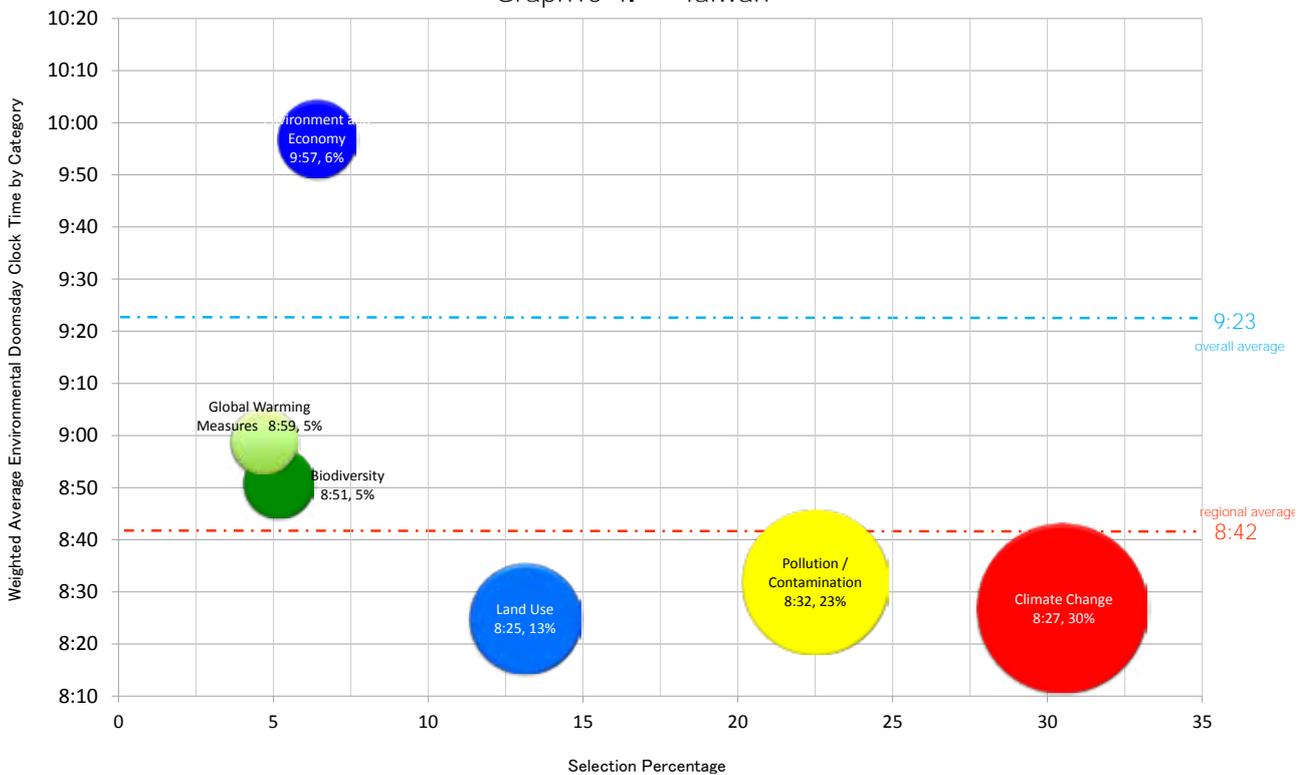
Graph13-2. India



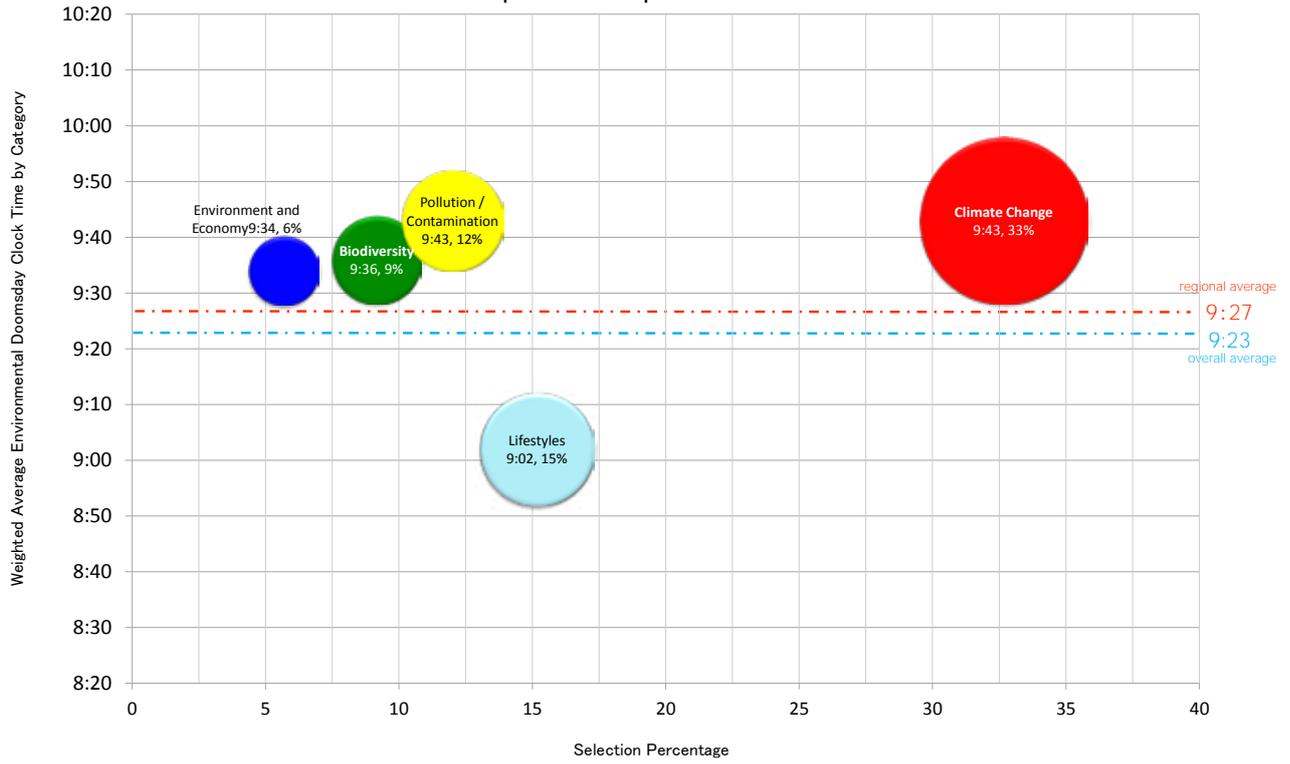
Graph13-3. China



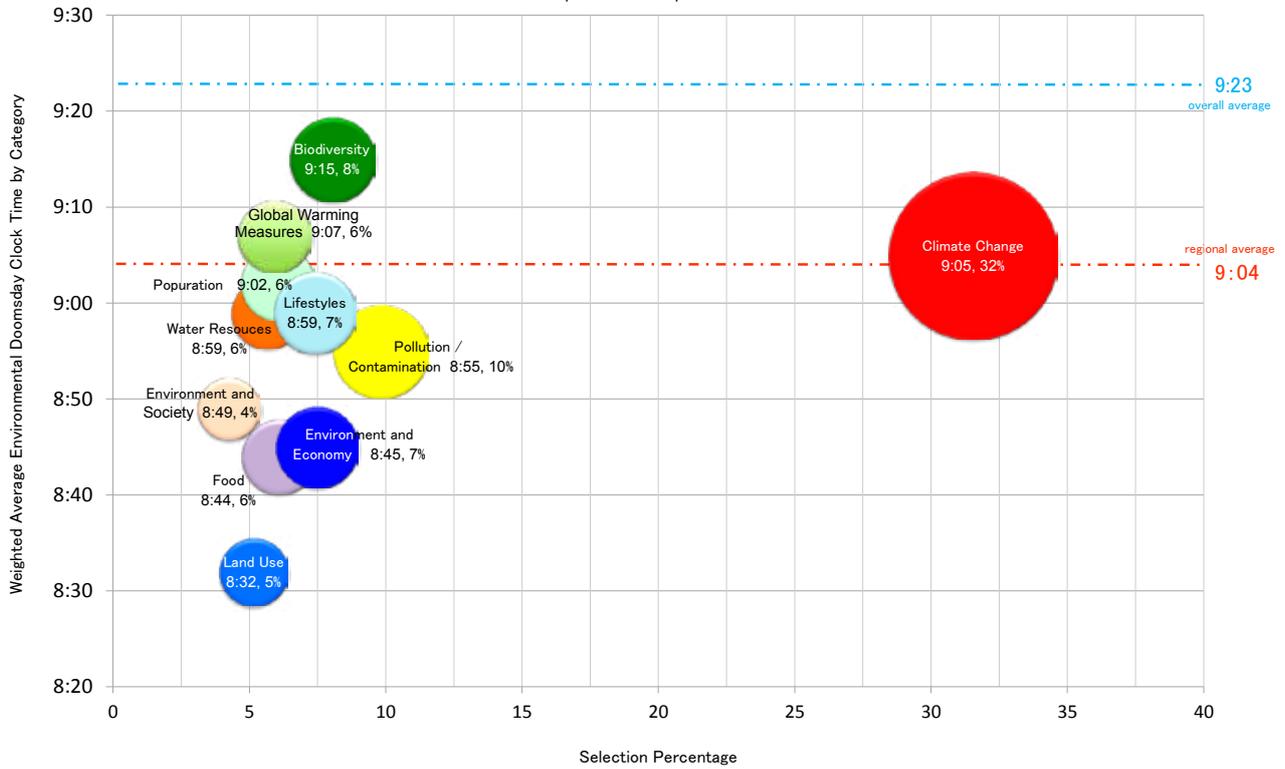
Graph13-4. Taiwan



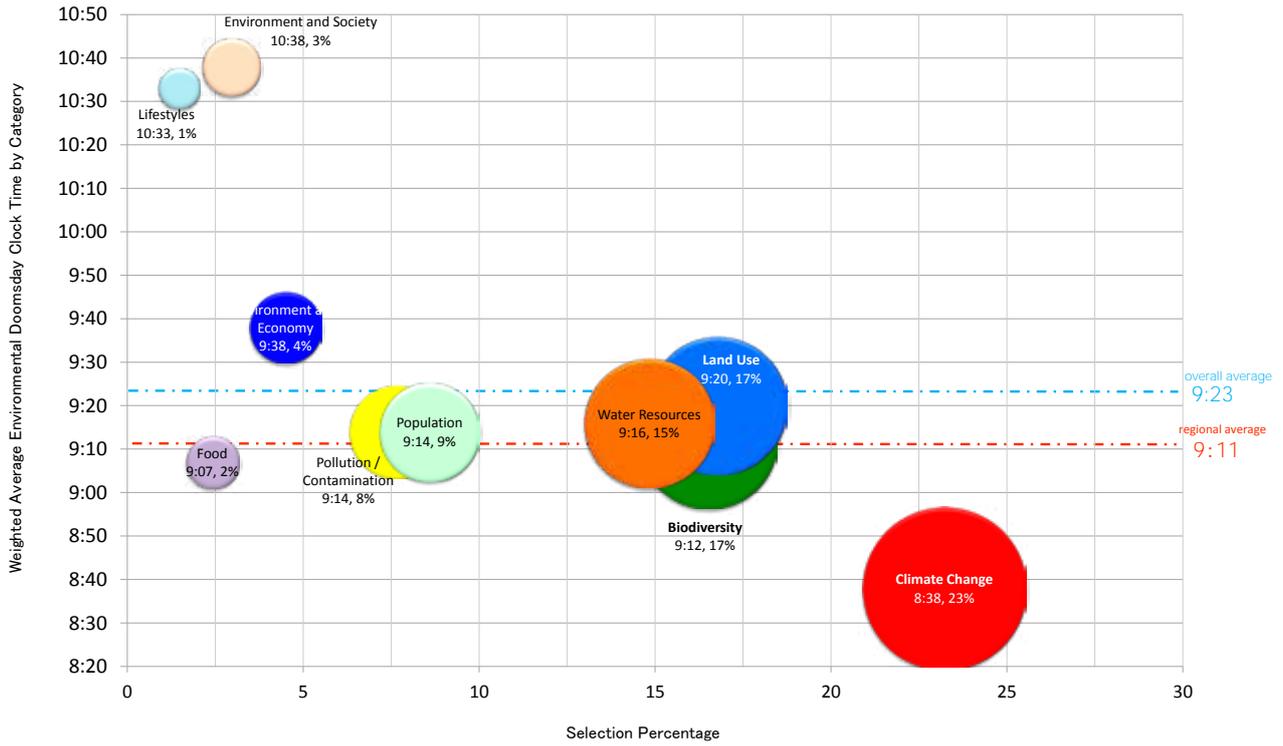
Graph13-5. Republic of Korea



Graph13-6. Japan



Graph13-7. Asian Region(except India,China,Taiwan,Korea,Japan)



# IV . Deta

## Number of Countries Surveyed

Region	Country		
Africa	ALGERIA	7	
	BENIN	5	
	BOTSWANA	3	
	BURKINA FASO	6	
	BURUNDI	3	
	CAMEROON	8	
	CHAD	1	
	COTE DIVOIRE	3	
	DEMOCRATIC REPUBLIC OF THE CONGO	4	
	EGYPT	3	
	EQUATORIAL GUINEA	2	
	ETHIOPIA	4	
	GABON	1	
	GAMBIA	1	
	GHANA	4	
	GUINEA	3	
	GUINEA-BISSAU	1	
	KENYA	23	
	MADAGASCAR	19	
	MALI	3	
	MAURITANIA	3	
	MAURITIUS	3	
	MOROCCO	5	
	MOZAMBIQUE	2	
	NAMIBIA	2	
	NIGER	1	
	NIGERIA	16	
