



September 8, 2020

The Asahi Glass Foundation Announces the Results of the 29th Annual “Questionnaire on Environmental Problems and the Survival of Humankind”

- The average time on the Environmental Doomsday Clock is now 9:47, the same as that in 2018 when the strongest sense of environment crisis was felt since launching the survey in 1992.
- Respondents in Oceania and North America reported a higher sense of crisis, in the 10 o'clock range. Conversely, respondents in Africa reported the lowest sense of crisis, in the 8 o'clock range, showing 2 hours difference from that in North America.
- As in previous years the survey respondents aged 60 or over tend to report more advanced times on the Clock than other age groups.
- Since 2011, among the environmental issues to be taken into account, which are used to calculate the time on the Clock, Climate Change has been the most often selected category.
- In terms of the time on the Clock, “Biosphere Integrity (Biodiversity),” as it did last year, has the time closest to midnight.
- With regard to the transition to a decarbonized society, a positive change was seen from all three viewpoints, “Public Awareness,” “Policies and Legal System,” and “Social Infrastructure.”
- The category most commonly identified as showing signs of improvement in approach was “Climate Change.”

The Asahi Glass Foundation (Chairman: Takuya Shimamura) has conducted an annual survey with environmental experts from around the world since 1992. This year, we sent the questionnaire to 205 countries around the world, and received responses from 1,813 people in 137 countries. Below are the main points from this year’s questionnaire results. Further details are available in the report of the “29th Annual Questionnaire on Environmental Problems and the Survival of Humankind,” or online at the Foundation’s web site, starting at 11 a.m. September 8.

I. Awareness of the Crisis Facing Human Survival - The Environmental Doomsday Clock

I-1 The Time on the Environmental Doomsday Clock

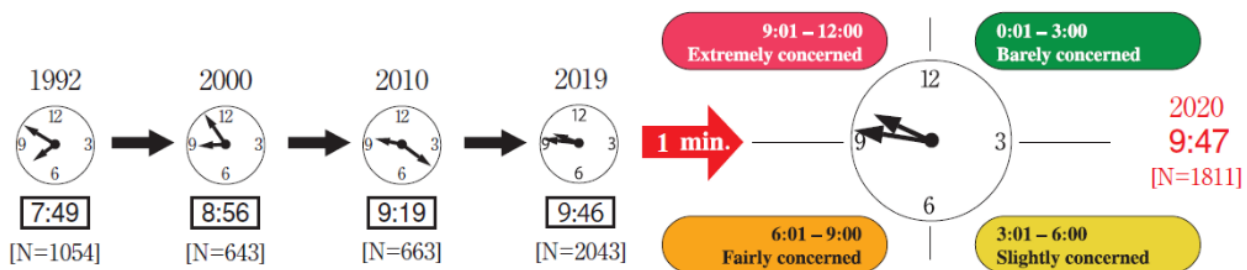


Fig. 1 Change in the Time on the Environmental Doomsday Clock Since 1992

- The time on the Clock for the world is 9:47, which is one minute closer to midnight than last year. This Year and 2018 have recorded the closest time to midnight. (Fig. 1, 2)
- As with last year's time of 9:46, respondents have shown a strong sense of crisis through the three consecutive years. The time on the Clock is now closer to midnight by almost two hours than when the survey was launched in 1992. (Fig. 2 and Table 1)

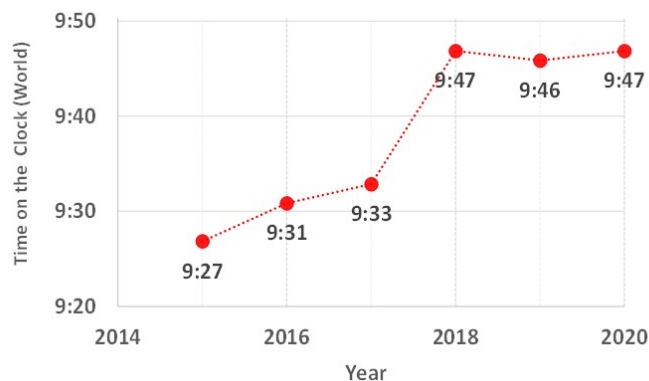


Fig. 2 Change in the Time on the Environmental Doomsday Clock over Six Years

- Of the 10 regions surveyed, the time is closer to midnight than last year in five regions, whereas in the 5 remaining regions the time is further from midnight. The time receded back in only 2 regions last year, Asia and Africa. (Fig. 3)

