



**Results of the 21st Annual
“Questionnaire on Environmental Problems and the Survival of Humankind”**

Report

THE ASAHI GLASS FOUNDATION

November 2012

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Foreword

This report summarizes the results of the 2012 Questionnaire on Environmental Problems and the Survival of Humankind, a survey conducted annually by the Asahi Glass Foundation since 1992.

Twenty years ago in June 1992, the United Nations Conference on Environment and Development (UNCED/the Earth Summit) was held in Rio de Janeiro, Brazil and was the largest global conference on the environment at the time. At the conference, the participants adopted the “Rio Declaration on Environment and Development.” Further, numerous countries agreed and became signatories to the United Nations Framework Convention on Climate Change as well as the Convention on Biological Diversity. These results gave people a significant sense of hope for the future of the global environment.

Unfortunately, the same can not be said for the United Nations Conference on Sustainable Development (Rio + 20) held this year. Despite the participation of 40,000 people, from 98 heads of states and cabinet members, to countless ordinary citizens, the conference revealed numerous problems. The traditional confrontational stance between developed and developing countries remained unresolved, and with the added polarization between emerging and impoverished countries, the conference closed its doors without notable achievements.

At the Asahi Glass Foundation, we are deeply concerned not only at the lack of a positive outcome but at the apparent stagnation of progress. Further, we fear that these conditions will lead to a sense of resignation and diminished interest among the wider public towards solving environmental problems. We sincerely hope that the continued publication of this survey will help maintain and perhaps even attract interest in environmental issues, and thereby contribute to the resolution of environmental problems.

This year, we revised the way in which the time on the Environmental Doomsday Clock is calculated, in order to further clarify the relationship between the environmental issue the respondents found most pressing and the time that they chose. We hope that the new method allows our respondents to provide answers to the Environmental Doomsday Clock that are clearer than in previous years.

In this year’s questionnaire, we asked respondents to indicate why environmental problems show no signs of moving towards a solution 20 years after the Rio Summit. At 1,100, we received the highest number of responses since the inception of the survey. We extend our most heartfelt gratitude to those who took the time out of their busy schedules to complete the questionnaire. In addition, we would like to express our profound appreciation to Professor Akio Morishima, Special Research Advisor of the Institute for Global Environmental Strategies, for continuing to provide invaluable advice at all stages of the project.

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

Asahi Glass Foundation
November 2012

I. Facts about the 21st Annual “Questionnaire on Environmental Problems and the Survival of Humankind”

Response period: Questionnaires were sent out in April 2012 with a return deadline of June 2012.

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: 7,152 (6,237 to overseas and 915 within Japan)

Questionnaires returned: 1,101

Response rate: 15.4%

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

Region	Number of responses	Percent of total
A Regions (Including Asian Four)	670	61.1
Japan	357	32.6
United States & Canada	105	9.6
Western Europe	119	10.9
Asian Four* ¹	89	8.1
B Regions	373	34.0
Rest of Asia (Excluding Japan, Asia Four)	298	27.2
Latin America	42	3.8
Africa	33	3.0
C Regions* ²	52	4.7
Oceania	17	1.6
Eastern Europe & former Soviet Union	26	2.4
Middle East	9	0.8
Overseas Total	739	67.4
Total	1096	100.0

Gender		
Male	823	75.1
Female	262	23.9
No response	11	1.0
Total	1096	100.0

Occupational Affiliation		
National government	50	4.6
Local government	106	9.7
University or research institution	385	35.1
Nongovernmental organization	164	15.0
Corporation	182	16.6
Mass Media	54	4.9
Others	147	13.4
No response	8	0.7
Total	1,096	100.0

*1 In this report, “Asia” is all of Asia except Japan. Further, Hong Kong, South Korea, Taiwan, and Singapore are classified as the “Asian Four.” Other Asian countries are classified as the “Rest of Asia.”

*2 Japan, United States & Canada, Western Europe, and the Asian Four are classified as “A region,” while the remainder of the Rest of Asia, Latin America, and Africa are classified as “B region,” and Oceania, Eastern Europe & former Soviet Union, and Middle East are classified as “C region.”

*3 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.

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

*5 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. The needle advanced by 22 minutes from last year, when the average time was 9:01 following three consecutive years of retreat. The result this year is comparable to the time in 2009.
- Overall, “climate change” was the most often cited environmental condition of concern when classifying the categories ranked 1 through 3. This was followed by “water resources,” “pollution/contamination” and “biodiversity” as well as “population.”
- Likewise, when listing the weighted averages of the Environmental Doomsday Clock with regard to each category concerned starting with the most advanced time, respondents expressed the greatest sense of crisis with regard to “environment and economy.” This was followed by “biodiversity,” “population,” “environment and society” and “climate change.”

B. Main Focus of The Current Year’s Questionnaire

2. Impediments to Addressing Environmental Problems

This year, on the 20th anniversary of the 1992 Rio Summit, the questionnaire was designed to probe why solutions and responses put forward to address environmental problems have shown few signs of progress.

- Overall, respondents most frequently selected “pursuit of profit (human desires)” as the chief impediment to addressing environmental problems, followed by the “global economic system,” with these two comprising approximately half of all responses.
- A large number of respondents indicated their concern that national, corporate, and individual profits were being prioritized over environmental considerations.
- More than half of respondents expressed regret that there is far too much importance placed on GNP measurements as part of economic goals, and further that it was problematic that lifestyle alterations have not progressed.

3. About Nuclear Energy and the Environment

- When asked how public sentiment towards nuclear power had changed as a result of the accident in Fukushima, a majority of respondents across the world selected “more citizens oppose nuclear power.”
- Overall, 80% of respondents indicated a preference for some sort of review of nuclear energy policy.
- When asked about the most important factors in reviewing nuclear energy policy, the majority of respondents selected “the health and safety of citizens,” “consideration for future generations,” and “consideration for the environment.”

III. Questionnaire Results

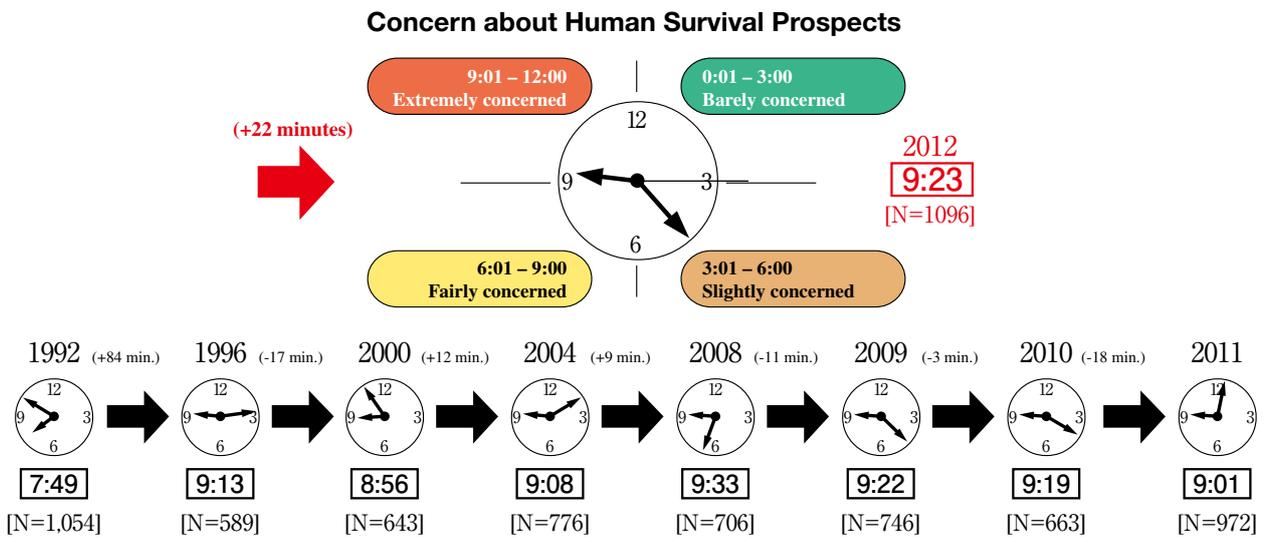
A. REPEAT TOPICS

1. AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL (QUESTION 1)

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 the three environmental issues of greatest concern from the chart described in page 5, and write a time for each category within the range of 0:01 to 12:00 corresponding to the extent of your concern.

The determination method of the Environmental Doomsday Clock has been revised and a calculation system has been introduced starting this year in order to shed further light on the intention behind the respondents' decisions. The time was determined by first ranking the top three environmental conditions of concern in order of importance. Respondents were then asked to provide a time for each issue, and finally, the Environmental Doomsday Clock was calculated by taking the weighted average of the data. The issue ranked in first place was weighted at 50%, second place at 30%, and third place at 20%.

1-1 Environmental Doomsday Clock



	Changes in time from year to year			Changes in average time by region	
	'02	'11	'12	'02 → '12	'11 → '12
Total	9:05	9:01	9:23	+18	+22
Japan	9:18	8:46	9:14	-4	+28
United States & Canada	8:23	9:35	9:54	+91	+19
Western Europe	8:44	9:28	9:55	+71	+27
Asia	8:36	8:51	9:03	+27	+12
Latin America	9:22	9:18	10:00	+38	+42
Africa	9:29	9:09	10:04	+35	+55
Oceania	9:22	10:06	10:14	+52	+8
Eastern Europe & former Soviet Union	9:28	9:13	9:12	-16	-1
Middle East	8:02	10:24	9:38	+96	-46
Overseas Total	8:51	9:14	9:27	+36	+13
United States & Canada, Western Europe, the Asian Four and Japan	9:05	9:04	9:28	+23	+24
Latin America, Africa and Rest of Asia	9:00	8:36	9:11	+11	+35
Oceania, Eastern Europe & former Soviet Union, and Middle East	*	9:39	9:37	*	-2
Asian Four	*	9:31	9:19	*	-12
Rest of Asia	*	8:22	8:58	*	+36
Male	9:01	8:59	9:22	+21	+23
Female	9:24	9:06	9:26	+2	+20

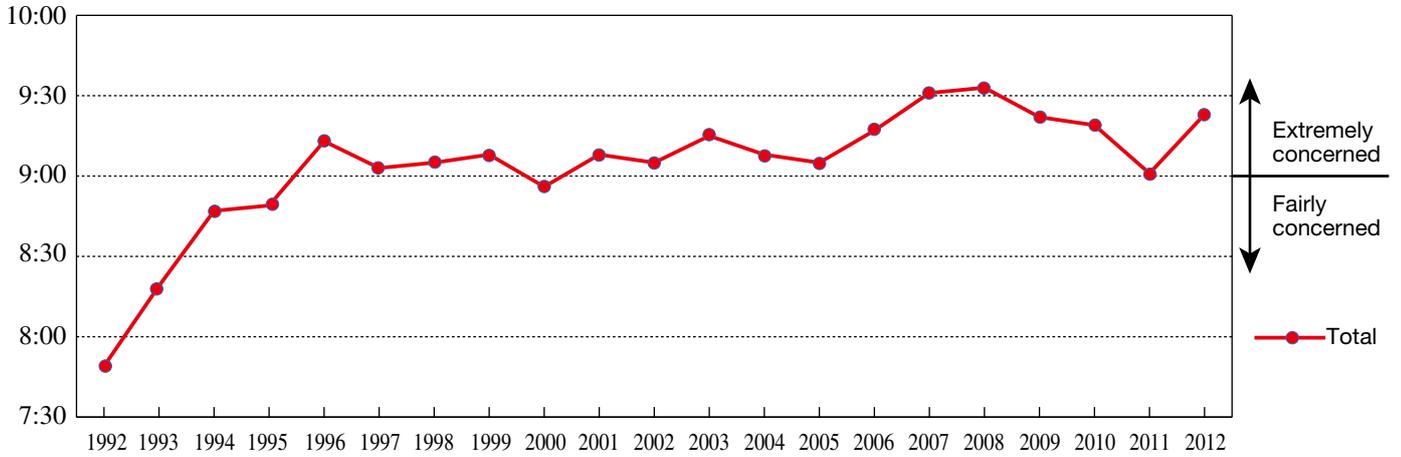
(Red indicates the advancement in time from last year; green indicates a reversal)

- The average time on the environmental doomsday clock for all respondents was 9:23. The needle advanced by 22 minutes from last year, when the average time was 9:01, which had represented the third consecutive year that the average time had retreated. The result this year is comparable to the time from 2009.

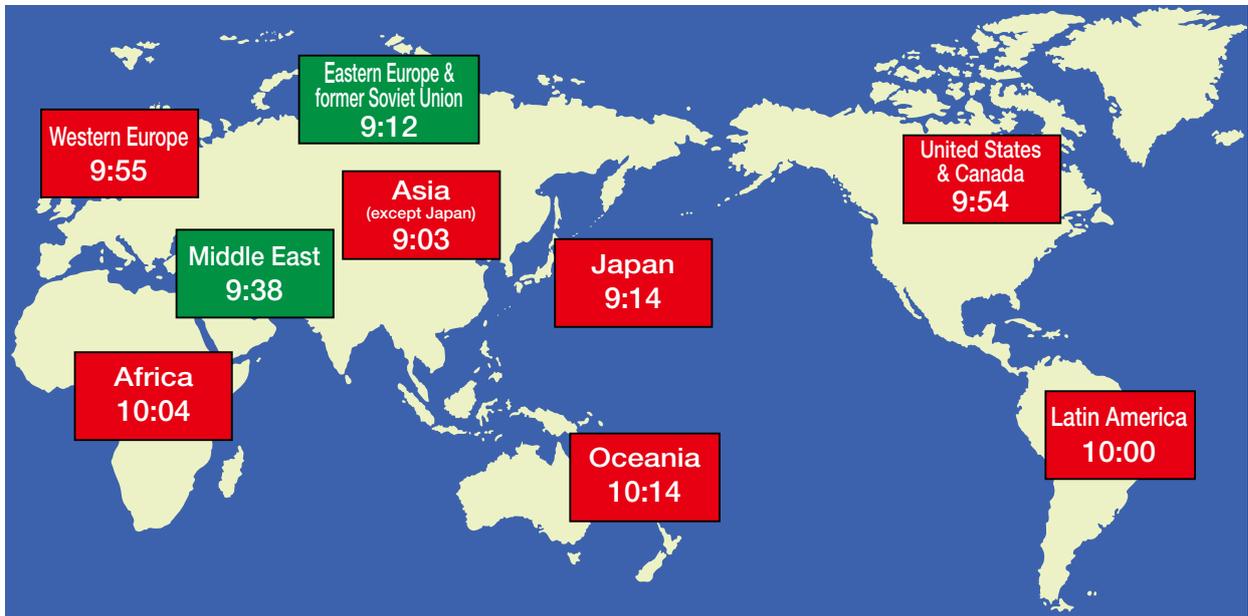
Changes in the Environmental Doomsday Clock (Overall)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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

(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

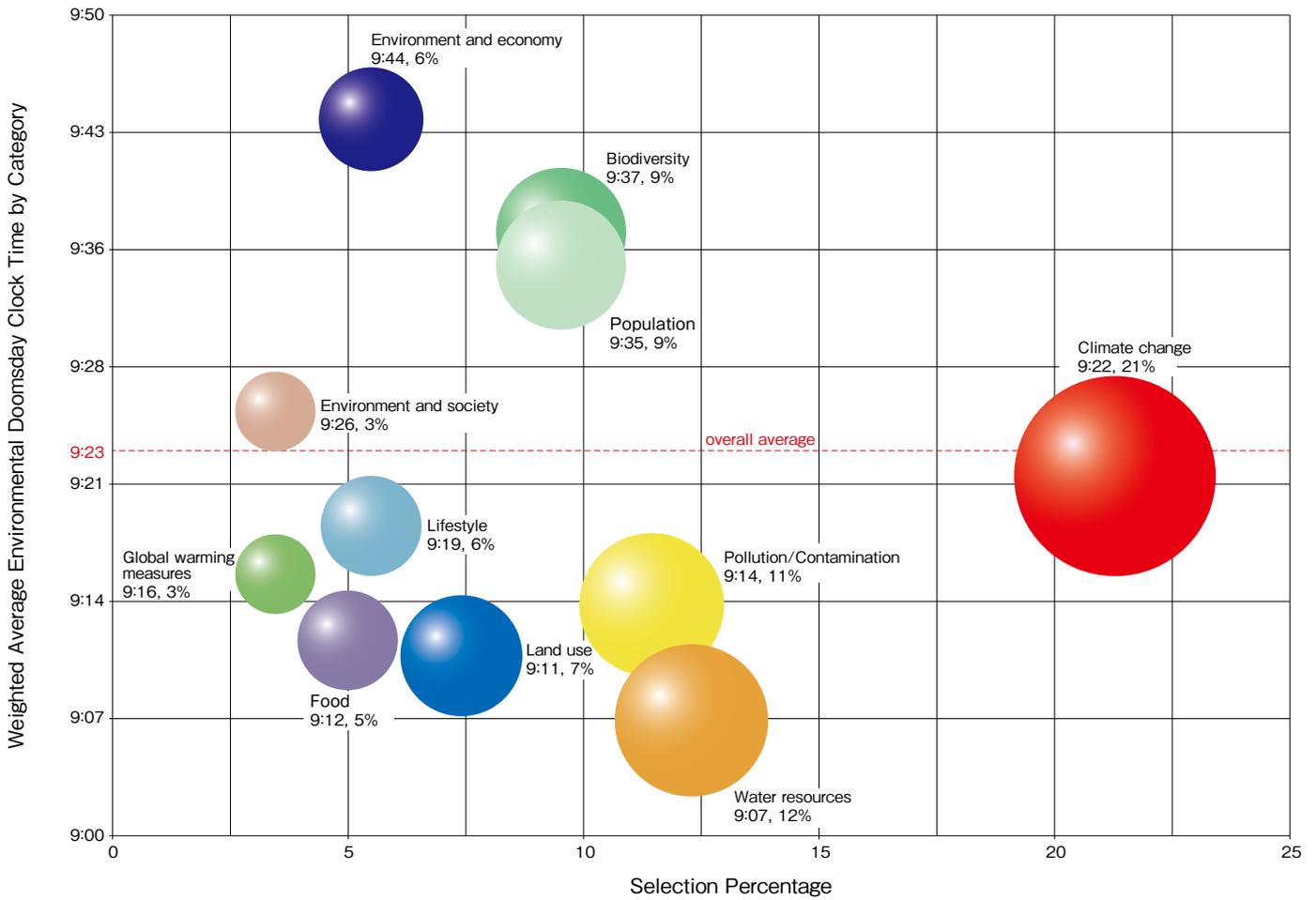


(Red indicates the advancement in time from last year; green indicates reversal)