	REPUBLIC OF THE CONGO	5	
	REUNION	2	
	RWANDA	3	
	SENEGAL	4	
	SEYCHELLES	1	
	SIERRA LEONE	1	
	SOUTH AFRICA	25	
	SUDAN	2	
	SWAZILAND	1	
	TANZANIA	6	
	TOGO	2	
	TUNISIA	8	
	UGANDA	11	
	ZAMBIA	4	
	ZIMBABWE	4	
	<b>Africa Total</b>	<b>215</b>	
	Asian	AFGHANISTAN	2
		BANGLADESH	9
		BHUTAN	5
		BRUNEI	1
CAMBODIA		4	
CHINA		332	
HONG KONG		6	
INDIA		90	
INDONESIA		14	
JAPAN		460	
Republic of Korea		60	
LAOS		1	
MALAYSIA		12	
MALDIVES		1	
MYANMAR		1	
NEPAL		17	
PAKISTAN		14	
PHILIPPINES		17	
SINGAPORE		5	
SRI LANKA		12	
TAIWAN	64		
THAILAND	12		
VIETNAM	17		
<b>Asian Total</b>	<b>1156</b>		

Region	Country	Total
Oceania	AUSTRALIA	79
	COOK ISLANDS	1
	FIJI	4
	MICRONESIA	2
	NEW ZEALAND	9
	PAPUA NEW GUINEA	1
	SAMOA	2
<b>Oceania Total</b>	<b>98</b>	
Western Europe	AUSTRIA	5