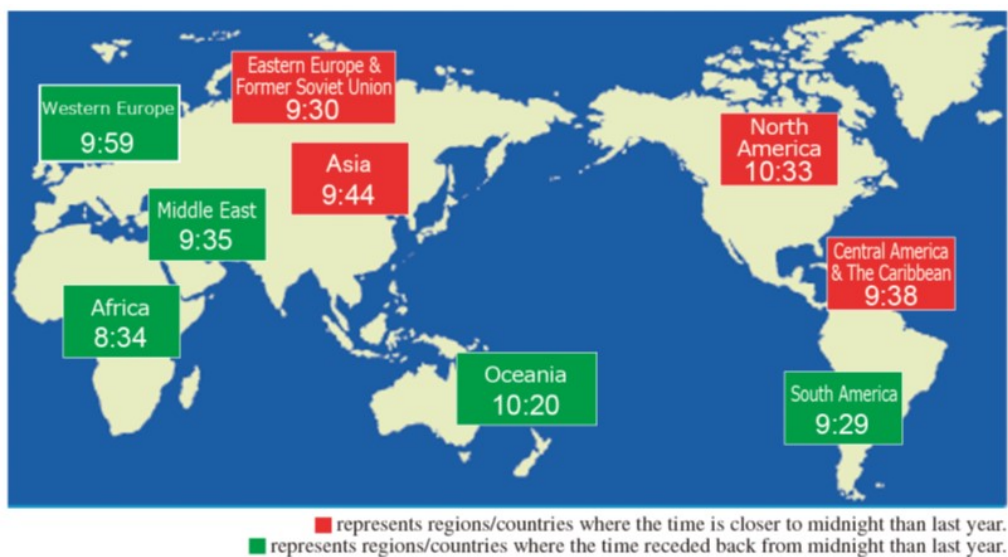


Fig. 3 Regional Times on the Environmental Doomsday Clock

- The time on the Clock in Africa receded back by 25 minutes (8:59 to 8:34), compared to the time last year, but is still in the 8 o'clock range compared to receding back from the time in 2010 by nearly two hours. (Fig. 3)
- The change in the time from last year is largest in Eastern Europe & former Soviet Union, 17 minutes (9:13 to 9:30); the time on the Clock is over 50 minutes closer to midnight compared to the time (8:42) in 2018. (Fig. 3)

Table 1. Changes in the Time on the Environmental Doomsday Clock (World) since 1992

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Time	-	7:49	8:19	8:47	8:49	9:13	9:04	9:05	9:08	8:56
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Time	9:08	9:05	9:15	9:08	9:05	9:17	9:31	9:33	9:22	9:19
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Time	9:01	9:23	9:19	9:23	9:27	9:31	9:33	9:47	9:46	9:47

Since the inception of the survey, ■ represents the lowest sense of crisis, while ■ represents the highest.