1-2 Environmental Conditions of Concern

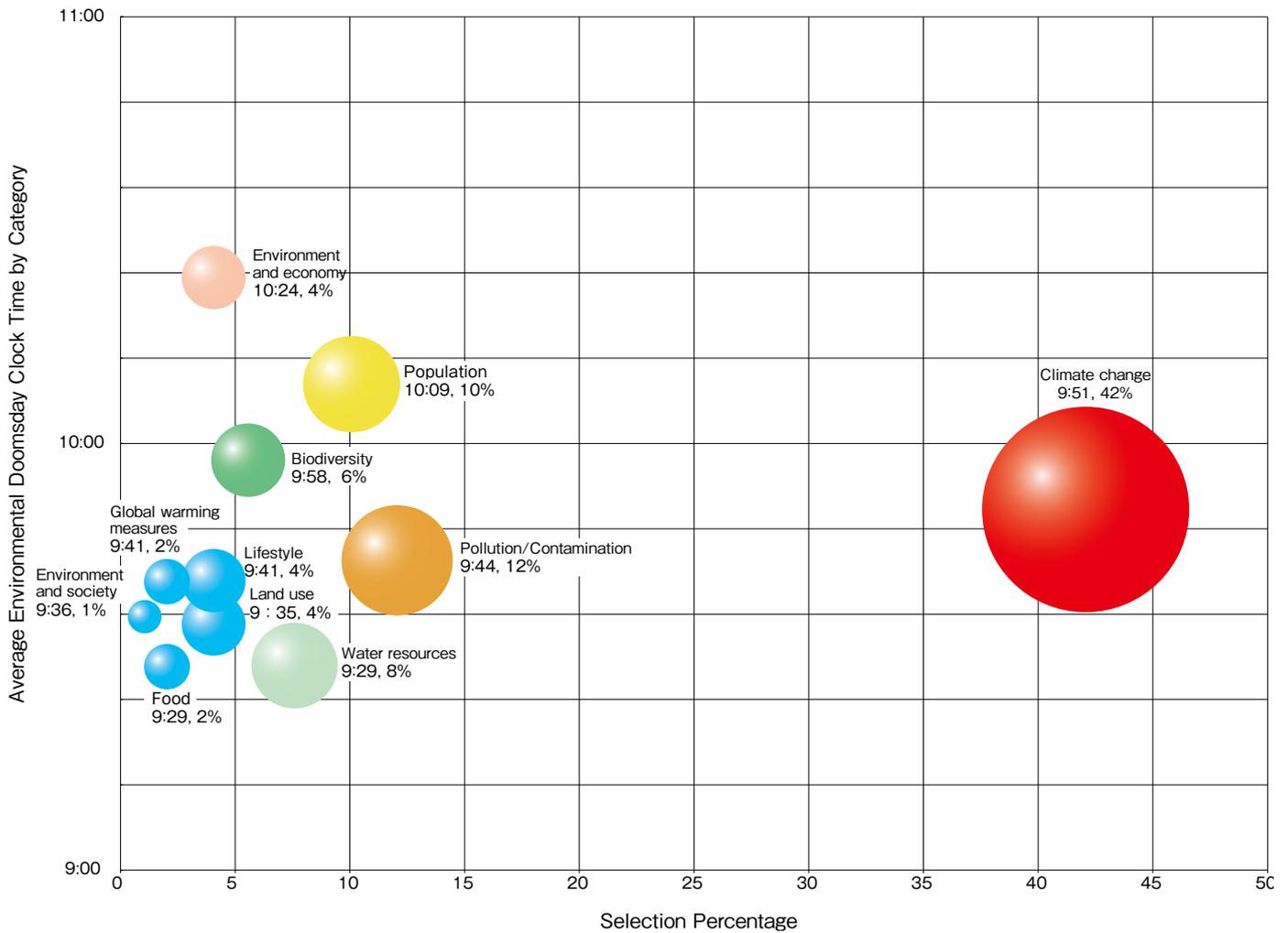
Category	Main Elements
1. Climate Change	Atmospheric concentration of CO₂ ; global warming ; ocean acidification ; climatic aberrations (droughts, torrential rains and flooding, severe storms, heavy snow, abnormal temperatures, drying of rivers and lakes, desertification, etc.)
2. Biodiversity	Acceleration of species extinction ; effects of contamination, climate change, land use
3. Land Use	Expansion of cultivated land mass; destruction of forests due to excessive development; desertification caused by overgrazing; agriculture and land use without regard for the environment; urbanization
4. Pollution /Contamination	River and ocean pollution : 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	Population growth beyond what the Earth can support; aging of the population
7. Food	Diminution of food supply from land and oceans
8. Lifestyles	Transformation of lifestyles away from excessive consumption of resources like 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 ₂ , which causes 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.
11. Environment and Society	Environmental awareness at the individual and societal levels, progress of environmental education ; poverty ; the status of women
12. Other	()

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



- Overall, “climate change” (21%) was the most often cited environmental condition of concern when classifying the items ranked 1 through 3 by how frequently they were selected. This was followed by “water resources” (12%), “pollution/contamination” (11%), and “biodiversity” as well as “population” (9%).
- Likewise, when listing the weighted averages of the Environmental Doomsday Clock of each category concerned starting with the most advanced time, respondents expressed the greatest sense of crisis with “environment and economy” (9:44). This was followed by “biodiversity” (9:37), “population” (9:35), “environment and society” (9:26), and “climate change” (9:22).

2. Distribution of the Environmental Conditions of Concern (Categories Ranked 1)



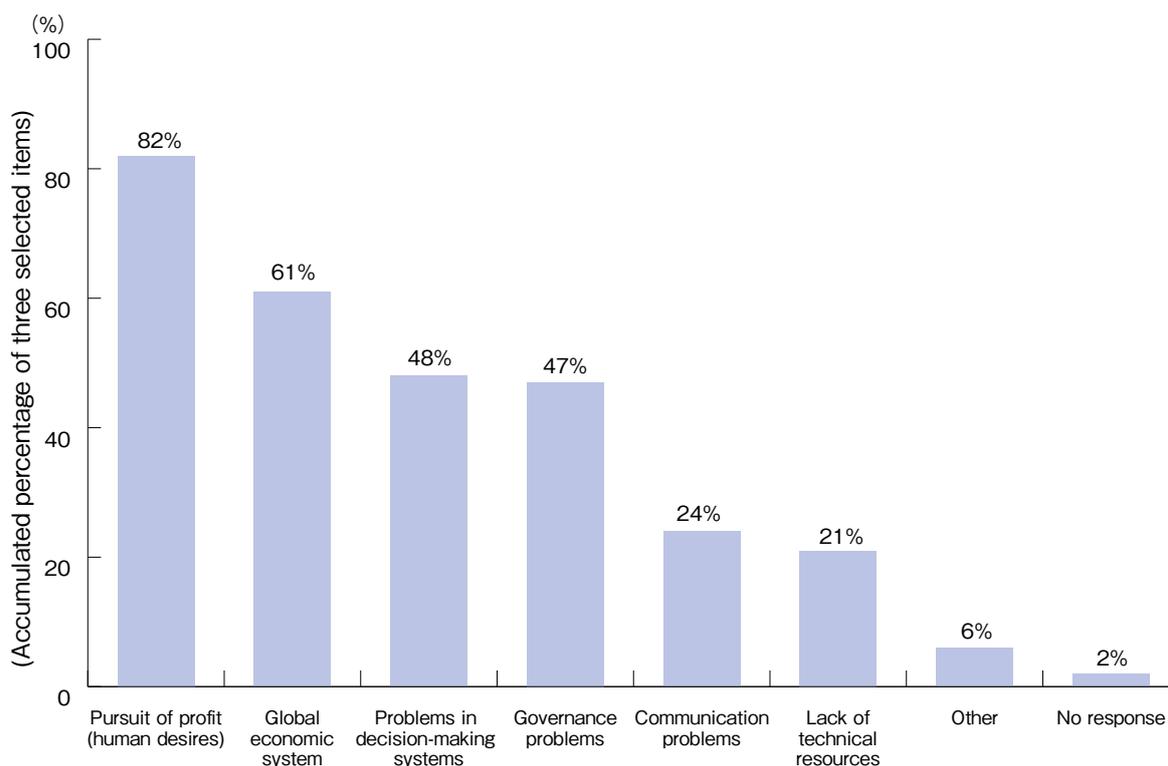
- The environmental issue that respondents overall most frequently selected as being the greatest concern (rank 1) in choosing the time on the environmental doomsday clock was “climate change,” at 42%. This was followed by “pollution/contamination” at 12%, “population” at 10%, “water resources” at 8%, and “biodiversity” at 6%.
- Likewise, when listing the categories by their times on the environmental doomsday clock of each category concerned in descending order, respondents indicated the greatest sense of crisis with “environment and economy,” at 10:24. This was followed by “population” at 10:09, “biodiversity” at 9:58, “climate change” at 9:51, and “pollution/contamination” at 9:44.

B. MAIN FOCUS OF THE CURRENT YEAR'S QUESTIONNAIRE

- This year, on the 20th anniversary of the 1992 Rio Summit, the questionnaire was designed to probe the reasons why solutions and responses to address environmental problems have shown few signs of progress, and to shed as much light as possible onto the reasons behind the stagnation.
- In addition, the questionnaire probed how the accident at the Fukushima Dai-ichi Nuclear Power Plant in Japan has affected the opinions of environmental experts on nuclear power.

2. IMPEDIMENTS TO ADDRESSING ENVIRONMENTAL PROBLEMS (QUESTION 2)

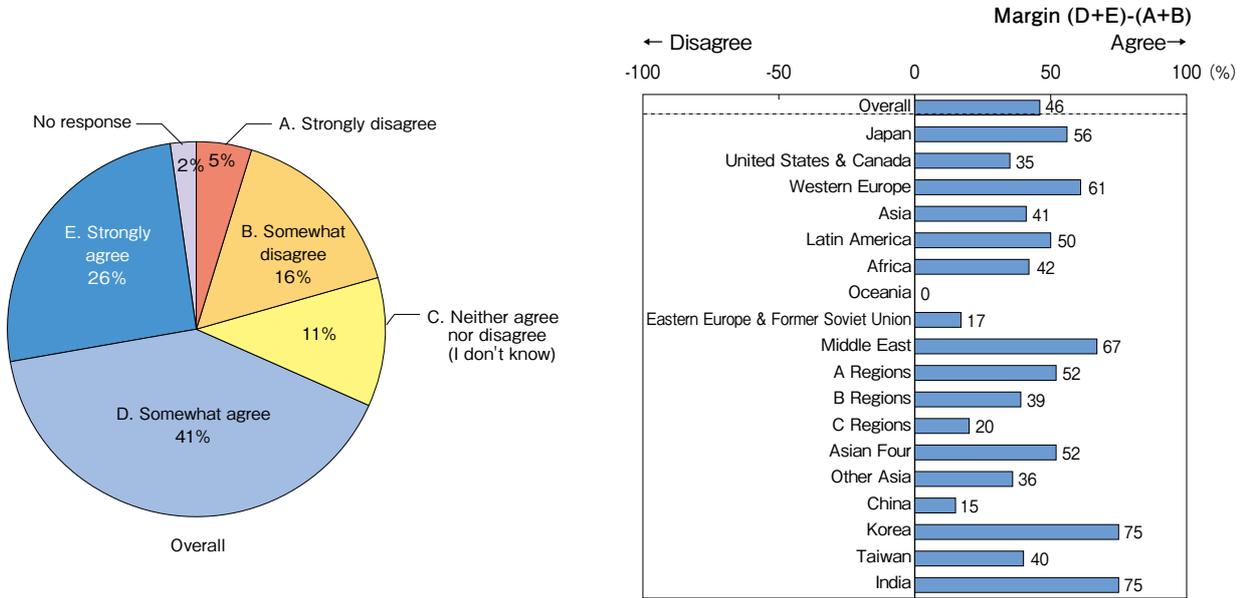
What do you think are the impediments to addressing environmental problems? Please circle three items from the list below that you think represent the most significant impediments. Please proceed to additional questions only for the three you have selected.



- Overall, respondents most frequently selected “pursuit of profit (human desires)” as the impediment to addressing environmental problems.

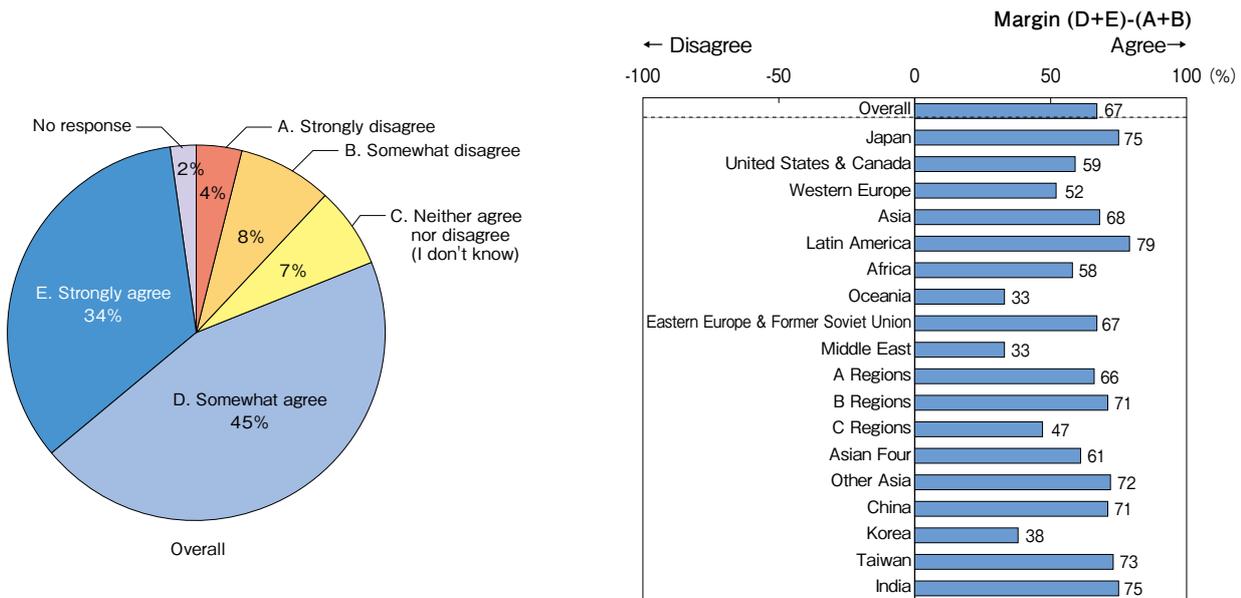
2-1 Communication problems— There are problems in communicating information, thus the conditions of the global environment remain poorly understood.

1. Information is not sufficiently communicated from scientists and researchers (henceforth: environmental experts) to politicians and strategists (henceforth: political decision makers) who are involved in the development of policies.



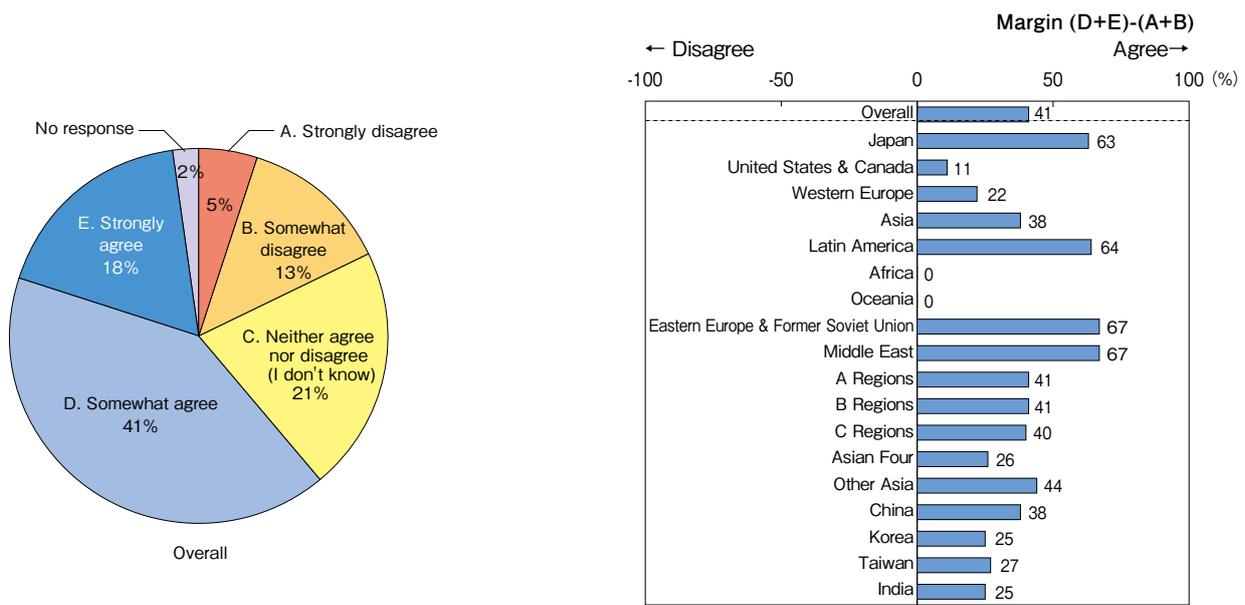
- Respondents who selected “agree” (D+E) comprised the majority. 21% of respondents selected “disagree” (A+B). Among those affiliated with universities and research institutions (worldwide), 67% selected “agree.” (Please refer to V. Data by Occupational Affiliation, P82)

2. Easily comprehensible information has not been successfully communicated from environmental experts to the public.



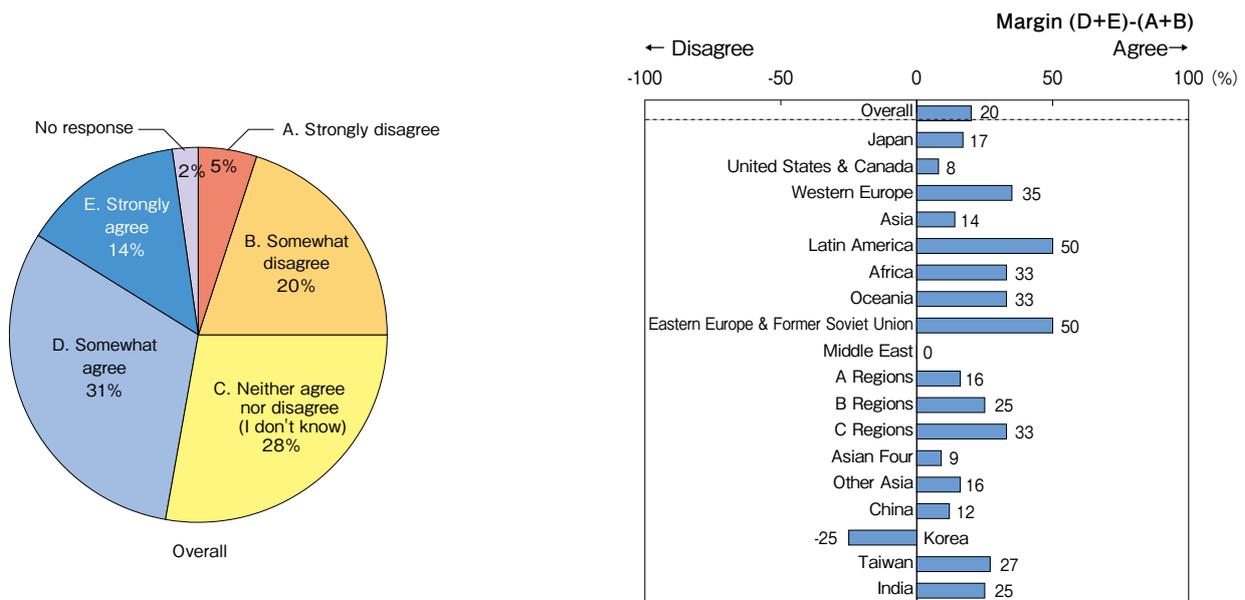
- Respondents who selected “agree” (D+E) comprised a large majority, at 79%. In contrast, those who selected “disagree” were limited to 12%. Those who selected “agree” comprised a large majority among respondents affiliated with central and local government, non-profit organizations, universities and research institutions. (Please refer to V. Data by Occupational Affiliation, P82)

3. There are discrepancies among environmental experts in the acknowledgement of environmental problems, weakening the ability of the information to appeal to the public.