	BELGIUM	4
	DENMARK	5
	FINLAND	5
	FRANCE	27
	GERMANY	27
	GIBRALTAR	1
	GREECE	9
	ICELAND	2
	IRELAND	4
	ITALY	31
	MALTA	2
	NORWAY	5
	PORTUGAL	8
	SPAIN	26
	SWEDEN	4
SWITZERLAND	25	
THE NETHERLANDS	14	
UK	73	
<b>Western Europe Total</b>	<b>277</b>	
Eastern Europe & former Soviet Union	ALBANIA	1
	ARMENIA	4
	BULGARIA	4
	CROATIA	4
	CZECH	2
	ESTONIA	3
	GEORGIA	2
	HUNGARY	8
	KAZAKHSTAN	2
	LITHUANIA	2
	MACEDONIA	1
	MONTENEGRO	2
	POLAND	5
	ROMANIA	3
	RUSSIA	14
	SERBIA	3
SLOVAKIA	2	
SLOVENIA	4	
UKRAINE	5	
<b>Eastern Europe &amp; former Soviet Union Total</b>	<b>71</b>	
Middle East	BAHRAIN	2
	CYPRUS	3
	IRAN	14
	IRAQ	2
	ISRAEL	5
	JORDAN	12
	KUWAIT	2
	LEBANON	2
	OMAN	2
	PALESTINE	1
	SAUDI ARABIA	2
	SYRIA	1
	TURKEY	10
	UNITED ARAB EMIRATES	5
	YEMEN	1
	<b>Middle East Total</b>	<b>64</b>