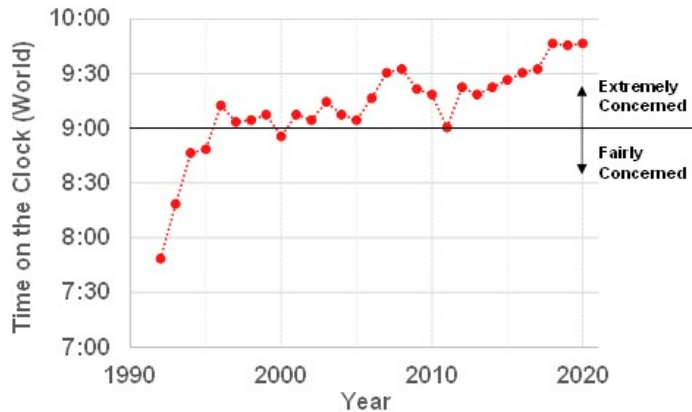


Fig. 4 Changes in the Time on the Environmental Doomsday Clock since 1992

- In analyzing the changes in the time of the Clock since launching the survey, respondents have consistently indicated times in the “extremely concerned” quadrant in the 9 o’clock range since 1996, with the exception of 2000. (Fig. 4)

I-2 Changes in the Times on the Environmental Doomsday Clock by Generation (2011 - 2020)

- While all age groups are developing a stronger sense of crisis each year, the result shows only a small change overall from last year. (Fig. 5)
- As in previous years the survey respondents aged 60 or over tend to report more advanced times on the Clock than other age groups. (Fig. 5)
- The survey respondents in all generations have been feeling sense of crisis, selecting “Extremely Concerned,” every year since 2012. (Fig. 5)

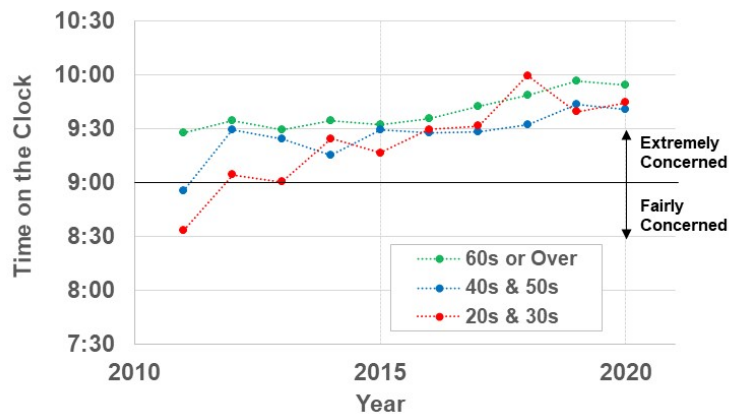


Fig. 5 Changes in the Time on the Environmental Doomsday Clock by Generation

II. “Environmental Issues to be Taken into Account” in Determining the Time on the Clock (World)

In determining the time on the Environmental Doomsday Clock, the questionnaire asked respondents to select, from the following nine categories of environmental problems, the three most pressing issues for the country or region where they reside, and rank them in the order of importance.

(See the Questionnaire Report for further details.)

Nine Environmental Issues to be Taken into Account:

1. Climate Change, 2. Biosphere Integrity (Biodiversity), 3. Land-system Change (Land Use),
4. Biochemical Flows (Pollution/Contamination), 5. Water Resources, 6. Population, 7. Food,
8. Lifestyle (Consumption Habits), 9. Society, Economy and Environment, Policies, Measures

II-1 Weighted Average Selection Percentage of the Nine Environmental Issues

- The top two issues that the respondents selected in determining the time on the Environmental Doomsday Clock time have remained unchanged for three years in a row: “Climate Change” ranked first (30%), followed by “Biosphere Integrity (Biodiversity)” at 14%. (Fig. 6)

II-2 Weighted Average Time on the Environmental Doomsday Clock of the Nine Environmental Issues

- When arranging the “Environmental Issues to be Taken into Account,” for the entire world on the Environmental Doomsday Clock, “Biosphere Integrity (Biodiversity)” was at 9:57, “Climate Change” 9:52, and “Biochemical Flows (Pollution/Contamination)” 9:50. They were all closer to midnight than the world’s average time. (Fig. 5)
- Last year, the time on the Clock for “Climate Change” was 9:44, two minutes earlier than the last year’s world average. This year, however, the time is 9: 52, five minutes closer to midnight than the world average, indicating growing sense of crisis about “Climate Change.”