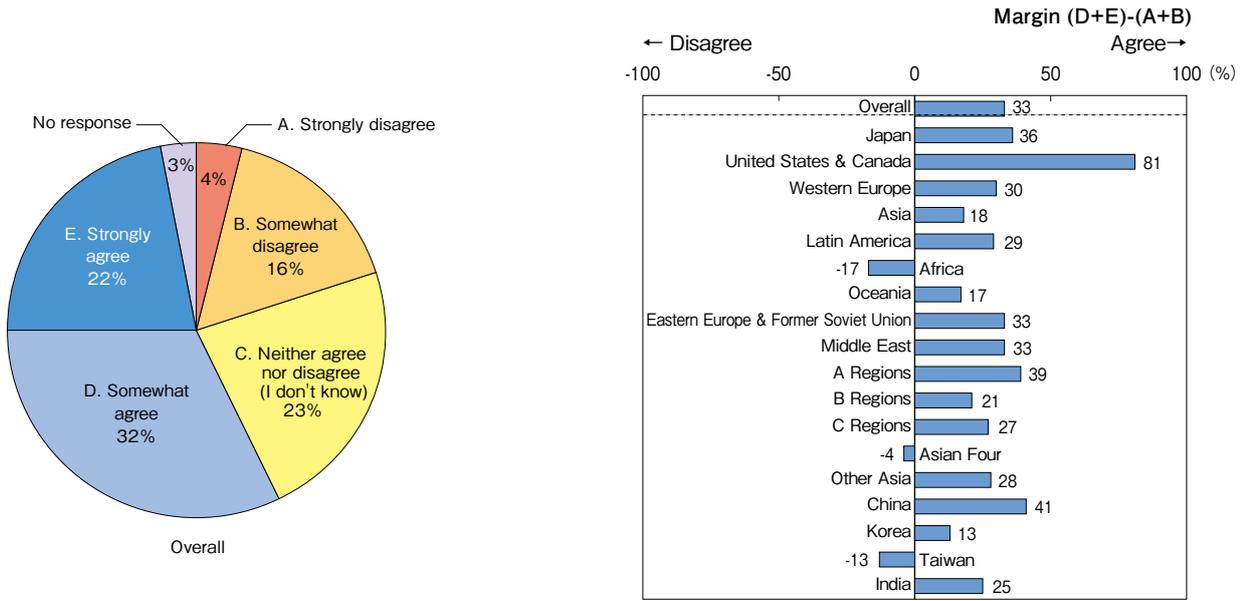
- While respondents who selected “agree” (D+E) comprised the majority at 59%, only 18% selected “disagree” (A+B). Among respondents affiliated with universities and research institutions, 66% selected “agree” and 20% selected “disagree.” (Please refer to V. Data by Occupational Affiliation, P82)

4. Environmental experts focus their communication of information too heavily upon policy makers, failing to reach the public.



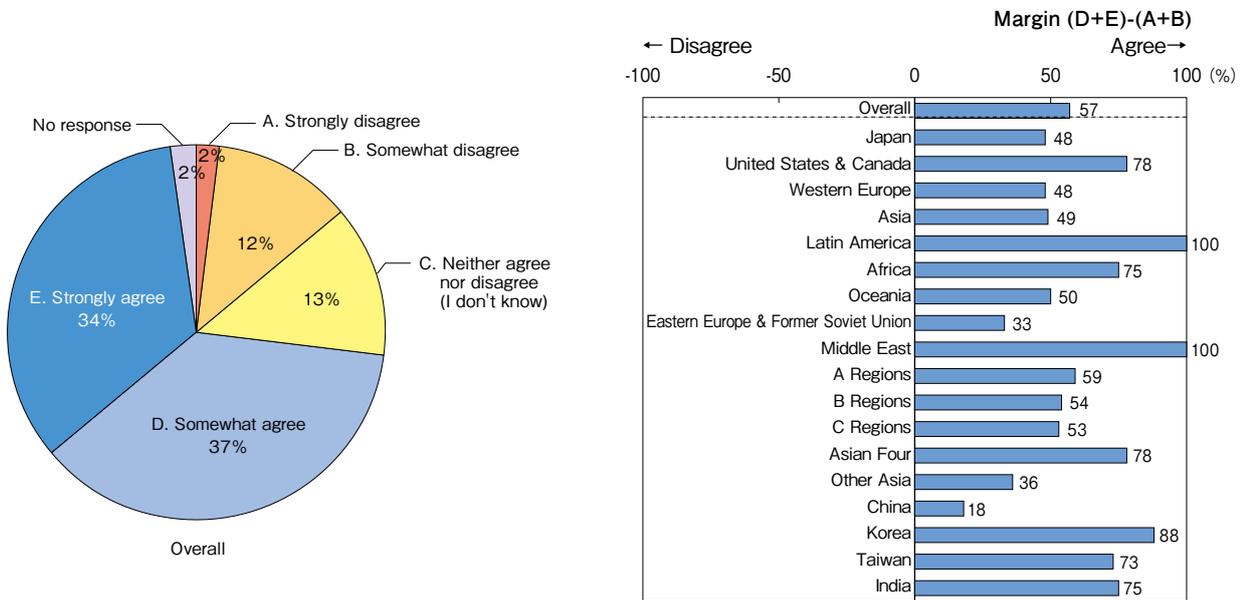
- Opinions on this statement were scattered. While a large number of respondents selected “agree” (D+E) at 45%, they did not reach a majority. On the other hand, many respondents withheld their opinions by selecting “neither agree nor disagree,” at 28%, and another 25% selected “disagree” (A+B). Among respondents affiliated with universities and research institutions, 44% selected “agree” and 26% selected “disagree.” (Please refer to V. Data by Occupational Affiliation, P82)

5. Information from environmental experts became confusing with negative campaigning.



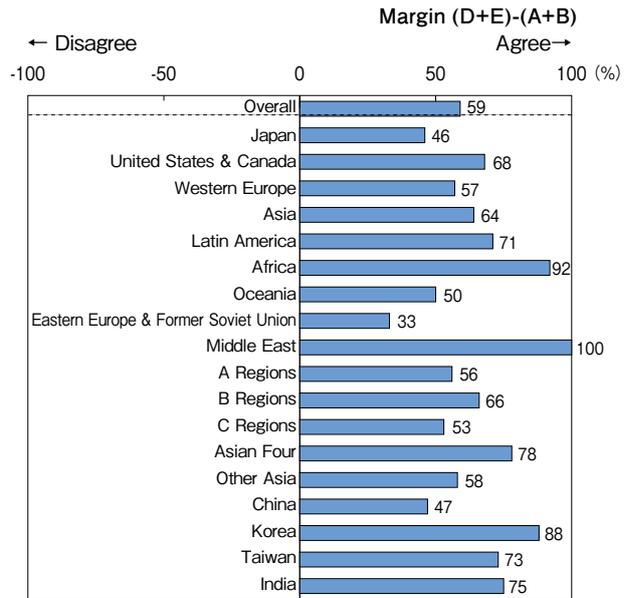
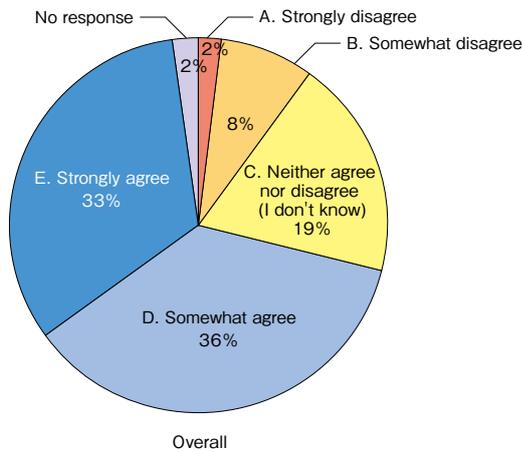
- While respondents who selected “agree” (D+E) comprised the majority at 54%, only 20% selected “disagree” (A+B). (Please refer to V. Data by Occupational Affiliation, P82)

6. Policy makers consider environmental problems secondary, disregarding the opinions of environmental experts.



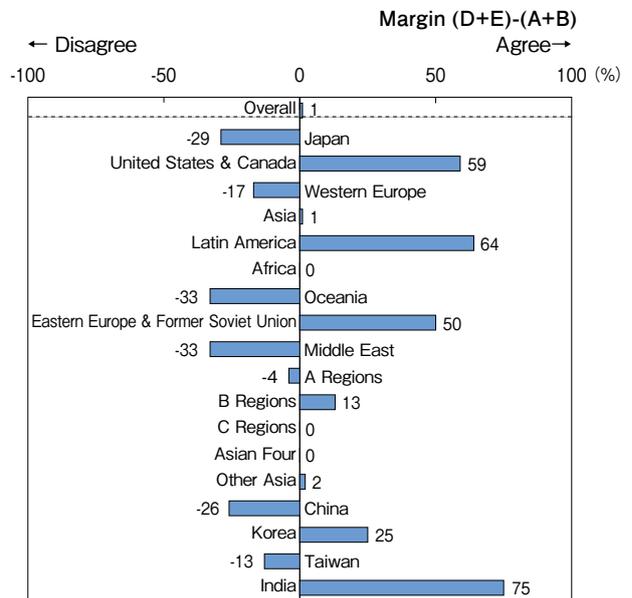
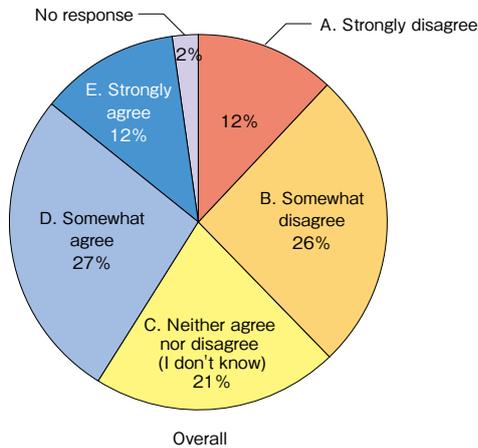
- Respondents who selected “agree” (D+E) comprised a large majority, at 71%. In particular, those who selected “strongly agree” comprised a large majority in the United States & Canada, South Korea, Taiwan, and India. Among respondents affiliated with central governments (worldwide), 82% selected “agree.” (Please refer to V. Data by Occupational Affiliation, P82)

7. Policy makers do not communicate information given by environmental experts to the public.



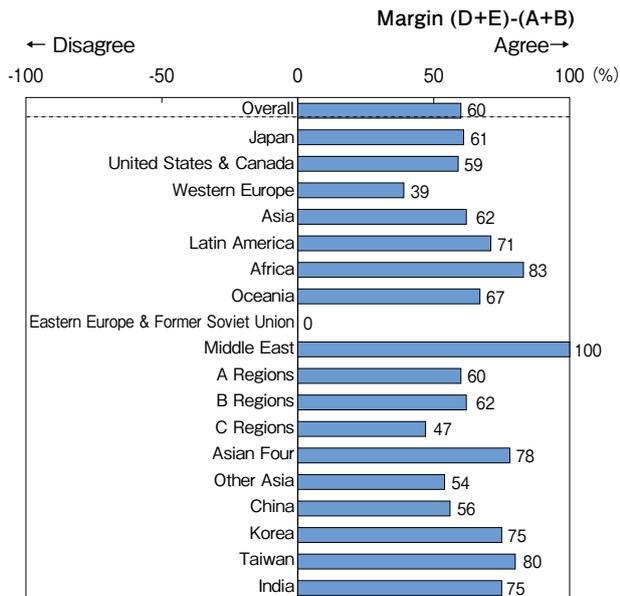
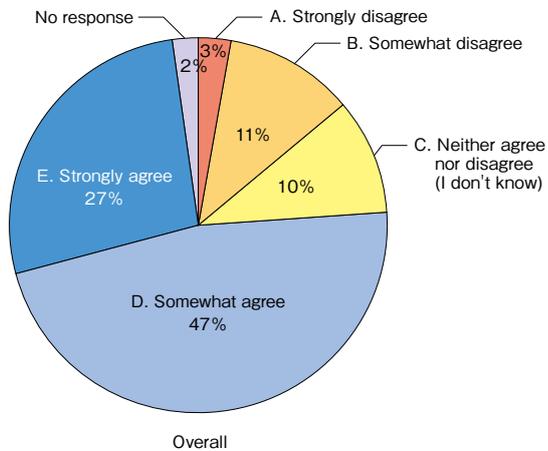
- While respondents who selected “agree” (D+E) constituted the majority at 69%, only 10% selected “disagree” (A+B). Among respondents affiliated with central governments (worldwide), 90% selected “agree.” (Please refer to V. Data by Occupational Affiliation, P82)

8. Policy makers deny the very existence of environmental problems.



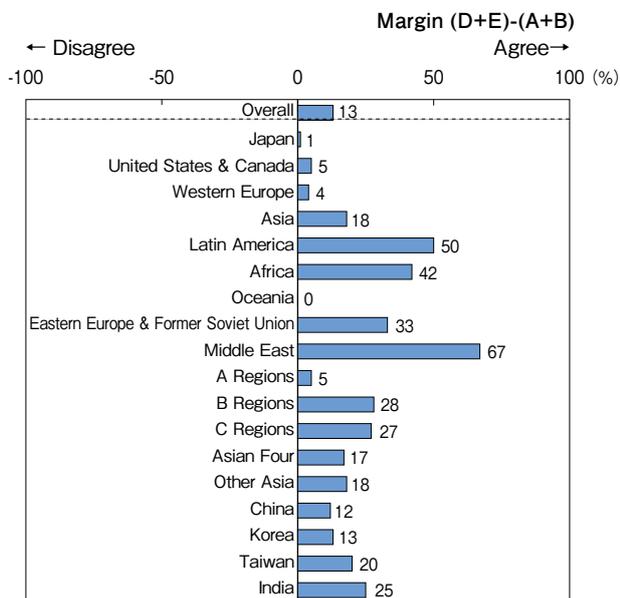
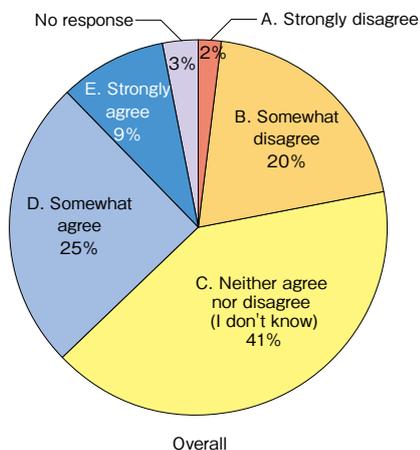
- Opinions were split on this statement. 39% of respondents selected “agree,” while 38% selected “disagree,” and 21% selected “I don’t know”. Trends differed by country and region. Among respondents affiliated with central governments (worldwide), 46% selected “agree” while 36% selected “disagree.” (Please refer to V. Data by Occupational Affiliation, P82)

9. The public does not value the information provided by environmental experts unless disaster occurs in their vicinity.



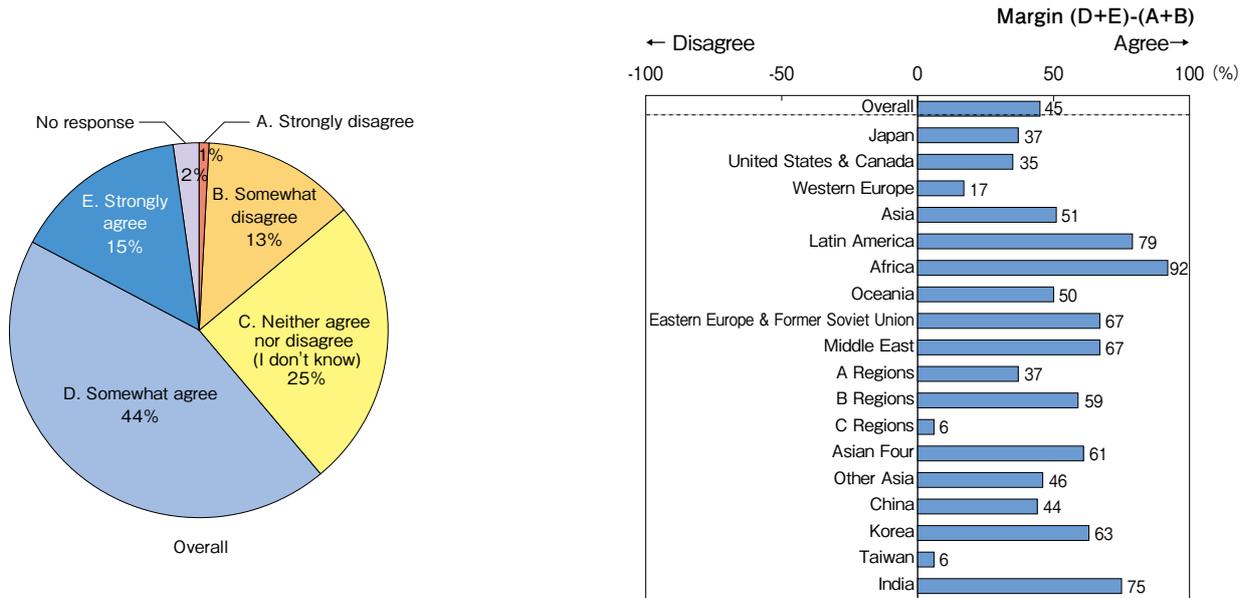
- A large majority selected “agree” (D+E) at 74%.

10. Non-profit organizations put their communications efforts too much on policy makers.



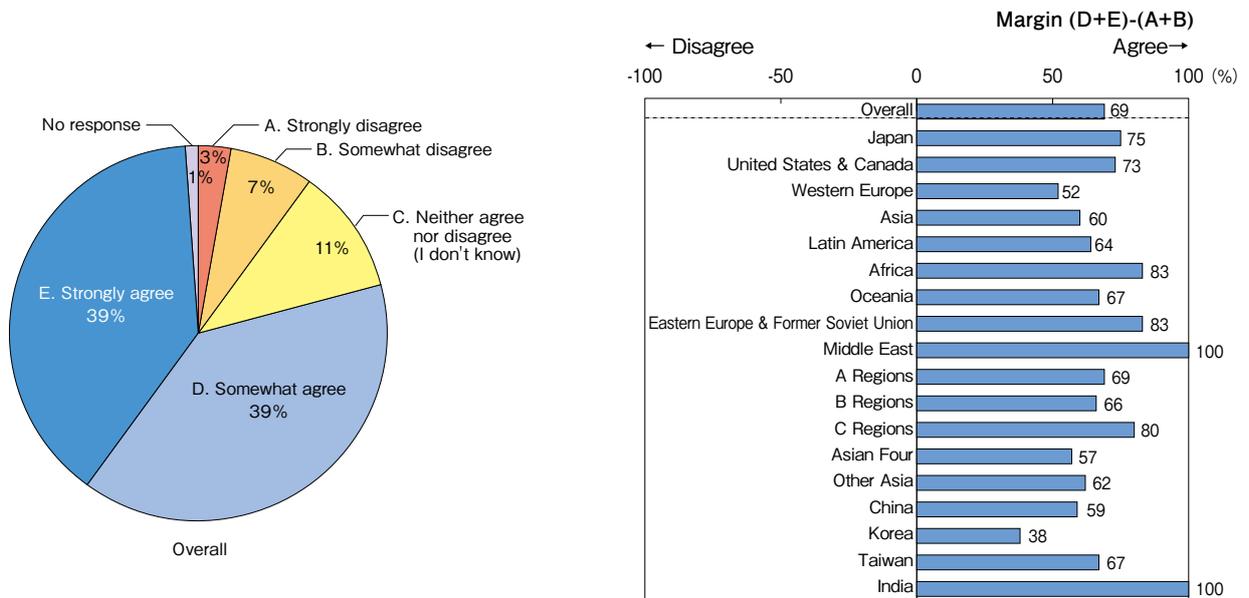
- Responses were scattered, with respondents most frequently selecting “I don’t know,” at 41%. This was followed by “agree” (D+E) at 34%, and “disagree” at 22%. On the other hand, among respondents affiliated with non-profit organizations (worldwide), 41% chose “agree” (D+E), and 33% selected “disagree.” (Please refer to V. Data by Occupational Affiliation, P82)

11. Although non-profit organizations exist in close proximity to the public, they have not been effective and the information of environmental experts does not reach the public.