Region	Country	Total
United States & Canada	CANADA	35
	USA	215
<b>United States &amp; Canada Total</b>	<b>250</b>	
Central America, Caribbean countries	BELIZE	2
	COSTA RICA	11
	CUBA	3
	DOMINICAN REPUBLIC	3
	EL SALVADOR	1
	GUADELOUPE	1
	GUATEMALA	8
	JAMAICA	5
	MARTINIQUE	1
	MEXICO	21
NICARAGUA	1	
PANAMA	4	
PUERTO RICO	1	
SINT EUSTATIUS	1	
TRINIDAD AND TOBAGO	3	
TURKS AND CAICOS ISLANDS, W.I.	2	
<b>Central America, Caribbean countries Total</b>	<b>68</b>	
South America	ARGENTINA	24
	BOLIVIA	7
	BRAZIL	39
	CHILE	9
	COLOMBIA	25
	ECUADOR	11
	FRENCH GUIANA	1
	GUYANA	1
	PARAGUAY	4
	PERU	13
URUGUAY	5	
VENEZUELA	5	
<b>South America Total</b>	<b>144</b>	
<b>Total</b>	<b>2343</b>	

### Q 1. Awareness of the Crisis Facing Human Survival — Environmental Doomsday Clock

In Table 1, environmental issues to be taken into account are shown. Keeping in mind the problems that the environment faces at a global level, please select the three most pressing issues for the country or the region where you reside. Then, please prioritize them in the order of importance. Lastly, for each item, select a time using hours and minutes between 0:01 to 12:00, to indicate the level of crisis for that issue. For the purposes of calculating results, please select your times in units of 10 minutes. If you wish to suggest another category, please do so under item "12. Others."

#1-Ranked Issue

Unit: %

	Overall	Oceania			North America			Central America, Caribbean countries	South America	Western Europe		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)							
	[2343]	Oceania (excl. Australia)		Australia	Canada		United States			U.K.						Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)	
		[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Climate Change	35	56	63	54	48	63	45	29	19	31	36	30	29	31	19	37	52	23	17	42	48	33
2. Biodiversity	10	12	0	15	10	6	10	13	18	16	22	14	16	11	19	6	4	15	2	6	8	15
3. Land Use	10	5	11	4	5	6	5	19	27	12	4	14	20	6	14	6	4	10	2	14	0	18
4. Pollution/ Contamination	14	1	5	0	2	0	2	4	9	6	3	7	3	3	9	23	9	8	56	29	8	5
5. Water Resources	8	5	0	6	8	3	9	13	7	5	3	5	13	32	9	5	2	11	7	0	0	13
6. Population	7	9	16	8	11	9	11	6	3	9	15	6	10	9	4	7	5	19	5	0	0	11
7. Food	1	1	5	0	1	0	1	0	0	1	0	1	1	0	0	2	3	3	1	0	0	1
8. Lifestyles	3	1	0	1	2	6	2	3	2	6	3	7	1	0	7	3	5	0	1	0	18	1
9. Global Warming Measurers	2	0	0	0	3	0	4	0	0	1	3	0	0	0	1	2	3	1	2	3	0	0
10. Environment & Economy	5	6	0	8	6	9	5	1	6	10	8	10	2	5	10	5	5	2	6	3	5	3
11. Environment & Society	3	2	0	3	2	0	3	6	7	2	1	2	2	2	9	2	2	7	2	0	5	1
12. Others	1	1	0	1	1	0	1	1	1	1	3	1	1	2	0	2	3	1	0	2	7	0
No Response	0	0	0	0	0	0	0	3	0	1	0	1	0	0	0	0	0	0	0	2	0	0
Total Valid Responses	[2328]	[98]	[19]	[79]	[249]	[35]	[214]	[65]	[143]	[273]	[73]	[200]	[213]	[64]	[70]	[1152]	[458]	[91]	[332]	[64]	[58]	[149]
Doomsday Clock Time	9:53	10:38	10:37	10:38	10:25	10:10	10:27	9:43	10:03	10:04	10:12	10:01	9:36	9:54	9:24	9:43	9:34	9:38	10:01	9:19	9:44	9:45

- Climate Change: Increase in CO2 concentration; ocean acidification; climatic aberrations (droughts, torrential rains, flooding, severe storms, heavy snow, abnormal temperatures, drying of rivers and lakes, desertification, etc.)
- Biodiversity: Acceleration of species extinction
- Land Use: Expansion of cultivated land mass; destruction of forests; desertification by overgrazing; land use without regard for environment; urbanization
- Pollution/Contaminati: River and ocean pollution, soil contamination: eutrophication from excessive nitrogen and phosphorus and chemical contamination; atmospheric pollution
- Water Resources: Diminution of usable fresh water resources (depletion, contamination)
- Population: Regional and national population growth; urban population growth unrelated to national trend
- Food: Diminution of food supply from land and oceans
- Lifestyles: Transformation of lifestyles away from excessive consumption of resources and energy
- Global Warming Mea: Progress of measures for mitigation and adaption
- Environment & Ecor: Implementing economic system to reflect environmental and social costs; taxes for fossil fuels and CO2 emissions; TEEB (The Economics of Ecosystems and Biodiversity); environmentally conscious economy
- Environment & Soci: Environmental awareness at individual and societal levels; environmental educaiton; poverty eradication