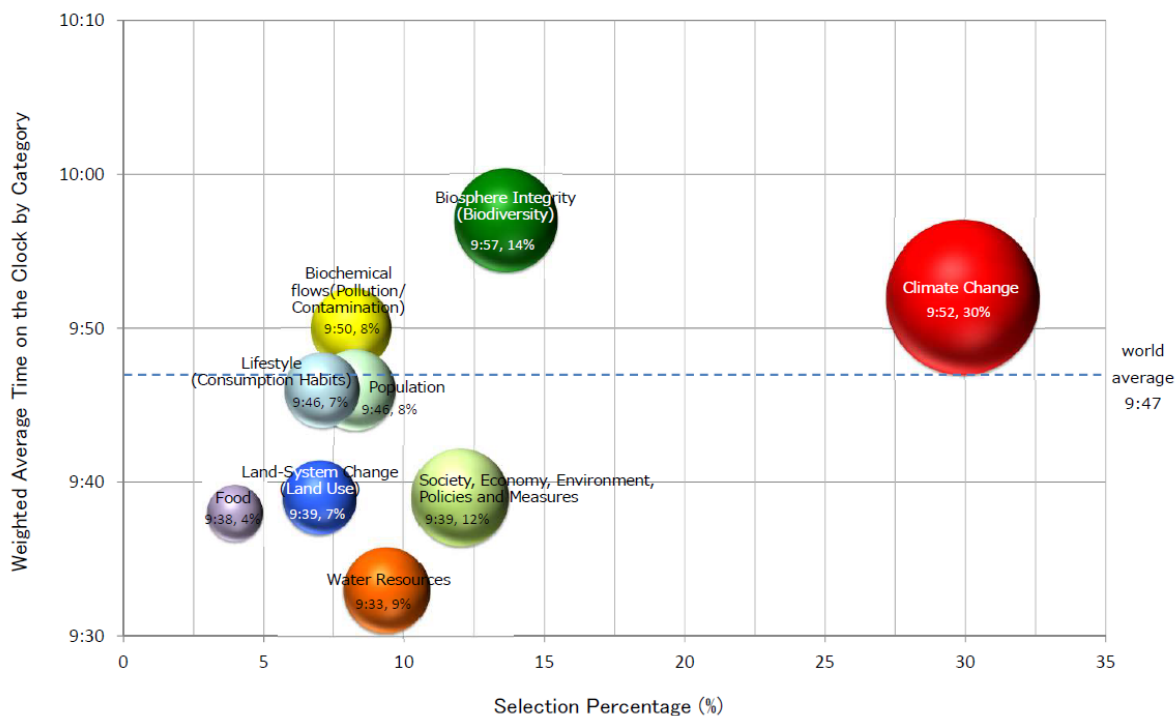


Fig. 6 2020 Distribution of the Environmental Issues (showing selection rate of respondent's 3 most pressing issues as a percentage and the time on the clock)

<The details regarding regional distribution of “Environmental Issues to be Taken into Account” are described in section III-1-2-5 of the Report.>

III. Signs of Improvement in the Approach to Environmental Issues: Comparison with the Situation Prior to 2015 When the Paris Agreement and SDGs were adopted.

Signs of improvement were investigated from the three perspectives, (1) Public Awareness, (2) Policies and Legal System, and (3) Social Infrastructure (Funds, Human Resources, Technologies, and Facilities). We asked the respondent’s opinion on whether there have been signs of improvement in the approach to global environmental issues with respect to a decarbonized society and where they saw signs of improvement from a list of “Environmental Issues to be Taken into Account.”

We calculated the average score by quantifying the answers giving a score of “-2” for the answer “Definitely not shifting,” “-1” for the answer “Not really shifting,” “0” for the answer “Cannot say either way,” “+1” for the answer “Somewhat shifting,” and “+2” for the answer “Definitely shifting.”