- While respondents who selected “agree” (D+E) comprised the majority overall at 59%, only 14% selected “disagree” (A+B). Among respondents affiliated with non-profit organizations (worldwide), 71% selected “agree”. This climbed to 90% among respondents affiliated with central governments (worldwide). (Please refer to V. Data by Occupational Affiliation, P82)

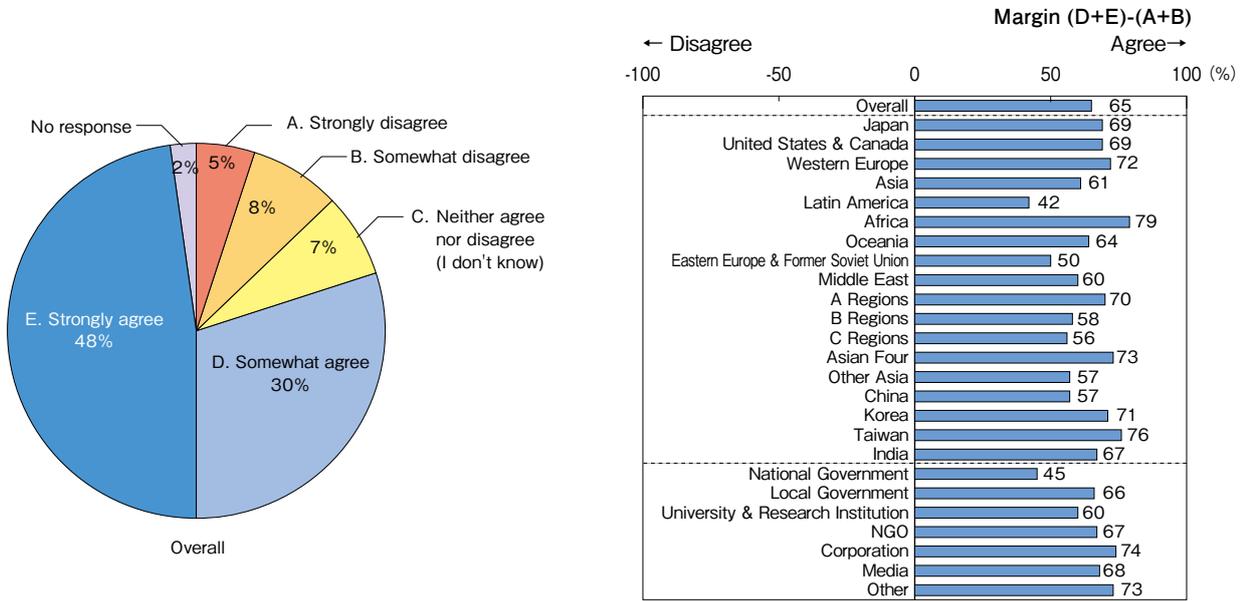
12. A certain level of education, necessary to fully understand information on the global environment, and environmental education, is lacking.



- While respondents who selected “agree” (D+E) comprised a large majority at 78%, only 10% selected “disagree” (A+B).

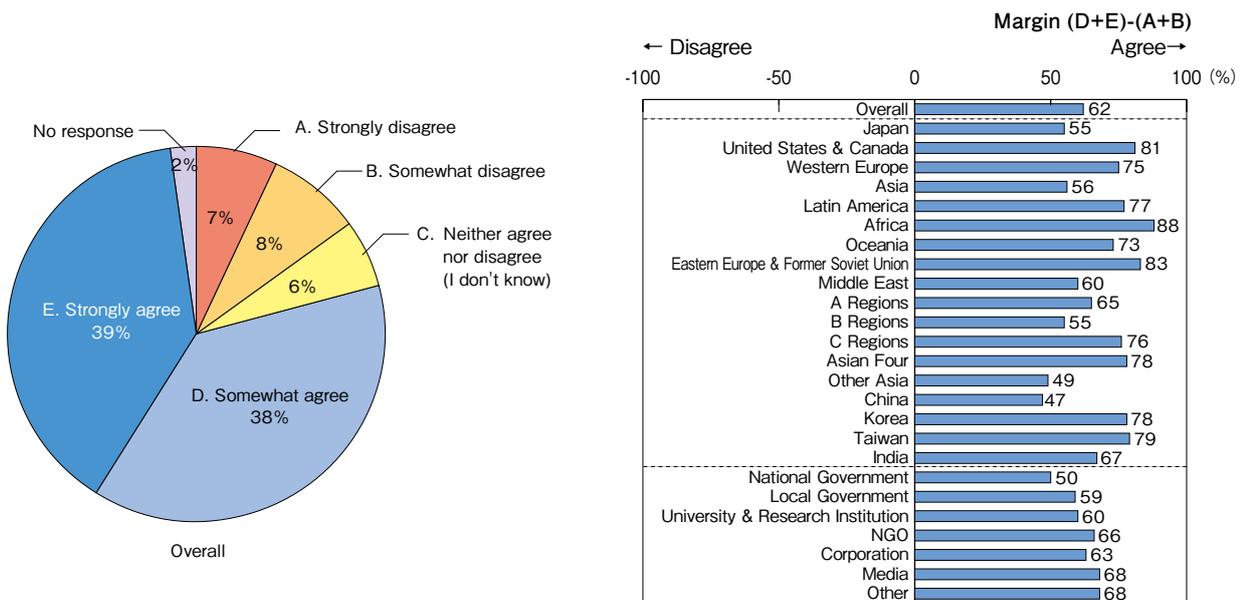
2-2. Pursuit of economic profit (human desires) —For certain individuals, organizations, and corporations, the pursuit of economic profits has been given the utmost priority, making environmental problems secondary.

1. National interests often take precedence.



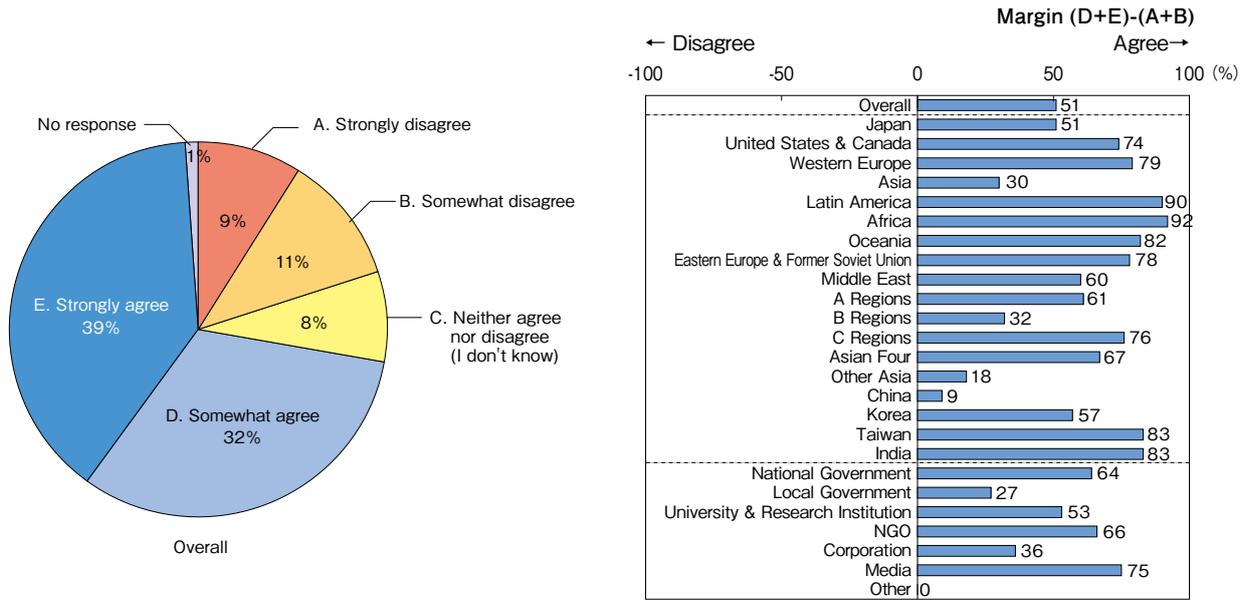
- The combined number of respondents who selected “somewhat agree” and “strongly agree” (D+E) comprised a large majority at 78%. Of those, respondents selecting “strongly agree” nearly reached a majority at 48% while only 13% selected “disagree” (A+B). Respondents affiliated with national governments had the lowest margin between those who agreed and those who disagreed, at 45%.

2. Individuals tend to make decisions based on immediate profit or loss.



- Respondents who agreed comprised a large majority at 77%, while those who disagreed comprised 15%.

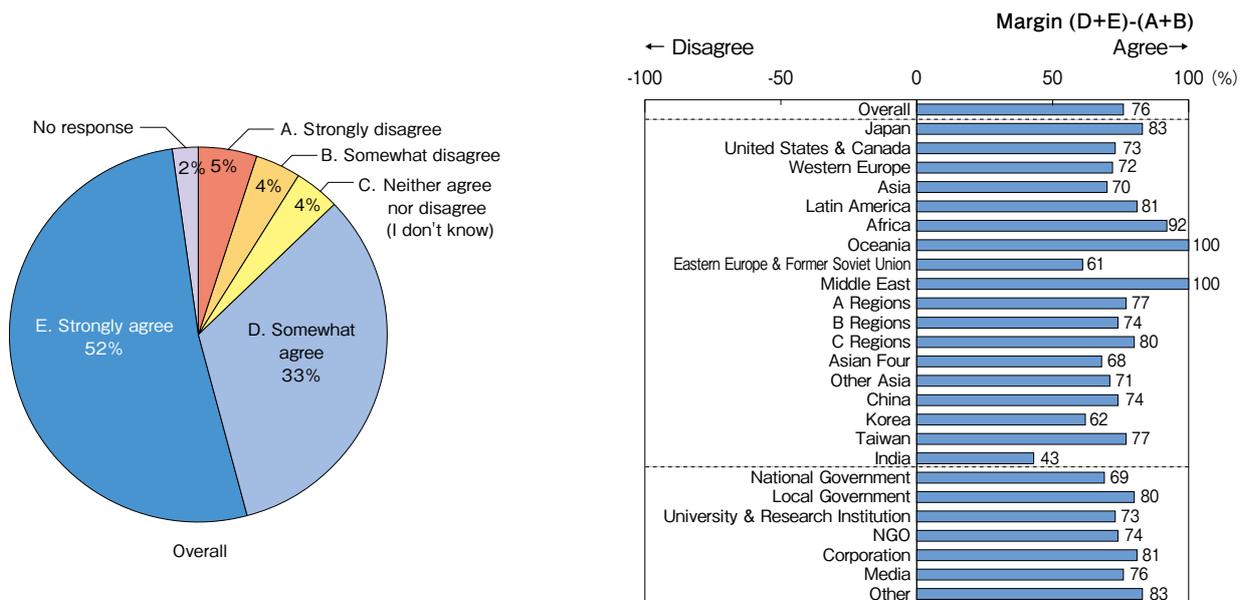
3. The economic profits of a corporation, organization, or a region are prioritized so much that environmental considerations are not taken into account.



- Respondents who agreed (D+E) comprised a large majority at 71%, whereas those who disagreed (A+B) comprised 20%.

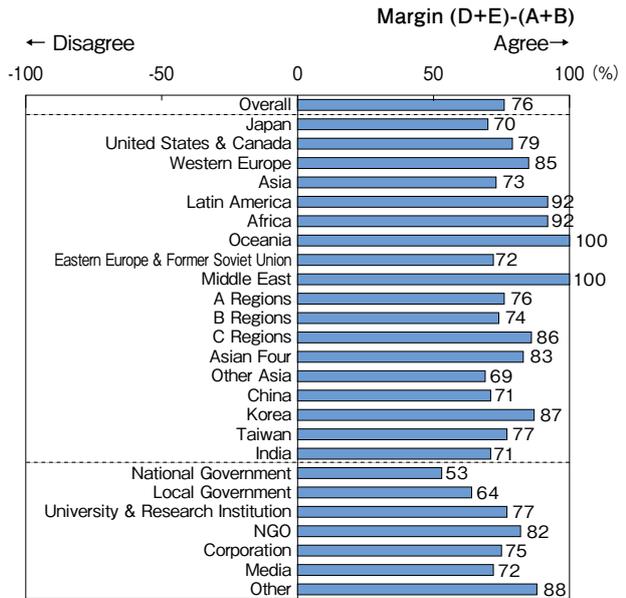
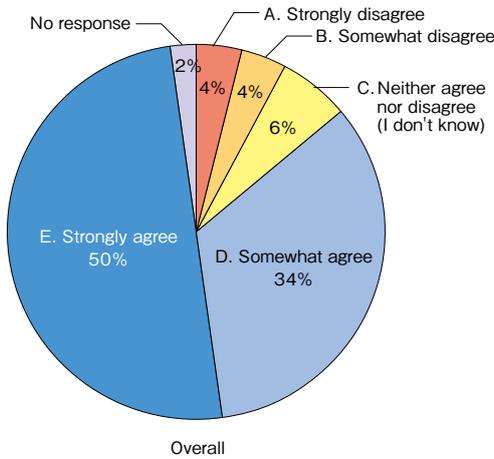
2-3 Global economic system — The Global economy, which emphasizes growth using indicator such as GDP has destroyed the environment.

1. Pursuing maximization of individual interests (partial optimization) has caused a significant detriment in the interest of the whole which is the global environment.



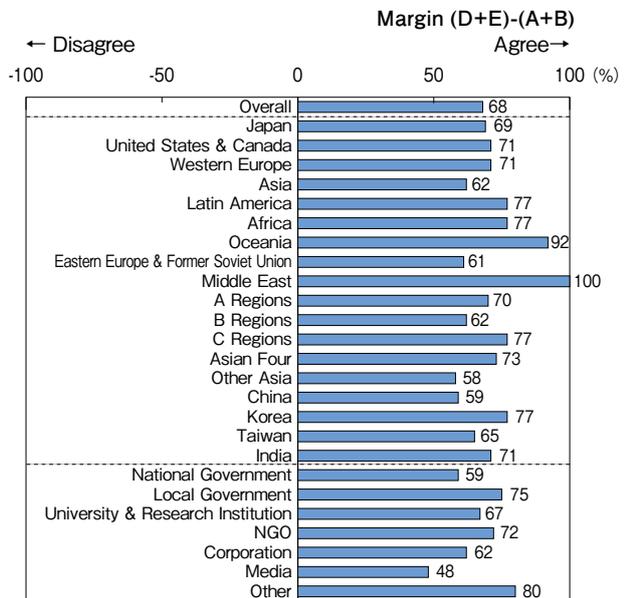
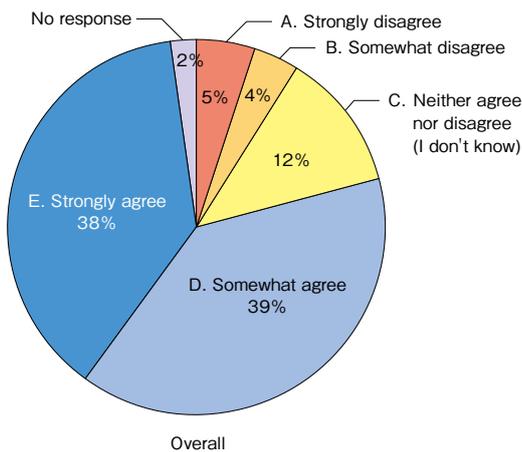
- Respondents who selected “agree” (D+E) comprised an overwhelming majority at 85%. Of those, respondents who selected “strongly agree” alone reached a majority at 52%. On the other hand, 9% respondents chose “disagree.”

2. The global economy continues to pursue growth using GDP as an indicator, not pursuing a sustainable and stable recycling economy.



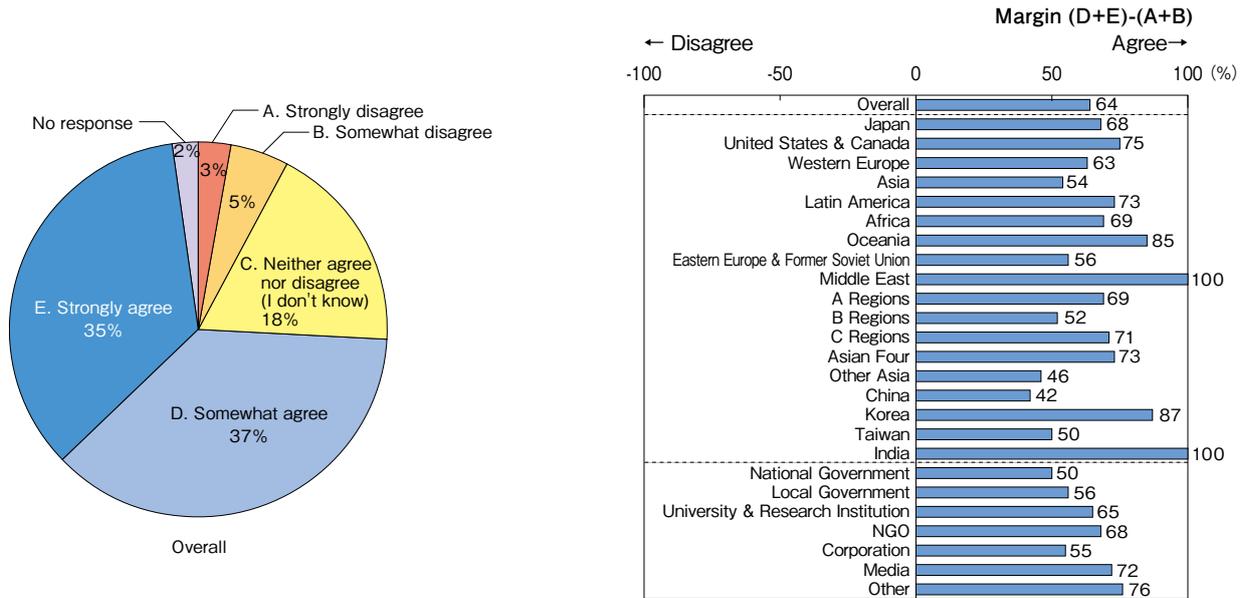
- Respondents who agreed (D+E) comprised an overwhelming majority at 84%, of which those selecting “strongly agree” reached 50%. On the other hand, those who disagreed (A+B) comprised 8%.

3. “Tragedy of the commons” (the economic propensity to inexhaustibly consume “free” things), which tends to occur with natural resources, has been tolerated.