#2-Ranked Issue

Unit: %

	Overall	Oceania		North America	Central America, Caribbean countries		South America	Western Europe	Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)	Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)				
		Oceania (excl. Australia)	Australia		Canada	United States																
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Climate Change	14	12	11	13	18	17	18	12	8	15	19	14	14	11	10	15	12	12	20	22	18	13
2. Biodiversity	15	27	37	24	12	11	13	10	15	23	23	23	19	15	19	12	14	19	5	5	13	23
3. Land Use	12	11	11	11	7	6	7	15	21	14	10	16	20	12	13	9	5	13	9	11	10	15
4. Pollution/Contamination	12	4	5	4	8	9	8	15	8	8	5	9	10	12	14	16	12	14	24	20	18	9
5. Water Resources	15	12	11	13	15	9	16	22	21	7	5	8	16	28	14	14	9	19	20	14	7	19
6. Population	6	11	0	14	10	6	10	7	6	5	7	5	5	8	4	5	7	8	2	3	3	5
7. Food	4	2	5	1	2	3	2	3	1	1	0	2	4	2	0	6	8	2	3	5	10	5
8. Lifestyles	6	2	0	3	9	11	9	4	7	7	7	7	2	6	1	5	9	4	2	0	10	2
9. Global Warming Measurers	4	5	0	6	5	3	5	1	1	1	1	1	2	2	0	6	11	1	3	9	3	1
10. Environment & Economy	7	7	21	4	9	17	8	3	6	9	14	8	3	3	14	7	8	5	7	5	5	6
11. Environment & Society	4	6	0	8	3	9	2	1	6	6	7	5	4	2	9	3	4	2	4	6	0	3
12. Others	1	0	0	0	0	0	0	3	1	1	1	0	0	0	1	1	2	0	0	0	2	0
No Response	0	0	0	0	0	0	0	3	0	1	0	1	0	0	0	0	0	0	0	2	0	0
Total Valid Responses	[2326]	[98]	[19]	[79]	[249]	[35]	[214]	[64]	[143]	[273]	[73]	[200]	[213]	[64]	[70]	[1151]	[457]	[91]	[332]	[64]	[58]	[149]
Doomsday Clock Time	9:09	9:52	9:52	9:51	9:40	9:37	9:41	8:55	9:00	9:16	9:43	9:07	8:53	9:07	8:53	9:02	8:52	8:47	9:27	8:27	9:31	8:52

#3-Ranked Issue

Unit: %

	Overall	Oceania		North America	Central America, Caribbean countries		South America	Western Europe	Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)	Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)				
		Oceania (excl. Australia)	Australia		Canada	United States																
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Climate Change	13	11	11	11	12	9	13	21	17	12	11	13	12	8	6	13	10	15	15	14	15	15
2. Biodiversity	10	17	21	16	13	20	12	4	13	12	14	11	14	15	13	8	8	11	7	3	5	11
3. Land Use	13	12	11	13	12	17	11	7	15	12	14	11	19	23	23	12	8	14	16	14	8	15
4. Pollution/Contamination	9	4	0	5	8	3	9	10	10	9	7	10	10	14	20	9	8	8	8	8	12	13
5. Water Resources	12	20	32	18	13	11	13	10	7	8	16	5	11	12	7	14	9	18	20	12	10	14
6. Population	7	13	16	13	10	9	11	4	7	9	11	8	3	2	3	7	6	9	8	9	5	7
7. Food	5	1	0	1	4	3	4	9	1	1	0	2	8	9	3	6	10	3	3	3	7	3
8. Lifestyles	7	6	0	8	10	14	10	13	5	8	4	9	5	6	7	7	10	5	4	9	15	3
9. Global Warming Measurers	3	1	0	1	2	6	1	1	2	3	3	3	2	2	0	4	5	2	5	2	2	3
10. Environment & Economy	9	4	0	5	8	3	9	10	10	10	11	10	7	2	10	10	13	7	7	17	8	7
11. Environment & Society	9	8	11	8	6	3	7	4	12	13	10	15	8	5	9	8	10	8	7	8	13	7
12. Others	1	1	0	1	2	3	2	1	2	1	0	2	0	3	0	1	3	0	0	0	0	1
No Response	0	0	0	0	0	0	0	3	0	1	0	1	0	0	0	0	0	0	0	2	0	0
Total Valid Responses	[2326]	[98]	[19]	[79]	[249]	[35]	[214]	[64]	[143]	[273]	[73]	[200]	[213]	[64]	[70]	[1151]	[457]	[91]	[332]	[64]	[58]	[149]
Doomsday Clock Time	8:31	9:19	9:36	9:14	9:04	8:44	9:07	8:19	8:20	8:38	9:00	8:30	8:25	8:19	8:06	8:23	8:08	8:07	8:58	7:33	8:38	8:13

Q 1-2 For each issue you selected in Q 1-1, please choose an item from Table 2 that best reflects your selection rationale. If you have more than one reason, please separate them with a comma. For "Other" (item 6), please write in your reason.