III-1 Progress in a Transition to a Decarbonized Society

- A positive change was seen from all three viewpoints, “Public Awareness,” “Policies and Legal System,” and “Social Infrastructure.” (Fig. 7)
- Overall, the results indicated that there were some signs of improvement in the efforts to transition to a decarbonized society but the same degree of progress was not made in “Policies and Legal System” and “Social Infrastructure” as in “Public Awareness.” (Fig. 7)

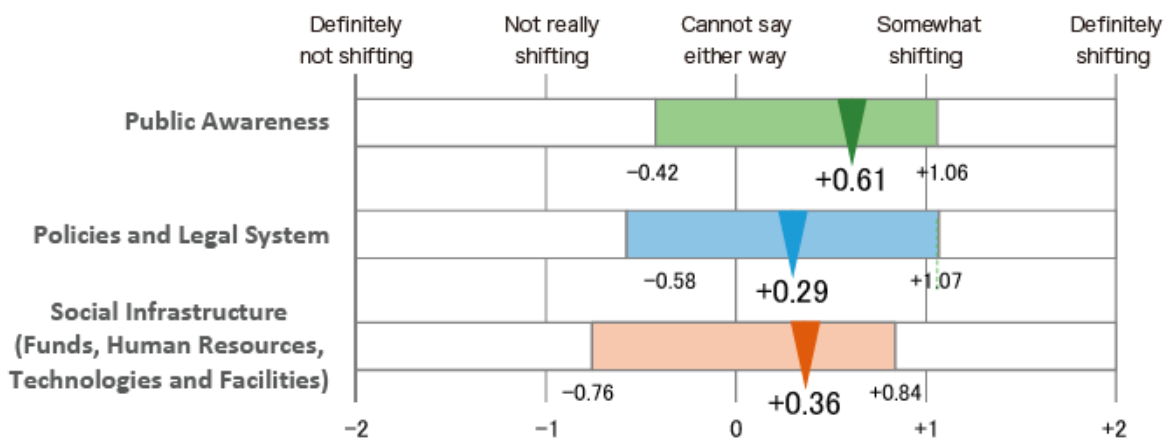


Fig. 7 Progress in a Transition to a Decarbonized Society: Score Ranges and Average Scores from 3 Perspectives

III-2 Categories Showing Signs of Improvement

- The category most frequently selected for showing signs of improvement was “Climate Change” at 28%, followed by “Lifestyle” and “Society, Economy and Environment, Policies, Measures” both at 14%. (Table 2)
- Concerning efforts against “Climate Change,” the respondents see more improvements in “Public Awareness (1.28)” than in “Policies and Legal System (0.59)” and “Social Infrastructure (0.75).” (Table 2)
- Sixteen percent of the respondents replied “No improvement at all.” (Table 2)

Table 2. Signs of Improvement: Selection Percentage and Average Score in Signs of Improvement

Selected Category	Selection Percentage (%)	Public Awareness	Policies, Legal System	Funds, Human Resources, Technologies and Facilities
Climate Change	28	1.28	0.59	0.75
Lifestyle	14	1.09	0.52	0.60
Society, Economy and Environment, Policies, Measures	14	1.07	1.02	0.91
Biosphere Integrity (Biodiversity)	8	1.05	0.72	0.51
Biochemical Flows (Pollution/Contamination)	7	1.09	0.91	0.79
Water Resources	5	0.94	0.87	0.72
Land-System Change (Land Use)	3	0.70	0.66	0.45
Population	3	0.96	0.50	0.42
Food	2	1.33	0.85	0.90
No Sign of Improvement	16	-	-	-

<Regarding the awareness of signs of improvement in the approach to environmental issues, the details are shown in page 25 and 26 of the Report.>

This survey includes a section where respondents are invited to provide their opinions and write about the environmental realities they face in their region of the world, as well as offer suggestions for improvement. This year, we received a total of 935 comments from 113 countries abroad. These comments will be published on the Asahi Glass Foundation website at 11a.m. on September 8.