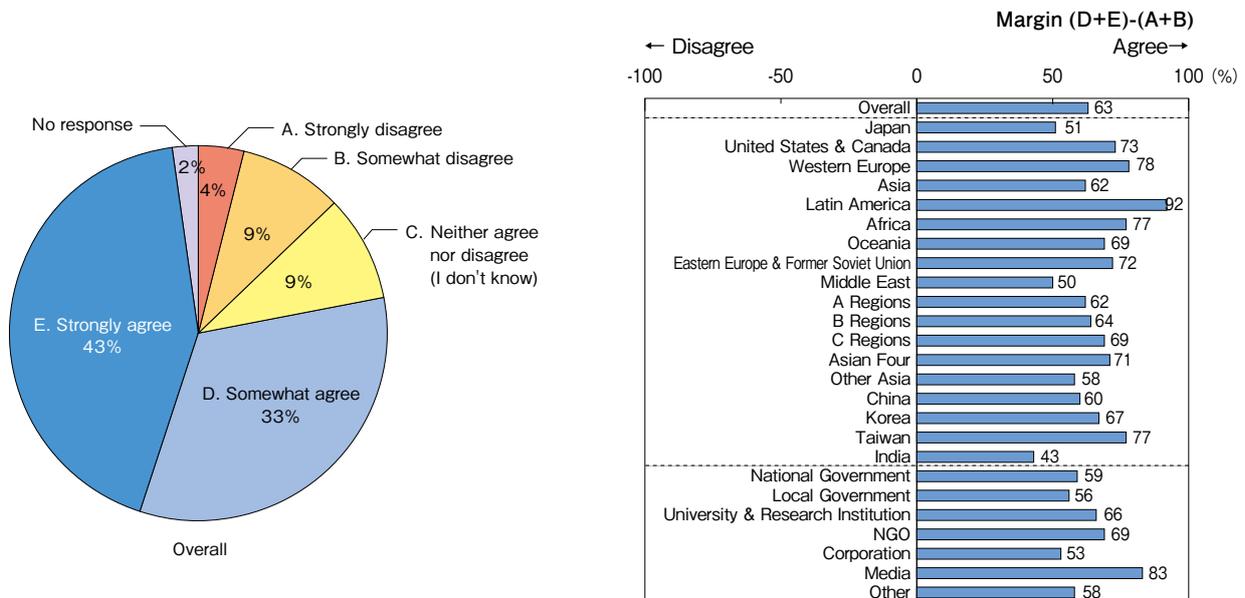
- Respondents who selected “agree” (D+E) comprised a large majority at 77%. On the other hand, 9% of respondents chose “disagree” (A+B), and another 12% selected “I don’t know.”

4. Economic systems which reflect societal costs like TEEB (The Economics of Ecosystems and Biodiversity) have not been pursued.



- Respondents who agreed (D+E) comprised the majority at 72%, while those who disagreed comprised 8%. Those who selected “Neither Agree Nor Disagree” reached 18%, representing the possibility that economic systems like The Economics of Ecosystems and Biodiversity (TEEB) are not necessarily widely known or understood.

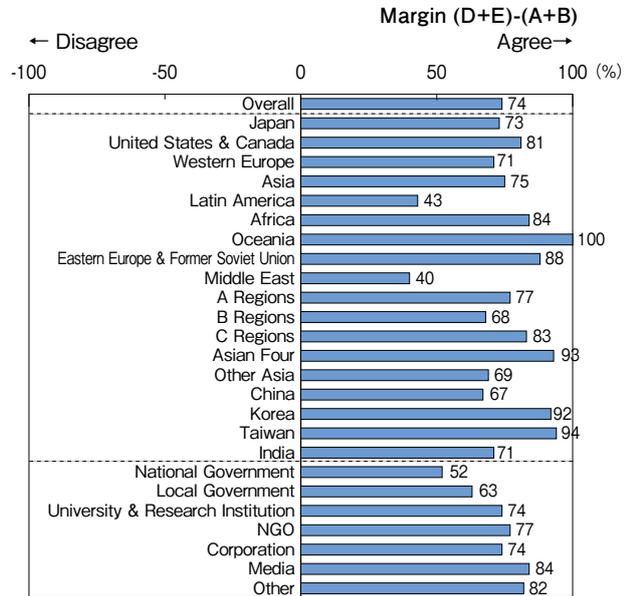
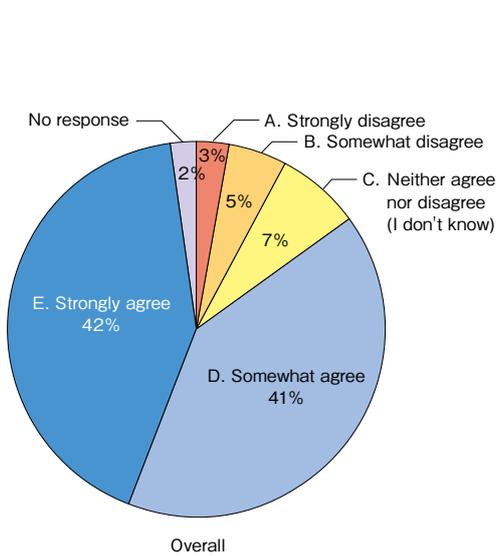
5. Corporations have focused too much on maximizing short-term profits and are indifferent in long-term benefits that incorporate the environment in their business objectives.



- Respondents who selected “agree” (D+E) comprised the majority at 76%. Of those, 43% respondents selected “strongly agree”. On the other hand, only 13% selected “disagree” (A+B). Even among respondents affiliated with corporations (worldwide), those who agreed with this statement comprised a majority with a large margin of 53%.

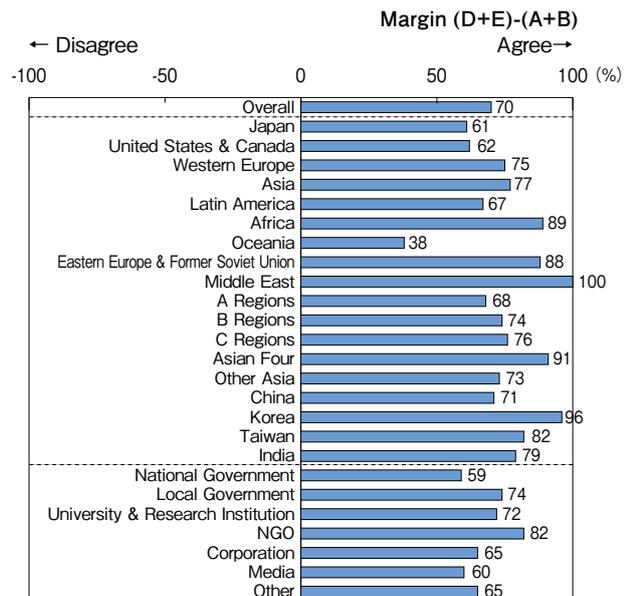
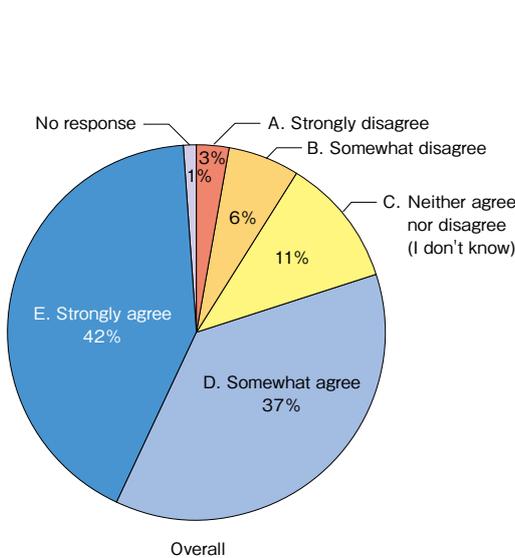
2-4 Problems in decision-making systems—There are limits to the decision-making systems of countries, international organizations like the United Nations, societies, and individuals, in managing interests that are shared throughout the world like the environment.

2-4-1 National decision-making systems tend to prioritize national interests, thus could be called a partial optimization. As such, policies that optimize the whole, which benefits the entire world, become secondary.



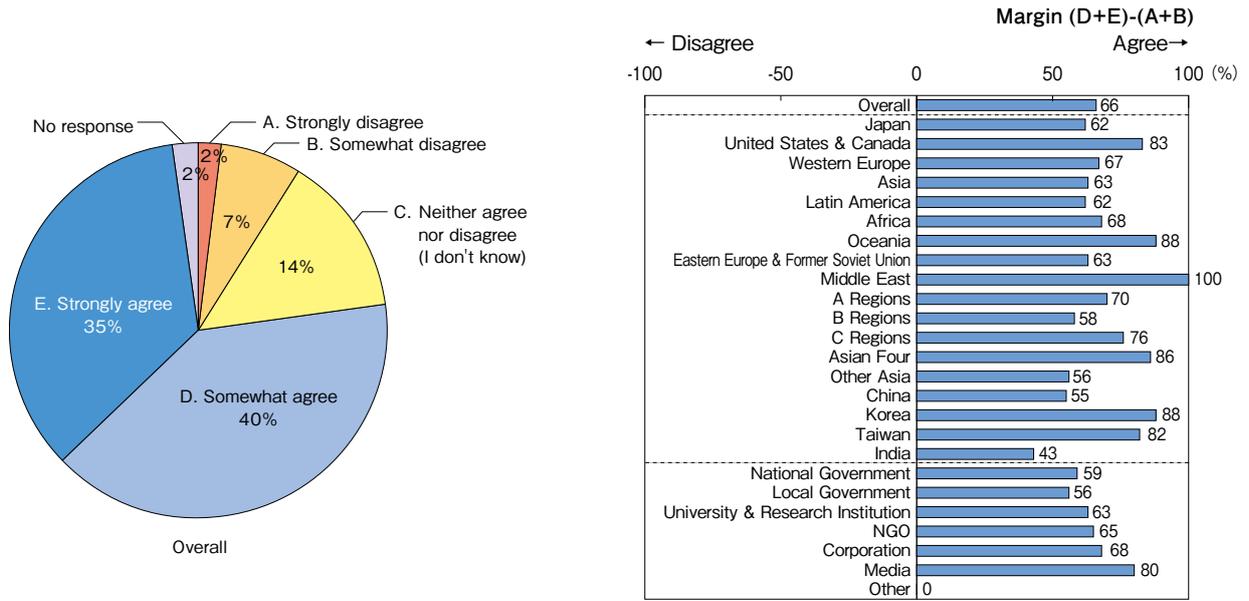
- Respondents who selected “agree” (D+E) comprised a large majority at 83%. Of those, 42% selected “strongly agree”. On the other hand, only 8% chose “disagree” (A+B). Even among respondents affiliated with central governments (worldwide), those who agreed with this statement comprised a majority with a large margin of 52%.

2. National decision-making systems are influenced by powerful political, business, and organizational interests and do not reflect the will of the public, deeply concerned about the global environment.



- Respondents who selected “agree” (D+E) comprised the majority at 79%. Of those, 42% selected “strongly agree”. On the other hand, only 9% chose “disagree” (A+B). In most countries, regions, and employment affiliations, those who selected “agree” comprised a large majority.

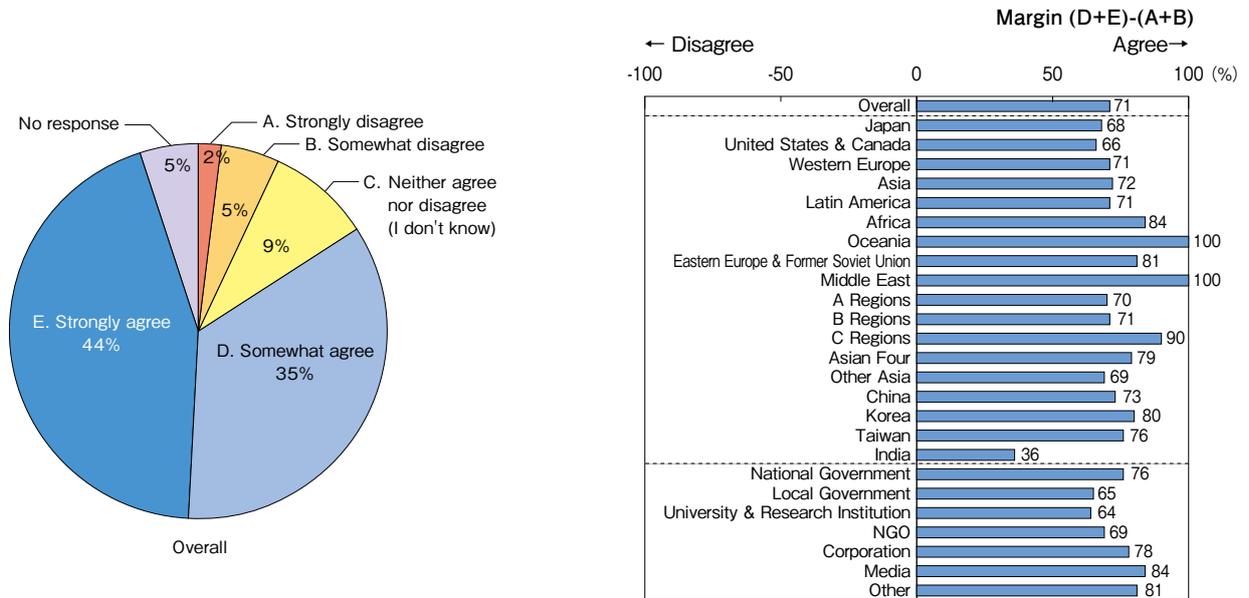
3. Changes in national policy often face great resistance (inertia), and the tendency is to stay with business as usual.



- Respondents who selected “agree” (D+E) comprised the majority at 75%. On the other hand, 9% of respondents chose “disagree” (A+B). Among respondents affiliated with central governments, those who selected “agree” comprised 72%, resulting in a similar outcome to the overall average. (Please refer to V. Data by Occupational Affiliation)

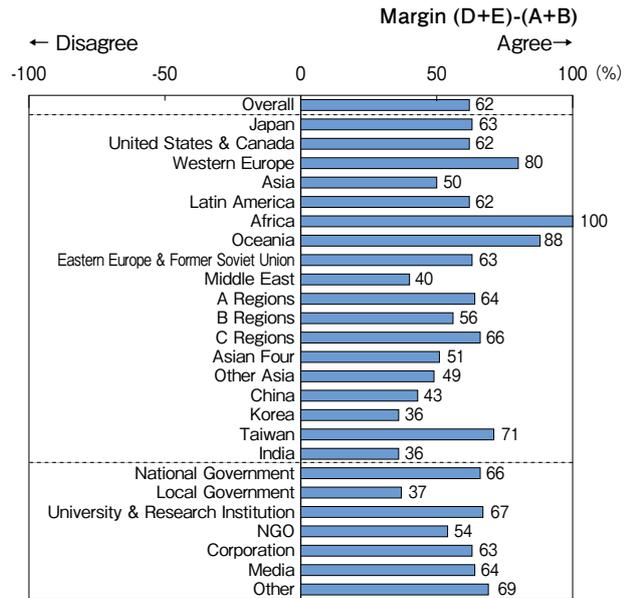
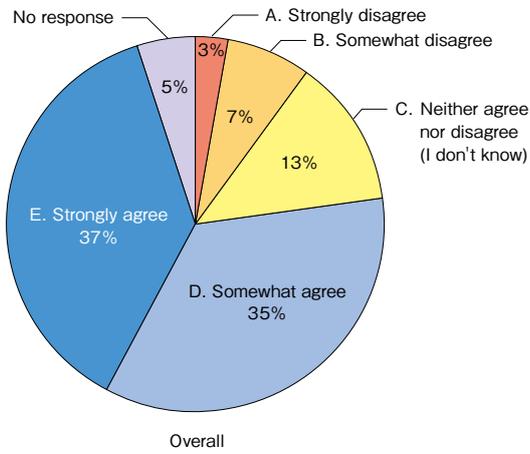
2-4-2. Problems with the systems of international organizations like the United Nations

1. International organizations like the United Nations are, in the end, affected by the will of individual countries, and do not move towards the optimization of the whole. (e.g., Large emitters of CO₂ refuse to become signatories to international treaties. Organizations cannot escape old frameworks like the one pitting developed countries against developing countries.)



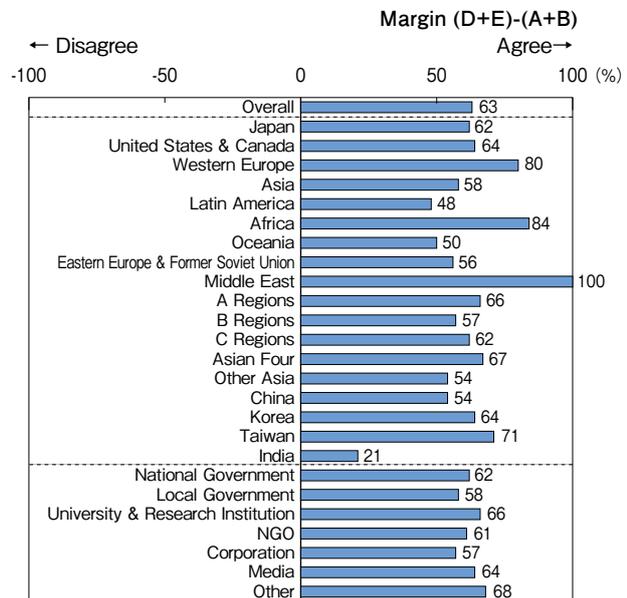
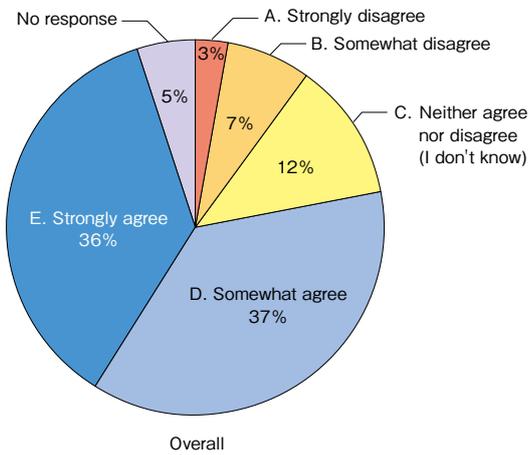
- Respondents who selected “agree” (D+E) comprised the majority at 79% while only 7% of respondents selected “disagree” (A+B). Respondents affiliated with central governments (worldwide), corporations (worldwide), and journalism had relatively high percentages of respondents who chose “agree,” at 83, 83, and 88 points respectively. (Please refer to V. Data by Occupational Affiliation)

2. The voting system at the United Nations, with its adherence to the fundamental principle of unanimous consent, makes decision-making difficult.



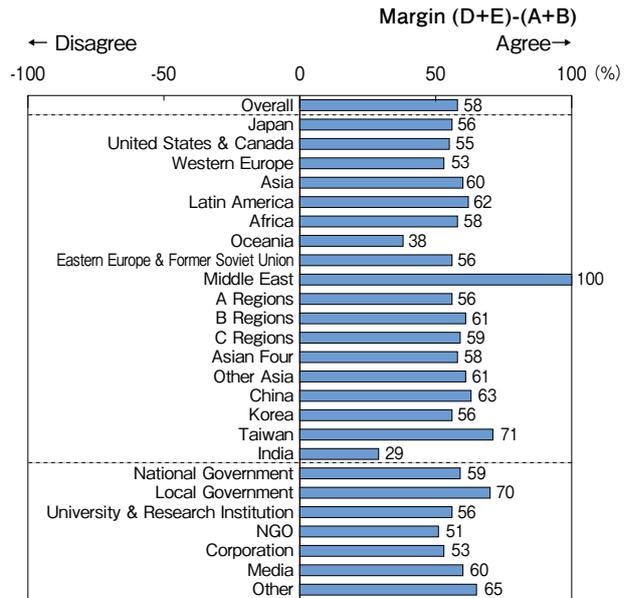
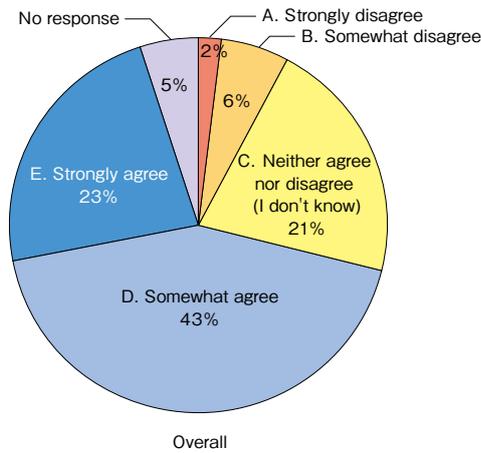
- Respondents who selected “agree” (D+E) comprised the majority at 72% while only 10% chose “disagree” (A+B). Another 13% of respondents selected “I don’t know.”