Selection Rationale for Issue #1

Unit: %

	Overall [2343]	1. Climate [829]	2. Biodiversity [239]	3. Land Use [225]	4. Polluti on/Con [318]	5. Water Resour [177]	6. Popula tion [175]	7. Food [30]	8. Lifesty les [76]	9. Global warmi [38]	10. Enviro nment [127]	11. Enviro nment [66]	Others [35]
1. Significant increase in frequency	46	56	48	41	56	45	29	23	18	24	25	20	23
2. Significant worsening in level of deterioration	49	45	63	50	75	64	25	47	14	26	30	30	34
3. Level affected (scale and cost) most significant	43	49	31	35	64	41	29	53	21	55	35	17	46
4. Fundamental problem, commonalities to many issues	55	52	37	56	64	54	67	43	68	63	58	74	37
5. Greatest factor slowing resolution of problems	30	19	10	34	43	16	50	20	57	39	56	59	29
6. Other (Please indicate rationale)	5	4	7	4	2	7	7	7	9	3	5	6	9
No Response	0	0	1	0	0	0	0	0	0	0	0	0	9

Selection Rationale for Issue #2

Unit: %

	Overall [2343]	1. Climate [338]	2. Biodiversity [356]	3. Land Use [270]	4. Polluti on/Con [292]	5. Water Resour [341]	6. Popula tion [141]	7. Food [91]	8. Lifesty les [131]	9. Global warmi [99]	10. Enviro nment [164]	11. Enviro nment [94]	Others [17]
1. Significant increase in frequency	40	51	51	43	49	45	26	30	21	23	24	24	18
2. Significant worsening in level of deterioration	47	46	60	56	58	55	31	32	25	34	30	27	47
3. Level affected (scale and cost) most significant	41	46	35	44	48	48	30	52	27	40	35	29	41
4. Fundamental problem, commonalities to many issues	49	50	32	47	48	54	61	33	61	44	64	63	53
5. Greatest factor slowing resolution of problems	26	21	6	25	26	20	41	11	44	32	52	54	29
6. Other (Please indicate rationale)	4	4	5	3	2	2	4	10	7	5	5	12	35
No Response	1	0	0	0	0	0	0	0	2	1	0	1	0

Selection Rationale for Issue #3

Unit: %

	Overall [2343]	1. Climate [296]	2. Biodiversity [246]	3. Land Use [311]	4. Polluti on/Con [221]	5. Water Resour [289]	6. Popula tion [170]	7. Food [116]	8. Lifesty les [170]	9. Global warmi [71]	10. Enviro nment [211]	11. Enviro nment [203]	Others [30]
1. Significant increase in frequency	39	49	53	49	48	48	36	28	21	35	17	20	37
2. Significant worsening in level of deterioration	40	36	59	53	50	60	33	28	22	45	19	19	30
3. Level affected (scale and cost) most significant	39	43	37	44	42	53	36	50	23	41	31	26	30
4. Fundamental problem, commonalities to many issues	49	44	39	50	41	44	62	28	62	48	63	56	33
5. Greatest factor slowing resolution of problems	28	15	12	29	19	20	29	19	47	32	49	48	23
6. Other (Please indicate rationale)	5	4	5	3	5	4	6	6	5	4	6	5	30
No Response	1	1	0	0	0	0	1	0	1	0	0	1	0

Q 1-2 For each issue you selected in Q 1-1, please choose an item from Table 2 that best reflects your selection rationale. If you have more than one reason, please separate them with a comma. For "Other" (item 6), please write in your reason.

Unit: %

Selection Rationale for Issue #1	Overall	Oceania		North America	Canada		Central America, Caribbean countries	South America	Western Europe	U.K.		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)							
		Oceania (excl. Australia)	Australia		United States	U.K.				Western Europe (excl. U.K.)	Japan				India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)			
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Significant increase in frequency	46	43	32	46	39	43	39	35	43	39	41	39	51	55	43	48	40	49	61	29	37	54
2. Significant worsening in level of deterioration	49	46	42	47	43	40	43	35	41	43	42	43	51	54	44	53	37	49	81	49	32	52
3. Level affected (scale and cost) most significant	43	32	32	32	37	37	37	40	33	29	29	29	33	32	23	54	48	34	80	43	33	42
4. Fundamental problem, commonalities to many issues	55	53	58	52	65	71	64	56	39	54	59	52	54	51	61	55	44	49	76	37	58	55
5. Greatest factor slowing resolution of problems	30	24	32	23	26	37	24	19	24	31	34	30	30	35	37	31	13	35	55	37	18	34
6. Other (Please indicate rationale)	5	9	5	10	8	6	8	7	4	7	8	7	5	8	1	4	4	10	1	3	2	7
No Response	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1

Unit: %

Selection Rationale for Issue #2	Overall	Oceania		North America	Canada		Central America, Caribbean countries	South America	Western Europe	U.K.		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)							
		Oceania (excl. Australia)	Australia		United States	U.K.				Western Europe (excl. U.K.)	Japan				India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)			
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Significant increase in frequency	40	34	26	35	38	43	37	32	31	33	40	31	45	57	40	43	26	42	67	40	38	48
2. Significant worsening in level of deterioration	47	47	37	49	44	31	46	49	40	41	38	42	50	51	39	50	31	45	79	32	43	56
3. Level affected (scale and cost) most significant	41	33	32	33	32	37	31	40	30	33	34	33	38	48	33	48	34	40	80	32	28	41
4. Fundamental problem, commonalities to many issues	49	46	53	44	59	63	59	46	45	49	58	46	42	54	54	48	39	49	70	28	22	45
5. Greatest factor slowing resolution of problems	26	24	21	25	21	20	21	21	14	19	16	20	28	28	29	30	19	34	47	42	13	21
6. Other (Please indicate rationale)	4	7	5	8	4	6	4	6	5	6	8	5	6	3	4	4	5	4	1	2	2	6
No Response	1	1	0	1	0	0	0	1	0	1	0	1	1	0	0	1	1	0	0	0	2	1