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Appendix

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

Since 1992, the Asahi Glass Foundation has conducted a survey every year with experts around the world who are knowledgeable and are involved in environmental issues. The respondents are those who are working for governments, universities, research institutions, NGOs, corporations, and mass media. These experts are queried about various endeavors to counter environmental problems. The questionnaire is produced in six languages (English, Chinese, French, Japanese, Korean, and Spanish) and is sent out in April every year, and collected by June. After the responses are compiled and analyzed, the survey results are published in September. This year, the questionnaire was sent to respondents in 205 countries including Japan, with responses returned from 137 countries. The highest respondent percentage by attribute is, universities and research institutions, corporations, NGOs/NPOs, central governments, local governments, and mass media in descending order. (Fig.8, Table 3)

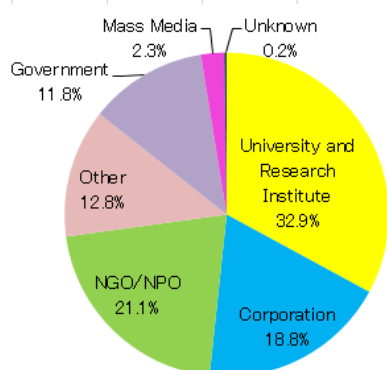


Fig. 8 Breakdown of Respondents by Occupational Affiliation

Table 3. Number of Countries Surveyed

Regions	Number of Countries
Africa	54
Asia	25
Central America, The Caribbean	27
Eastern Europe & Formwe Soviet Union	28
Western Europe	23
Middle East	16
North America	2
Oceania	17
South America	13
Total	205

● Facts about This Year’s Questionnaire

Survey period: April to June 2020

Respondents: Environmental experts working for national or local governments, NGOs, NPOs, universities and research institutions, corporations, and mass media, worldwide (listed on the Asahi Glass Foundation database).

Number of questionnaires mailed: 27,925 (26,779 to overseas respondents and 1,146 to respondents in Japan)

Number of questionnaires returned: 1,813

Response rate: 6.5%

Table 4. Number of Respondents Surveyed

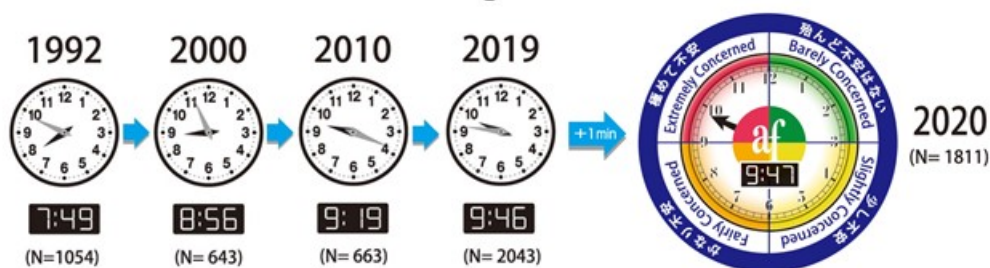
Region	Number of Respondents	%
Japan	365	20.1
Overseas	1448	79.9
World Total	1813	100
Africa	86	4.7
Asia	1017	56.1
Central America, The Caribbean	76	4.2
Eastern Europe & Former Soviet Union	46	2.5
Western Europe	223	12.3
Middle East	28	1.5
North America	176	9.7
Oceania	49	2.7
South America	112	6.2
World Total	1813	100

The Environmental Doomsday Clock

"Questionnaire on Environmental Problems and the Survival of Humankind"

Each year the Foundation conducts a survey of the sense of crisis felt by respondents about the continuance of the human race as the global environment continues to deteriorate, showing the time using the hands on the Environmental Doomsday Clock, created by the Foundation.

Change in the Time on the Environmental Doomsday Clock since 1992 & 2020 Regional Times



■ represents regions/countries where the time is closer to midnight than last year.
 ■ represents regions/countries where the time receded back from midnight than last year.

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