3. International organizations like the United Nations are not provided enforcement powers or other forceful methods of coordination.



- Respondents who selected “agree” (D+E) comprised the majority at 73% while only 10% of respondents chose “disagree” (A+B). Another 12% selected “I don’t know.” Among respondents in Western Europe, Africa, and the Middle East, those who chose “agree” comprised a majority with extremely high margins of 80, 84, and 100 points respectively.

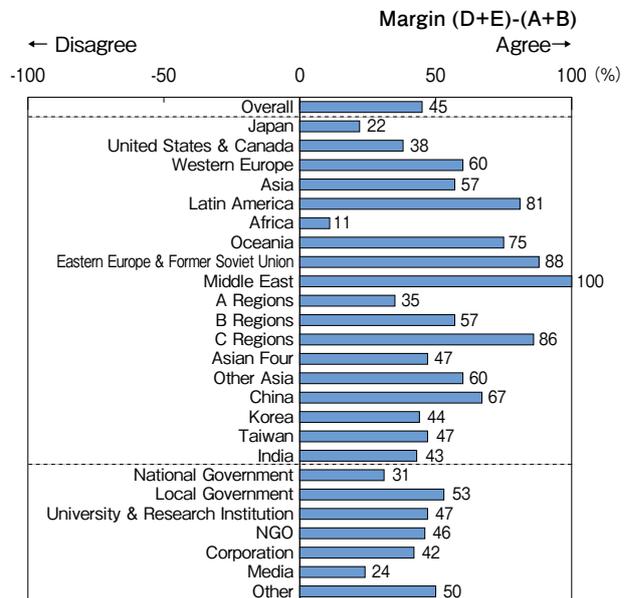
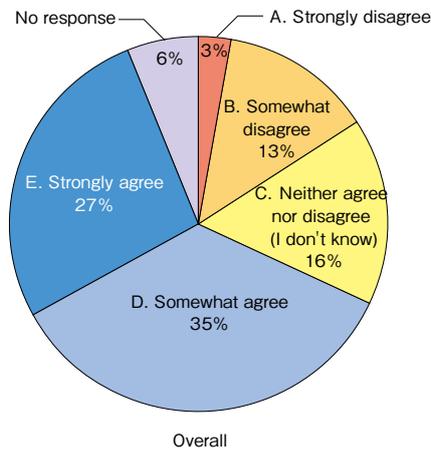
4. Systemic and organizational reforms have been sought, but have not been implemented.



- Respondents who selected “agree” (D+E) comprised the majority at 66% while only 8% of respondents selected “disagree” (A+B). Those who selected “I don’t know” reached 21%.

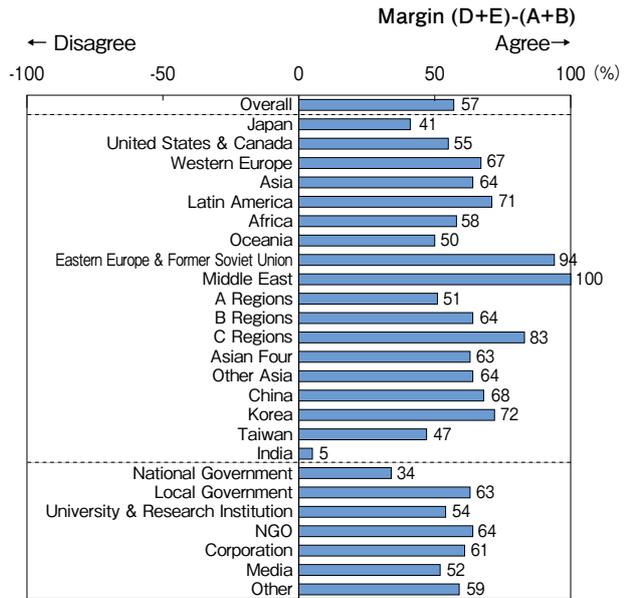
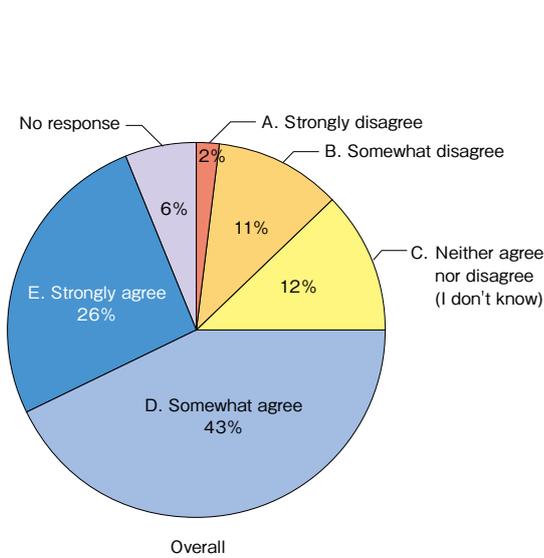
2-4-3 Limitations to individual decision-making (societal, cultural, and behavioral scientific problems)

1. The absence of a sense of reverence towards the natural environment and life forms.



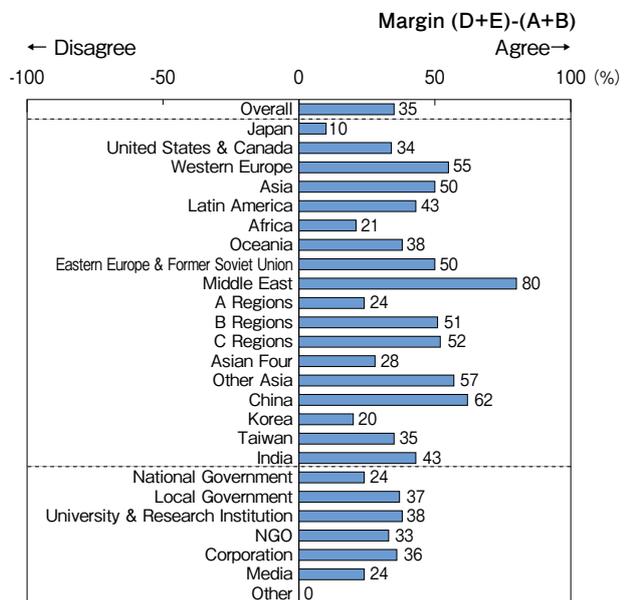
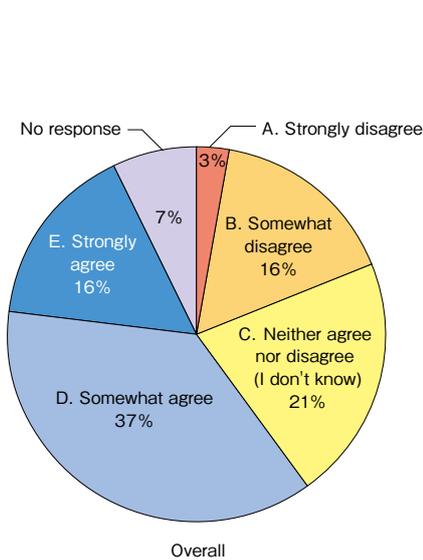
- Respondents who selected “agree” (D+E) comprised the majority at 62% while only 16% selected “disagree” (A+B), and another 16% selected “I don’t know.”

2. Societal and cultural practices or foundations that place high value on the “common good,” like the environment, are lacking or fragile.



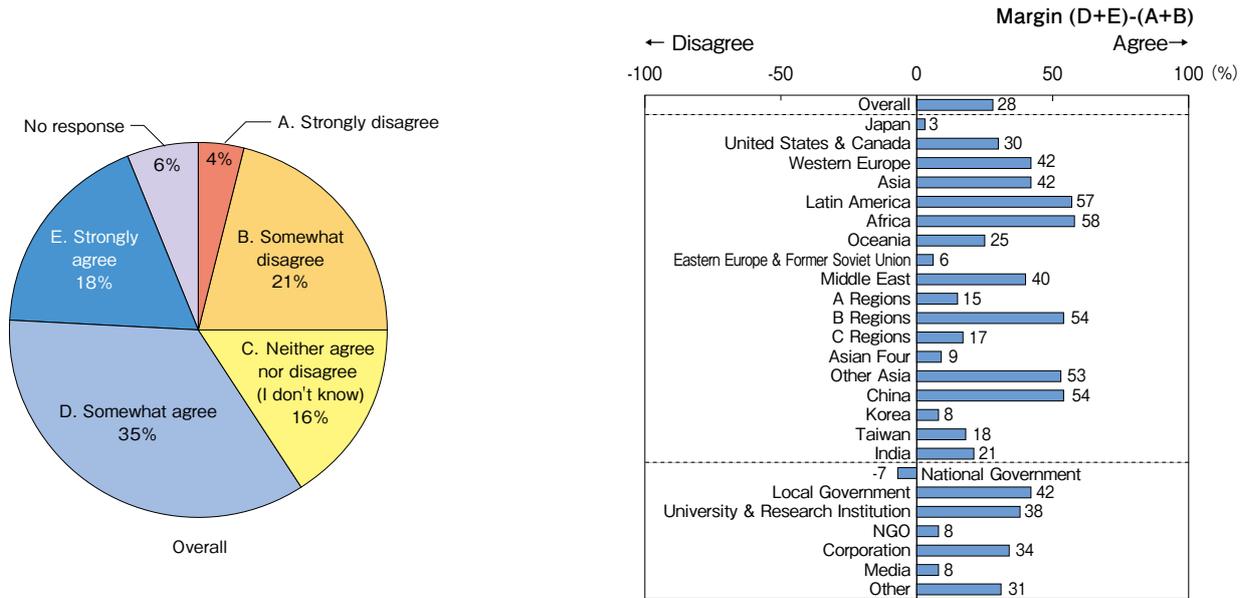
- Respondents who selected “agree” (D+E) comprised the majority at 69% while only 13% respondents selected “disagree” (A+B), and those 11% selected “I don’t know”.

3. Societal practices and traditions that value the weak, including the environment, are few and far between.



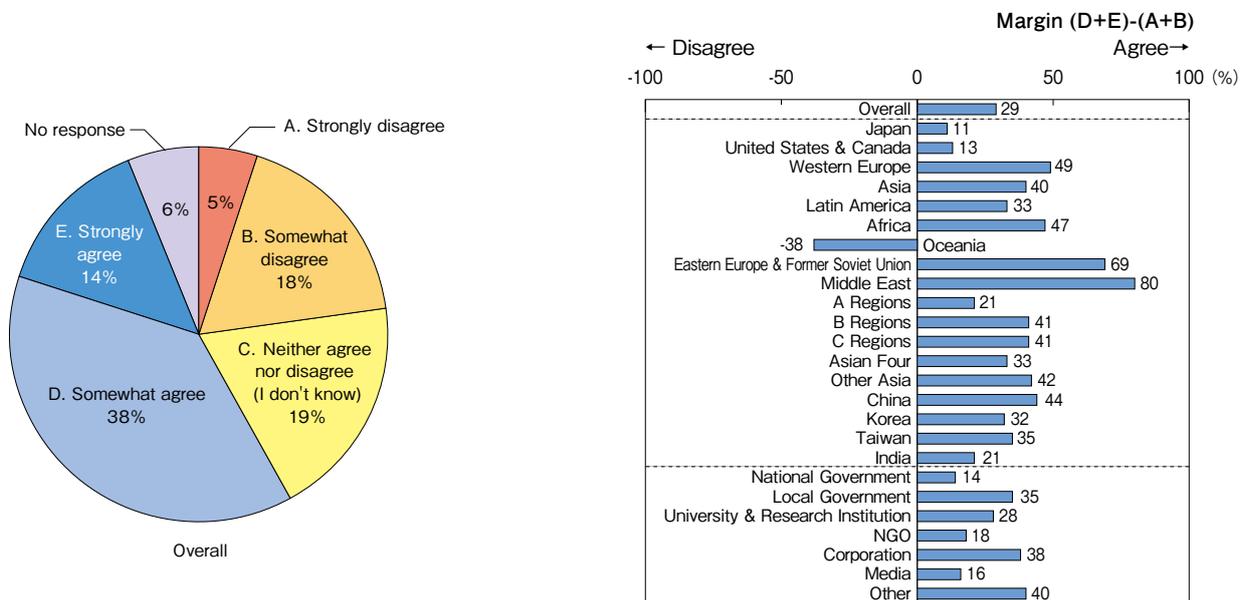
- Respondents who selected “agree” (D+E) comprised the majority at 53% while 19% selected “disagree”, and another 21% selected “I don’t know.” Respondents in Japan had the lowest margin of all countries of respondents, at 10 point, who selected “agree.”

4. At most, people may have the capacity to recognize environmental conditions and effects on a village or township level, but are fundamentally incapable of recognizing problems at a global scale.



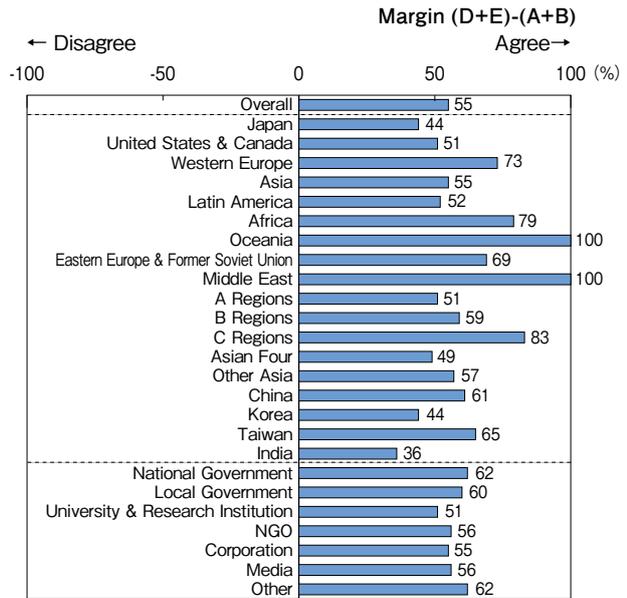
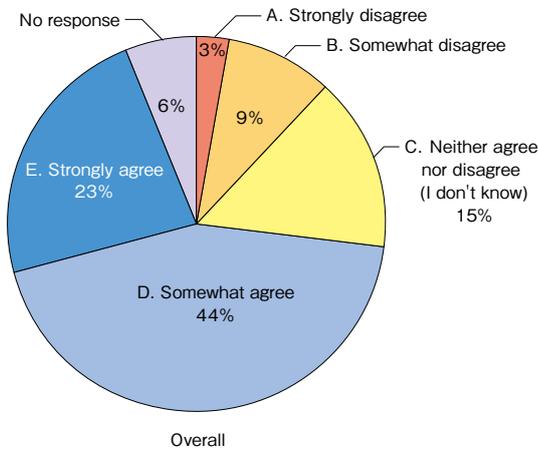
- Respondents who selected “agree” (D+E) comprised the majority at 53% while 25% selected “disagree”, and another 16% selected “I don’t know.”

5. The human decision-making process is instinctively based on self-preservation, and does not allow for consideration of the happiness of others or of future generations.



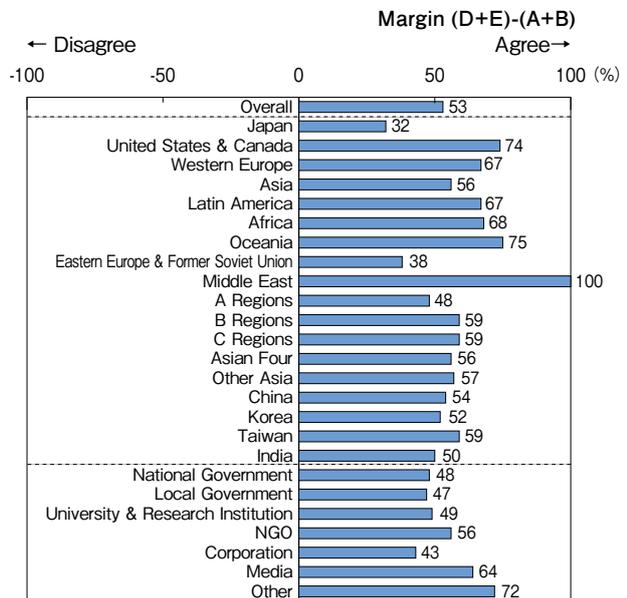
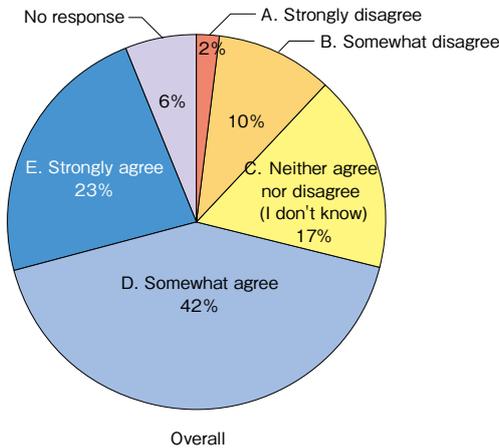
- Respondents who selected “agree” (D+E) comprised the majority at 52% while 23% selected “disagree”, and another 19% selected “I don’t know.” In Oceania, more respondents selected “disagree” with a 38% margin.

6. The human impulse to care for others is being overwhelmed by behavioral principles based on economic factors.



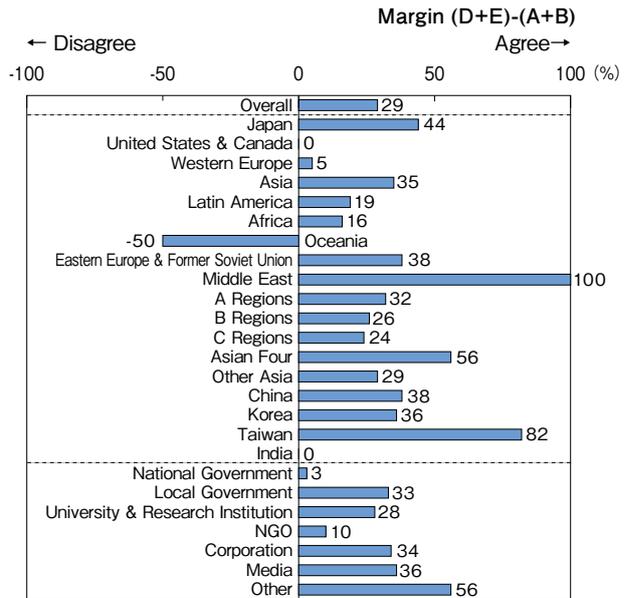
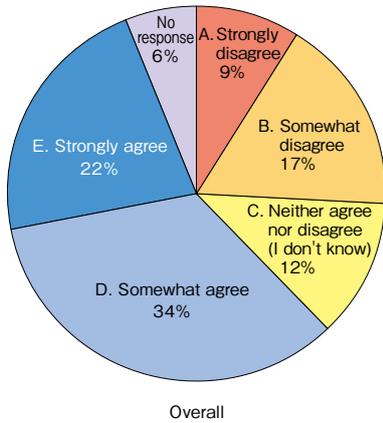
- Respondents who selected “agree” (D+E) comprised the majority at 67%, while 12% chose “disagree” (A+B) and another 15% selected “I don’t know.”