Selection Rationale for Issue #3

	Overall	Oceania		North America		Central America, Caribbean countries		South America	Western Europe	U.K.		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)		Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Significant increase in frequency	39	36	37	35	36	34	36	31	37	32	27	34	42	48	37	41	23	45	68	29	25	47
2. Significant worsening in level of deterioration	40	43	47	42	47	49	47	32	38	32	33	32	42	46	41	41	20	40	74	23	22	47
3. Level affected (scale and cost) most significant	39	30	32	29	32	31	32	34	35	31	26	33	32	48	36	45	26	37	78	34	40	45
4. Fundamental problem, commonalities to many issues	49	52	53	52	55	51	56	50	40	50	56	48	44	49	53	48	41	42	65	38	30	49
5. Greatest factor slowing resolution of problems	28	19	16	20	23	20	23	24	24	22	21	23	23	32	30	32	22	34	48	32	25	24
6. Other (Please indicate rationale)	5	7	11	6	4	6	3	9	4	6	5	6	4	6	6	5	7	5	2	3	2	6
No Response	1	2	0	3	0	3	0	1	0	1	0	1	1	0	0	1	1	0	0	2	2	1

Q 1-3 For each issue you selected in Q 1-1, please select one of the following items that best describes its current condition.

Current Condition for Issue #1

Unit: %

	Overall [2343]	1. Climate [829]	2. Biodiversity [239]	3. Land Use [225]	4. Pollution/Con [318]	5. Water Resour [177]	6. Popula tion [175]	7. Food [30]	8. Lifesty les [76]	9. Global warmi [38]	10. Enviro nment [127]	11. Enviro nment [66]	Others [35]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	82	91	85	79	81	81	79	83	54	74	65	52	91
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	5	2	4	3	8	4	6	0	8	8	10	18	0
3. No significant changes	13	7	10	17	11	14	15	17	38	18	24	30	6
No response	0	0	0	0	0	1	0	0	0	0	0	0	3

Current Condition for Issue #2

Unit: %

	Overall [2343]	1. Climate [338]	2. Biodiversity [356]	3. Land Use [270]	4. Pollution/Con [292]	5. Water Resour [341]	6. Popula tion [141]	7. Food [91]	8. Lifesty les [131]	9. Global warmi [99]	10. Enviro nment [164]	11. Enviro nment [94]	Others [17]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	74	81	80	84	71	82	74	66	60	67	56	53	71
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	6	4	5	4	7	6	7	10	9	5	10	20	0
3. No significant changes	19	15	14	11	21	12	18	23	29	27	34	27	29
No response	1	0	0	0	0	0	1	1	2	1	0	0	0

Current Condition for Issue #3

Unit: %

	Overall [2343]	1. Climate [296]	2. Biodiversity [246]	3. Land Use [311]	4. Pollution/Con [221]	5. Water Resour [289]	6. Popula tion [170]	7. Food [116]	8. Lifesty les [170]	9. Global warmi [71]	10. Enviro nment [211]	11. Enviro nment [203]	Others [30]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	66	73	79	72	70	76	70	65	52	58	52	39	70
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	8	4	4	4	9	7	8	9	15	7	14	18	0
3. No significant changes	25	22	17	24	20	17	21	27	32	35	34	42	30
No response	1	1	0	0	1	0	1	0	1	0	0	0	0

Q 1-3 For each issue you selected in Q 1-1, please select one of the following items that best describes its current condition.

Unit: %

Current Condition for Issue #1	Overall	Oceania		North America	Canada	United States	Central America, Caribbean countries	South America	Western Europe	U.K.	Western Europe (excl. U.K.)	Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)	Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)	
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	82	93	95	92	85	83	86	82	84	76	86	72	85	82	73	81	86	76	74	89	82	83
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	5	0	0	0	2	3	2	1	3	4	1	5	4	3	3	7	2	10	17	3	5	1
3. No significant changes	13	7	5	8	13	14	13	16	13	20	12	23	11	15	24	11	12	14	9	8	10	15
No response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	1	

Unit: %

Current Condition for Issue #2	Overall	Oceania		North America	Canada	United States	Central America, Caribbean countries	South America	Western Europe	U.K.	Western Europe (excl. U.K.)	Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)	Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)	
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	74	93	95	92	79	74	79	78	77	70	82	65	75	71	67	73	70	79	69	85	78	79
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	6	1	0	1	3	3	3	4	6	6	3	7	9	9	7	7	2	9	16	5	2	8
3. No significant changes	19	6	5	6	18	23	17	18	17	24	15	28	15	20	26	19	27	12	15	11	17	11
No response	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	3	1	

Current Condition for Issue #3

	Overall	Oceania		North America	North America		Central America, Caribbean countries	South America	Western Europe	Western Europe		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)		Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
1. Condition is deteriorating from 3-5 years ago (Doomsday Clock advancing)	66	78	79	77	73	69	73	71	69	67	75	64	70	52	53	64	60	69	63	71	63	68
2. Condition is improving from 3-5 years ago (Doomsday Clock retreating)	8	4	11	3	5	3	5	3	3	8	5	8	8	9	11	10	6	9	18	9	5	7
3. No significant changes	25	17	11	19	22	29	21	26	26	25	19	27	21	38	36	26	32	22	19	20	28	23
No response	1	1	0	1	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	3	1