7. People’s sense of values that respect their own environment is inconsistent with their daily economic activity.



- Respondents who selected “agree” (D+E) comprised the majority at 65%, while 12% chose “disagree” (A+B) and another 17% selected “I don’t know.”

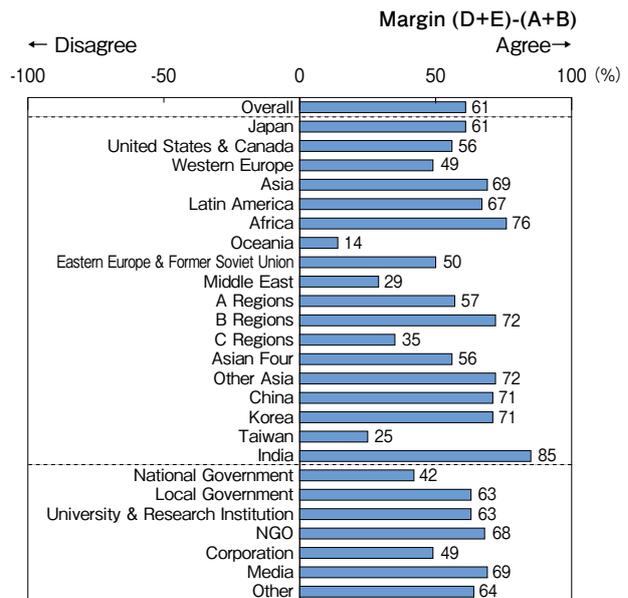
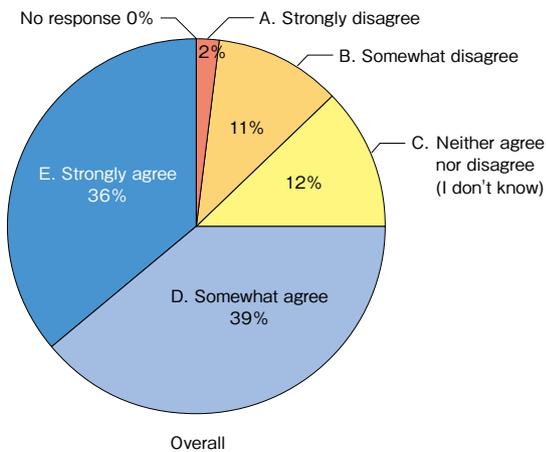
8. Current lifestyles based on large consumption of energy cannot be abandoned.



- Respondents who agreed (D+E) comprised the majority at 56% while 26% disagreed (A+B), and “Neither Agree Nor Disagree” comprised 12%. A large number of respondents in Asia, including Japan, stated they agreed, but in North America, Western Europe, and India, the number of respondents who agreed was comparable to those who disagreed.

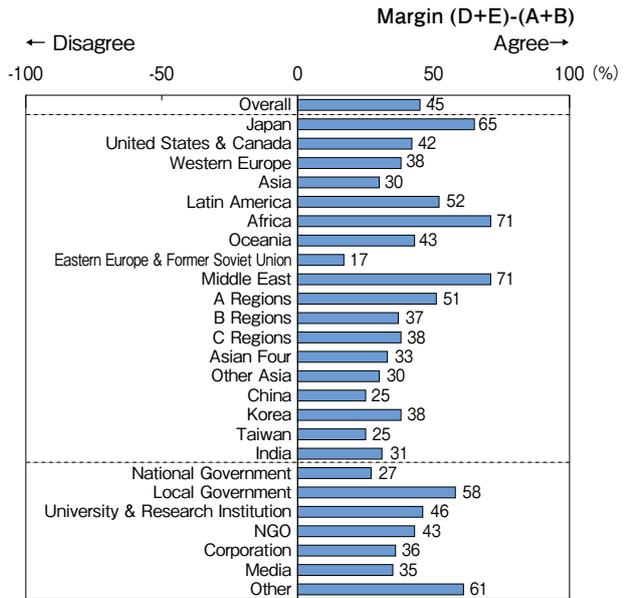
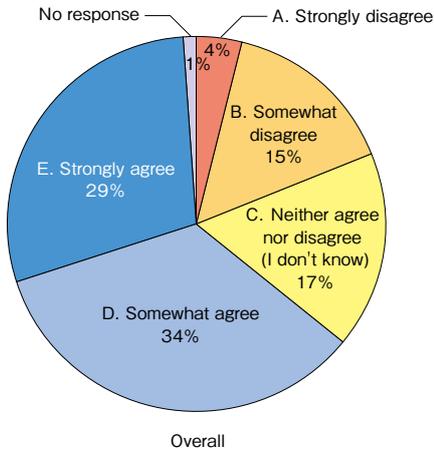
2-5. Governance—Whether or not governance is one of the causes of the delays in addressing global environmental problems in the post-Rio Summit era.

1. The political system lacks in transparency and accountability, preventing citizens and experts from scrutinising what goes on inside.



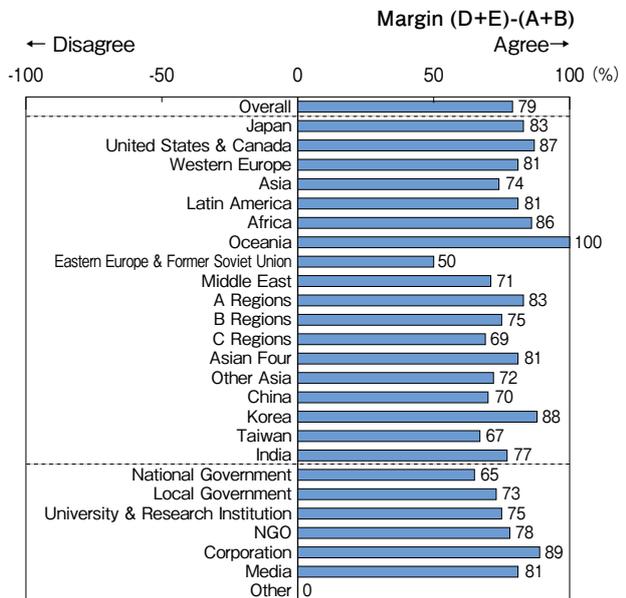
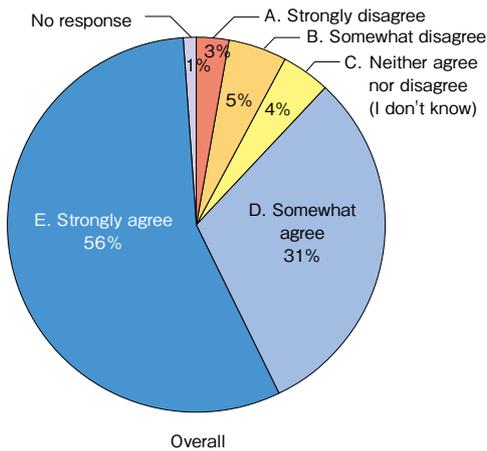
- A large number of respondents selected “agree” (D+E) at 75%, while 13 % chose “disagree” (A+B) and another 12% selected “I don’t know.”

2. Decision-making requires time, and the political system is unable to address environmental problems that demand a speedy response.



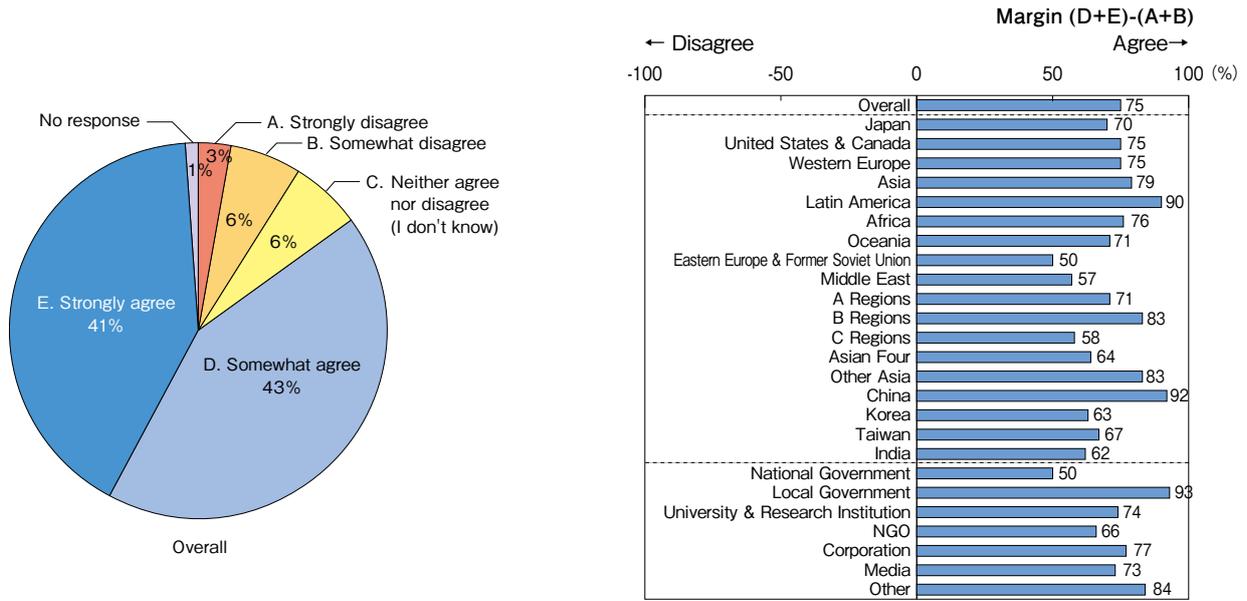
- A large number of respondents selected “agree” (D+E) at 63%, while 19% chose “disagree” (A+B) and another 17% selected “I don’t know.”

3. In many cases, the political system acts with extreme short-sightedness as the priority is to win elections, and as such it cannot handle environmental problems, which require a more long-term perspective.



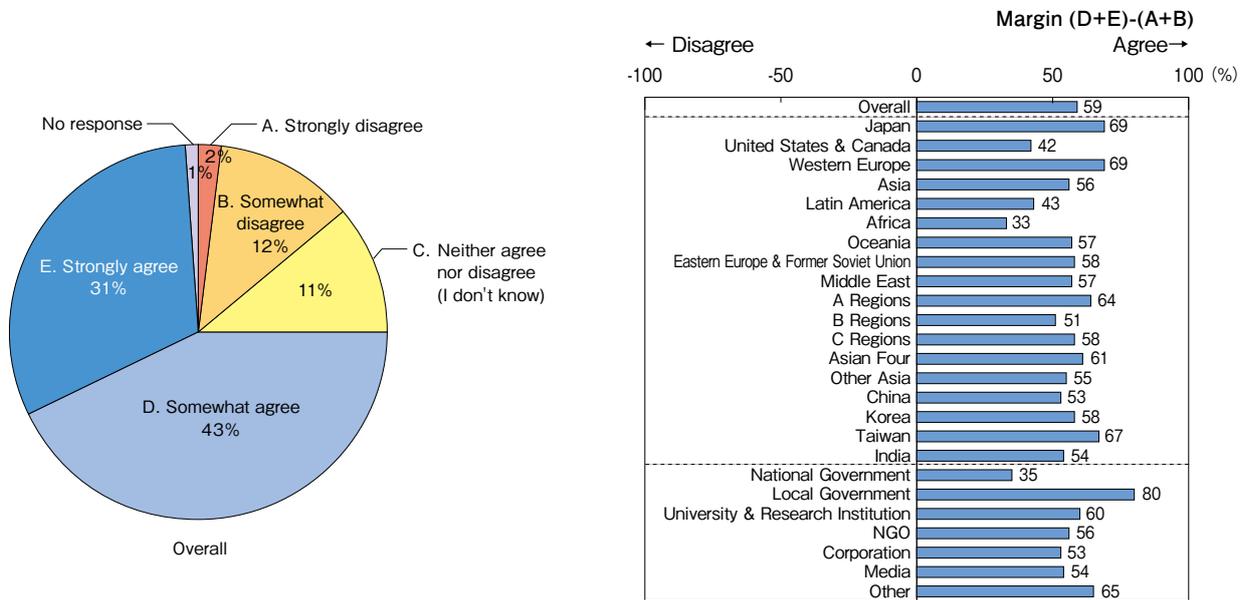
- Overall, respondents who selected “agree” (D+E) comprised an overwhelming majority at 87%. Of those, respondents who chose “strongly agree” constituted 56%. On the other hand, those who selected “disagree” (A+B) were limited to 8%.

4. Political systems tend to act in ways that disproportionately benefit certain sectors of the population, and cannot adequately address global environmental problems.



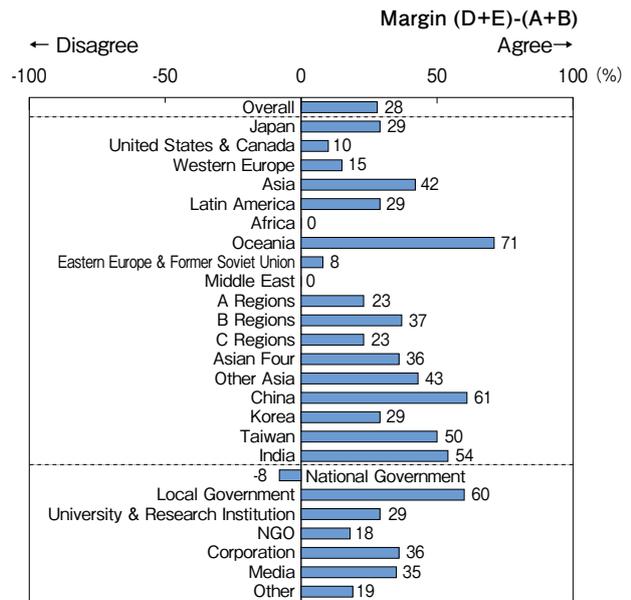
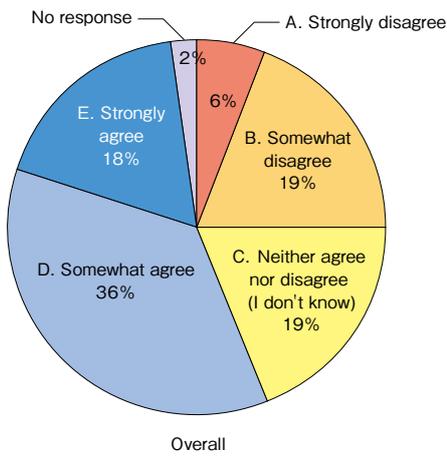
- Respondents who selected “agree” (D+E) comprised an overwhelming majority at 84% while only 9% selected “disagree” (A+B).

5. The basic unit of decision-making occurs at the national level, and therefore the political system is incapable of governing and leading towards the optimization of the entire world.



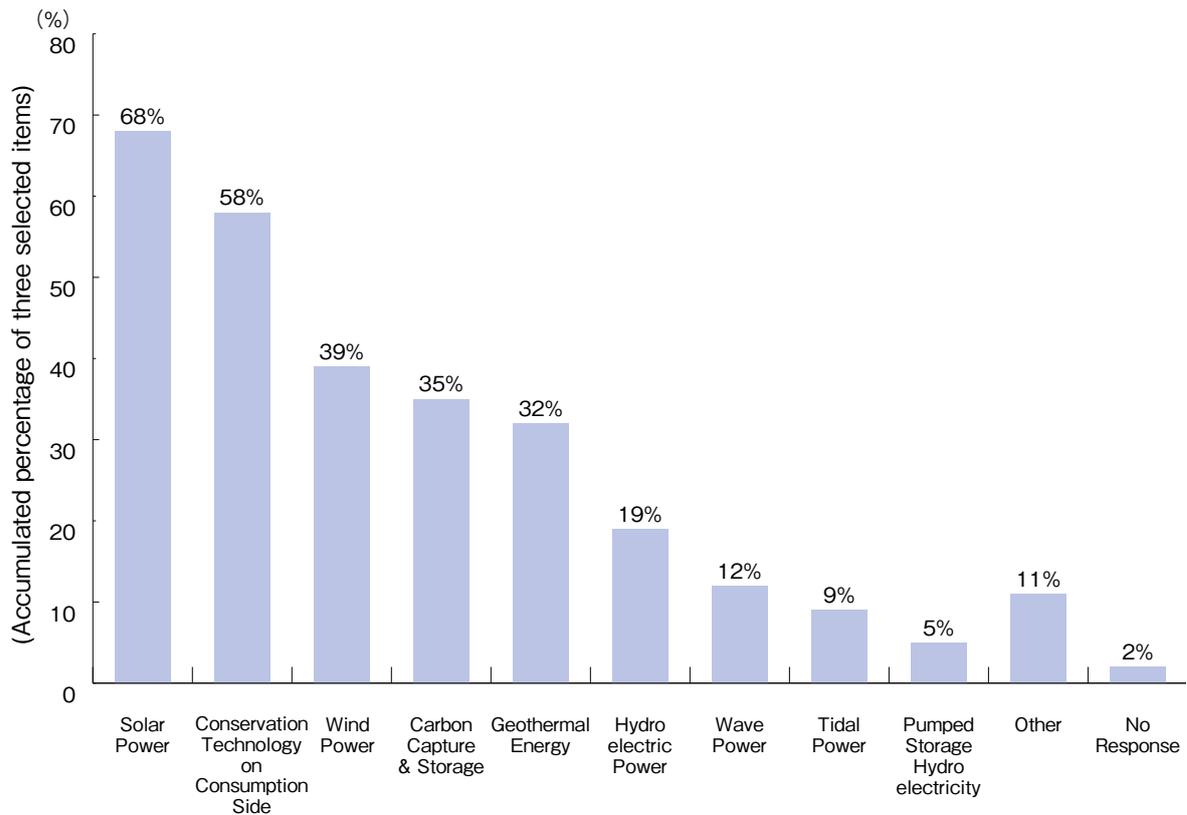
- Respondents who selected “agree” (D+E) comprised the majority at 74% while only 14% chose “disagree” (A+B).

6. A significant cause is the low level of interest of the public towards environmental governance.



- Respondents who selected “agree” (D+E) comprised the majority at 54%, while those who selected “disagree” (A+B) and “I don’t know” constituted 25% and 19% respectively.

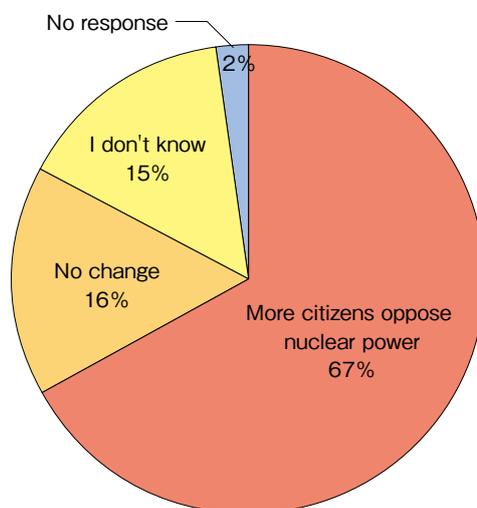
2-6. Lack of Sustainable technical resources—Which of the following categories do you think represents the technology that needs to be cultivated most urgently? Please circle three items that you think are the most pressing.



- Respondents most frequently chose “solar power.” This was followed by “thorough conservation technology on the consumption side (electricity conservation, insulation, and energy conservation in daily life), reflecting the importance respondents placed not only on power generation technology itself but also on energy conservation among consumers.