Respondent Affiliation  
Employment

Unit: %

	Overall	Oceania		North America		Central America, Caribbean countries	South America	Western Europe		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)									
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
		Oceania (excl. Australia)	Australia		Canada	United States				U.K.	Western Europe (excl. U.K.)					Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)	
1. Central government	6	9	11	9	10	11	10	16	8	4	3	5	12	8	3	4	1	9	1	23	2	8
2. Local government	7	3	5	3	2	3	2	4	3	2	0	3	3	8	0	11	7	4	23	12	3	3
3. University/research	39	40	26	43	37	37	31	44	43	41	43	29	43	54	39	55	42	24	35	15	30	
4. NGO	26	24	42	20	24	26	24	41	33	28	36	25	45	31	31	19	9	31	17	6	45	46
5. Corporation	9	5	0	6	4	6	4	1	3	6	1	8	2	5	0	15	11	2	28	18	23	0
6. Media	2	1	0	1	8	6	8	1	0	1	3	0	0	0	0	2	3	0	0	0	7	1
7. Other	11	17	16	18	13	11	14	4	8	16	16	16	9	6	11	11	14	12	6	5	5	13
No response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Gender

Unit: %

	Overall	Oceania		North America		Central America, Caribbean countries	South America	Western Europe		Africa	Middle East	Eastern Europe & former Soviet Union	Asia (All)									
	[2343]	[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
		Oceania (excl. Australia)	Australia		Canada	United States				U.K.	Western Europe (excl. U.K.)					Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)	
Male	72	74	74	75	73	89	71	66	76	72	62	76	76	74	63	71	92	90	42	60	53	74
Female	27	26	26	25	27	11	29	34	24	28	38	24	23	26	37	28	7	10	58	40	47	26
No response	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0

	Overall	Oceania		North America	Central America, Caribbean countries		South America	Western Europe	Africa	Middle East	Eastern Europe & former Soviet Union	Asia (AII)										
	[2343]	Oceania (excl. Australia)	Australia	Canada	United States			U.K.	Western Europe (excl. U.K.)			Japan	India	China	Taiwan	South Korea	Rest of Asia (excl. Japan, India, China, Taiwan, S. Korea)					
		[98]	[19]	[79]	[249]	[35]	[214]	[68]	[144]	[276]	[73]	[203]	[215]	[65]	[70]	[1157]	[460]	[91]	[332]	[65]	[60]	[149]
20s	9	2	0	3	4	6	3	3	3	3	4	2	5	5	3	15	0	5	41	26	13	5
30s	23	10	0	13	11	6	12	22	28	22	23	22	24	35	24	26	6	30	45	40	42	28
40s	22	19	37	15	20	23	19	35	30	25	27	25	33	37	23	18	15	29	10	22	23	34
50s	22	23	21	24	22	14	23	26	26	22	16	25	27	11	34	20	34	23	3	9	12	21
60s	16	33	32	33	30	31	30	7	10	17	16	18	10	9	9	14	30	4	1	2	10	9
70 and above	7	12	11	13	14	20	13	6	3	10	12	9	1	3	7	7	14	9	0	2	0	3
No response	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0

## On valid responses/no responses

Responses were considered valid if they were single answers or within the allowable number of responses as specified in the question. Responses were invalidated if there were more than the maximum allowable number.

If an answer was left blank even though specified otherwise in the question, it was counted as no response.



1-2. For each of the three categories you selected in Question 1-1, please choose an item from Table 2 below that best reflects the rationale for your selection. If you have more than one reason, please separate them with a comma. For those selecting "Other" (item 6), please write in your reason.

**Table 2: Selection Rationale for Category in Table 1**

Item	Selection Rationale	Item	Selection Rationale
1	The number of observable cases (frequency) increased significantly	4	It is a fundamental problem with commonalities to many environmental issues
2	The level of deterioration (intensity) worsened significantly	5	It is the greatest factor slowing down the resolution of environmental problems
3	The level affected (scale and cost of the damage) was most significant	6	Others (please indicate your rationale below)

Selection Rationale (Enter multiple answers separated by commas and in order of importance)

**Category 1** ( )

Other reasons

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**Category 2** ( )

Other reasons

---

**Category 3** ( )

Other reasons

---

1-3. For each of the three categories you selected in Question 1-1, please select one of the following items that best describes its current condition and enter the corresponding number.

1. The condition is deteriorating compared to 3-5 years ago (advancing the Environmental Doomsday Clock)

2. The condition is improving compared to 3-5 years ago (reversing the Environmental Doomsday Clock)

3. There haven't been significant changes compared to 3-5 years ago (little change in the Environmental Doomsday Clock)

Current Condition **Category 1** ( ) **Category 2** ( ) **Category 3** ( )

**2. Your Opinions on Environmental Problems**

2-1. Please consider the category of environmental change that you selected as being most important in Question 1-1 to answer the following questions.

2-1-1. If no measures are implemented to counter the issue you selected, what do you foresee happening to the environment in the country or region where you reside, or to the global environment, in 10 years from now? Please indicate what conditions you foresee.

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2-1-2. What actions do all of us need to take now in order to prevent the conditions you described above from materializing? Please write your thoughts freely.

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**2-2. Feel free to write comments on any topic related to environmental problems.**

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**Results of the 23rd Annual  
“Questionnaire on Environmental Problems and the Survival of Humankind”**

**REPORT**

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**September 2014  
Published by the Asahi Glass Foundation  
2nd Floor, Science Plaza, 5-3, Yonbancho  
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**If you have inquiries regarding this questionnaire,  
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