3. ABOUT NUCLEAR ENERGY AND THE ENVIRONMENT (QUESTION 3)

3-1. Have there been any changes in public sentiment towards nuclear power in your country as a result of the Fukushima nuclear accident?

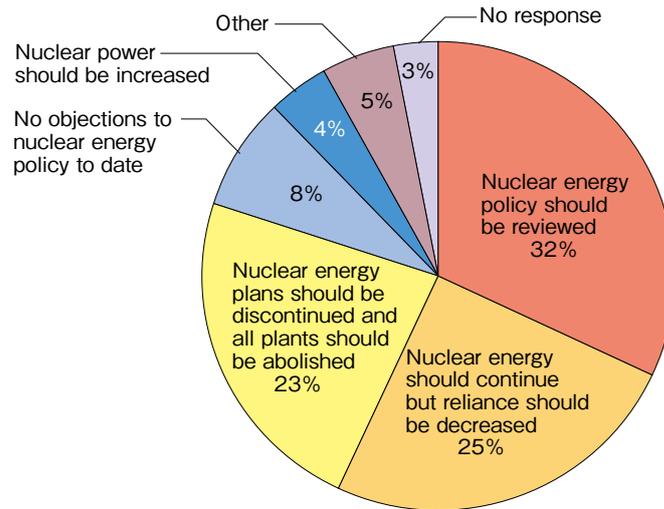


(%)

	More citizens oppose nuclear power	No change	I don't know	No response
Overall	67	16	15	2
Japan	97	1	2	1
United States & Canada	58	25	14	3
Western Europe	68	20	11	1
Asia ^{*1}	50	18	28	4
Asian Four	78	15	8	0
Other Asia ^{*1}	42	19	34	5
Latin America	40	48	12	0
Africa	30	48	18	3
Oceania	35	35	24	6
Eastern Europe & Former Soviet Union	42	38	15	4
Middle East	67	22	11	0
Overseas Total	52	23	21	3
United States & Canada, Western Europe, the Asian Four and Japans	83	10	6	1
Latin America, Africa and Rest of Asias	41	25	30	5
Oceania, Eastern Europe & former Soviet Union, and Middle East	44	35	17	4
China	39	16	38	6
Korea	78	16	6	0
Taiwan	76	14	11	0
India	58	37	0	5

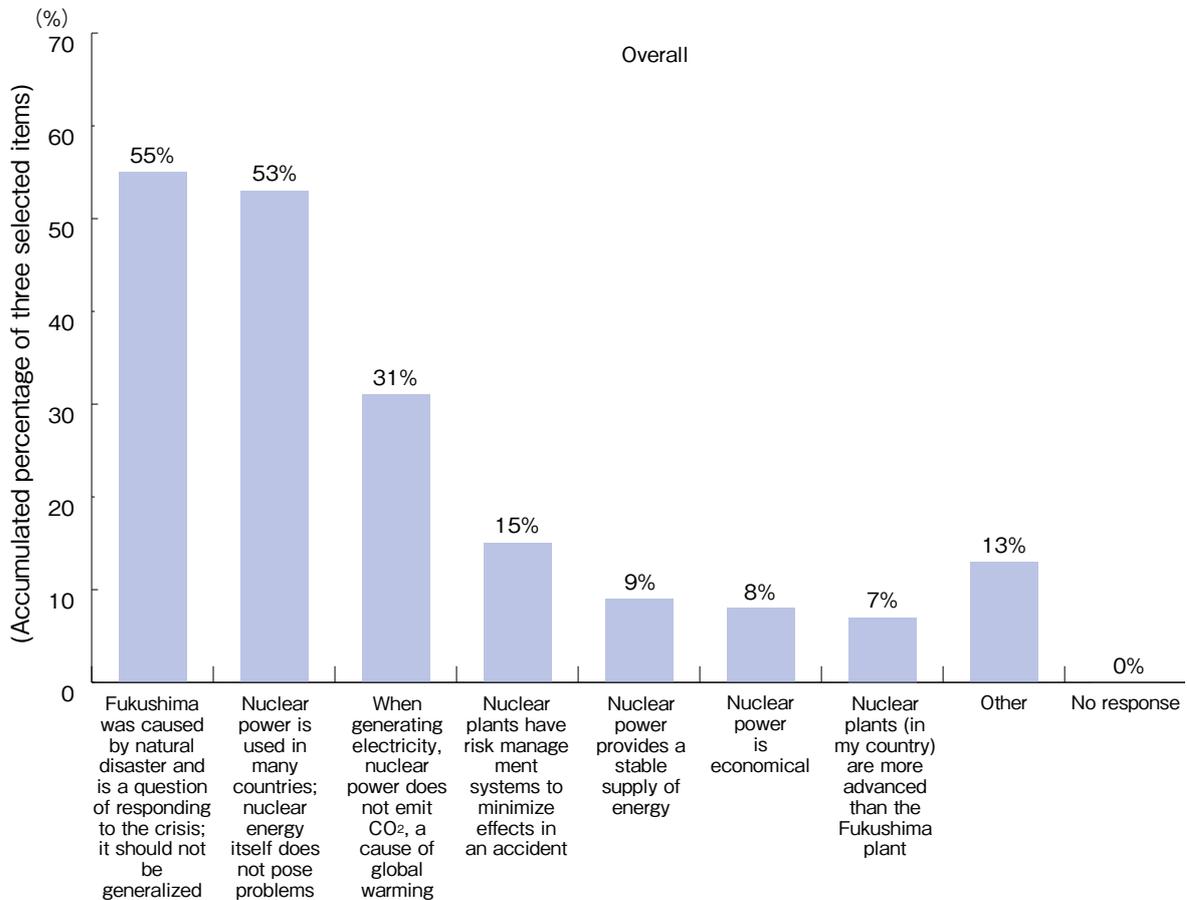
- A large number of respondents across the world selected “more citizens oppose nuclear power” at 67%. This selection reached 97% among respondents in Japan, whereas 52% of overseas respondents chose this item.

3-2. How do you feel about the nuclear energy policy in your country after the Fukushima accident?



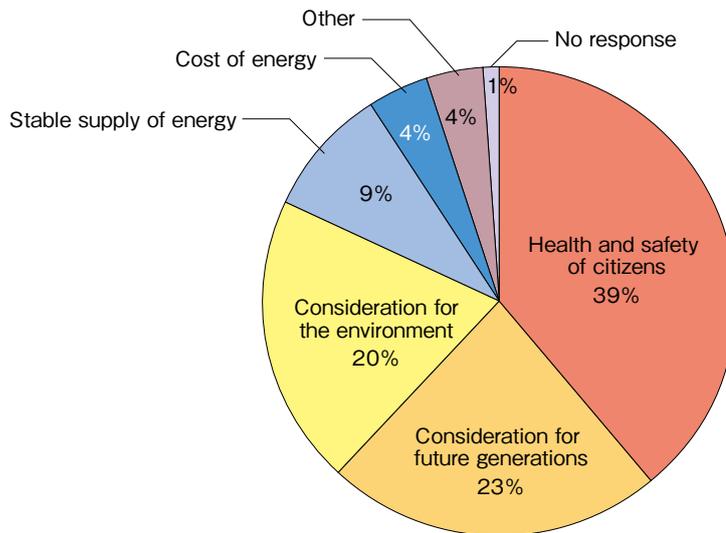
- Overall, 80% of respondents indicated a preference for some sort of review of nuclear energy policy. Specifically, 32% of respondents selected “nuclear energy policy should be reviewed,” while 25% selected “reliance on this form of power should be decreased” and 23% selected “Nuclear energy plans should be discontinued and all plants should be abolished.” On the other hand, respondents who selected “I have no objections to the nuclear policy to date” and “nuclear power generation should be increased and strengthened” were limited to 8% and 4% respectively.

3-2-1. You have selected “I have no objections to the nuclear energy policy to date.” Please circle two items from the following list that best reflects your rationale.



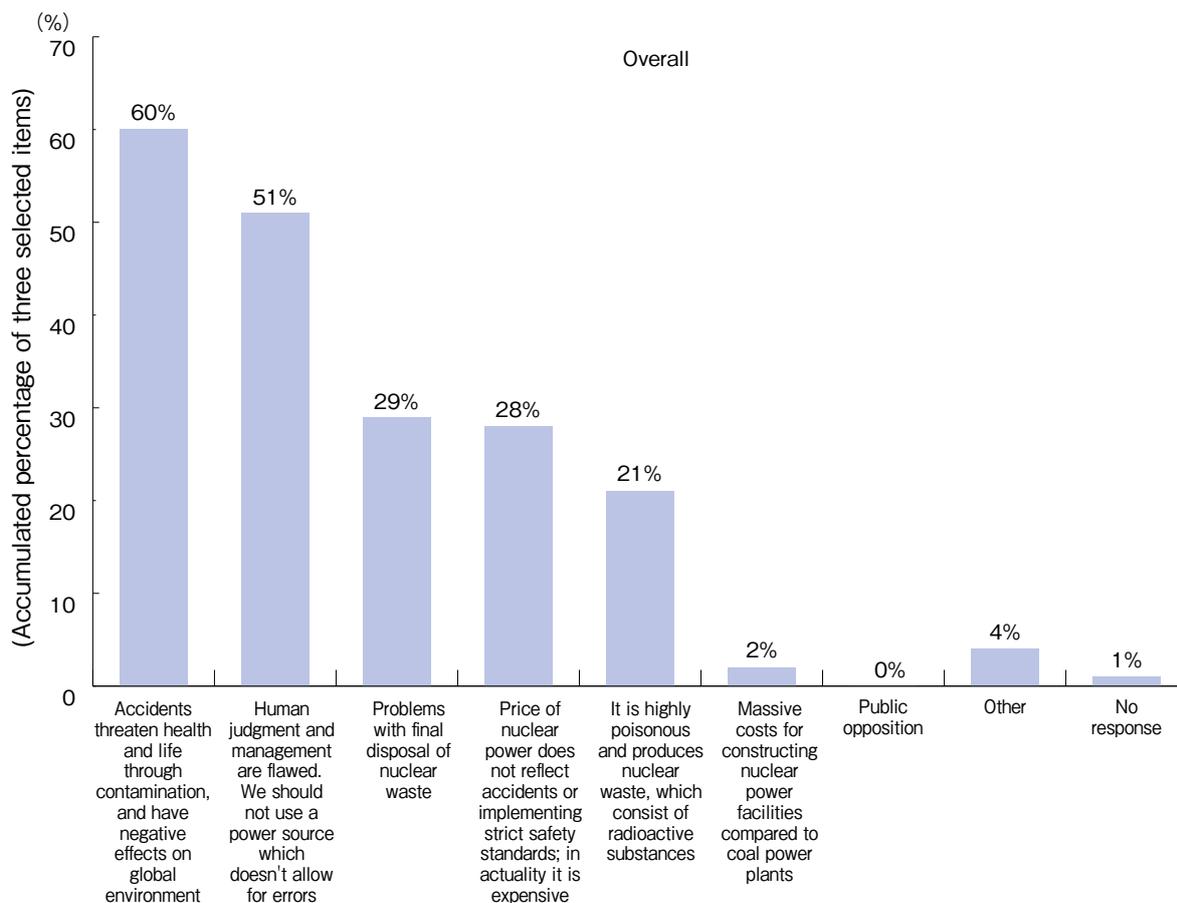
- Respondents who chose “I have no objections to the nuclear energy policy to date” most frequently selected as their reasons “the accident in Fukushima was caused by a natural disaster and is a question of managing and responding to the crisis,” and “In actuality, nuclear power is in use in many countries and nuclear energy itself does not pose problems; it is not one that should be generalized.”

3-2-2. Please circle one item from the following list that you think is the most important factor in reviewing nuclear energy policy.



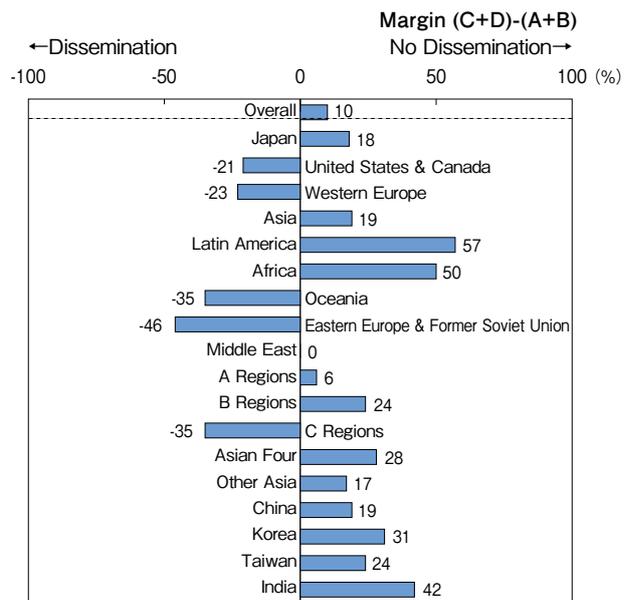
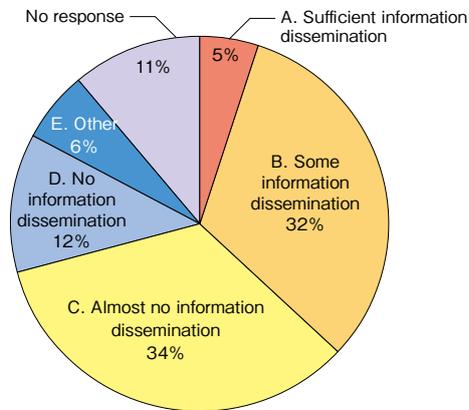
- Respondents who selected “the health and safety of citizens”(39%), “consideration for future generations”(23%), “consideration for the environment”(20%), comprised a large majority, for a combined total of 82%. Opinions that placed an emphasis on “the stable supply of energy”(9%) and “the cost of energy”(4%) comprised a minority, at 13%.

3-2-3. You have selected “I wish for nuclear energy plans to be discontinued and for nuclear power to be abolished.” Please circle two items from below that you think are the most important reasons for discontinuing and abolishing nuclear power.



- The majority of respondents who chose “I wish for nuclear energy plans to be discontinued and for nuclear power to be abolished” resoundingly gave as their reason, “Major accidents threaten health and life through radioactive contamination, and have negative effects on the environment on a global scale.”

3-3 What do you think is the level of dissemination of nuclear information conducted by your national or local government?



- The majority of respondents in the United States & Canada, Western Europe, Oceania and Eastern Europe & former Soviet Union indicated that there was either “sufficient” or “some level of” information dissemination about nuclear power in their countries. In contrast, a large number of respondents from Asia including Japan, Latin America and Africa stated that either there was “almost no” or “no” information dissemination in their countries.

IV. Comments from Respondents

This year's questionnaire elicited a total of 467 comments, the highest numbers since the inception of the survey in 1992, including 314 from 53 countries outside Japan and 153 from Japan. The comments provided invaluable information and opinions about the realities of environmental problems across the world as well as measures and ideas to improve the global environment. While the comments spanned a wide spectrum of subjects, given the continuing crisis from the Great East Japan Earthquake of March 2011, there were more comments than in previous years from Japan about energy problems, such as nuclear power generation and future energy policy.

This year, the Comments from Respondents section includes all comments from overseas respondents as well as the 41 comments from Japan. The suggestions about the questionnaire itself, which provide valuable input for the Foundation, have been excluded for this publication. We have included the name, organization, title, country, and our identification number along with the comments, unless the respondent requested anonymity, in which case we have identified only as M for male respondents and F for female respondents.

Comments from overseas

[Media]

Although each country is aware of the severity of environmental problems our planet is facing, public coverage of the range of damaging influences on the environment is inadequate and people have no direct sense of urgency or crisis about them. I believe there should be more related news coverage and documentaries.

F, China, C012

In public debate and most reporting, discussions of environmental concerns are simplistic and need to be more holistic.

Judith D. Schwartz, U.S.A., 013

In addition to legislation on the global and national levels, we need to present the severity of today's environmental problems in the form of documentaries in order to increase publicity. We need to start by changing the ways public life is lead in order to protect our planet's ecological environment.

F, China, C024

A major impediment to the US public's understanding of climate change is due to the dismal coverage by the news media. That is, in part, the result of pressure from oil, coal and auto companies which threaten to withdraw advertising from news media if they provide more extensive coverage of the climate crisis.

Ross Gelbspan, U.S.A., W114

[Population]

The positive factor that will result in longer term sustainability for the human race is that the limits of the planet will result in many disasters and ultimately a reduction in population. However, man is at his best in the face of adversity and hopefully societies will ultimately adjust their behavior to live within the limits of the environment within their jurisdiction.

Paul M. Koch, P.Eng., Chairman, Ottawa Sustainability Fund, Canada, W073

Reduce the population and set up conservation zones.

M, China, C181

Population growth lies at the heart of most environmental problems and must end if we are to have any hope of solving global environmental problems.

Jenny Goldie, newsletter editor, media, Sustainable Population Australia Inc., Australia, W204

Growth of population lead to the limit the earth can accommodate. A key issue is to stabilize population and to find a system for a no growth economy

Hans-Werner Schock, Director, Solar Energy Research, Helmholtz-Zentrum Berlin, Germany, W284

[Poverty]

The core area of most urban centers in my country is characterized by proliferation of slums and squatters dwellings, there is high level of air and water pollution leading to water and airborne diseases, planning laws and regulations are not strictly adhered to in the layout of physical development, access to potable water and decent environment is out of the reach of the common people, particularly, the urban poor. There is high rate of unemployment, poverty, homelessness, high crime rate and several other social vices. These problems are products of ineffective governance, and lack of political will and commitment

on the part of government and its Agencies to address the various urban environmental challenges.

Adesoji David Jiboye, Senior Lecturer, Department of Architecture, Obafemi Awolowo University, Nigeria, W066

Environmental problems can only be relegated to a secondary position in the face of issues of survival that have been brought about by poverty.

M, China, C116

Much destruction of the environment has been caused out of survival of humankind living in the context of poverty more common in developing countries. For example pastoralists after they have been hardest hit by the adverse effects of climate change, they change their livelihood to charcoal burning and they cut down the remaining trees with a lot of desperation attitude. Consequently their poverty levels makes them to be more vulnerable to adverse effects of climate change.

Gideon M.Muriithi, Social Research Scientist, Socio-economics and Applied Stastics, Kenya Agricultural Research Institute, Kenya, W187

In many LDC, the main problem for population and government is poverty. This reduces possibilities of increasing consciousness of environmental issues (which seems very theoretical for the majority of citizens of these countries)

Cheikhna A. Aidara, Coordinator, Mauritanian Association for Environment Protection (APEM), Mauritania, W274

[Waste]

Try to decrease the amount of garbage, plastic products, and paper used around me. Start with myself.

Wendy Lee, Logistic Assistant, Shipping-Logistics Department, PSM FASTNER (ASIA) LTD, Taiwan, T022

The issue of garbage. This is a product of human civilization. The more civilized we get, the more garbage there is. There's so much garbage that even the sea has become a landfill. People must pay better attention to reducing the volume of garbage and refrain from tossing garbage into rivers.

Lin Bo-hua, Supervisor, Business Department, Taiwan Honda Quansheng Auto Co. Ltd., Taiwan, T036

We should reduce the use of those technologies that have a substantial impact on the environment. Technological accomplishment is a double-edged sword. It brings us convenience, but the pollution it entails destructs the Earth as well. Because of this, I believe the pace of development should be slowed.

M, China, C060

We should implement garbage classification. This will not only reduce the workload of sanitation workers but also help us better recycle garbage, reduce pollution, and save resources. Recycling of used batteries should also be implemented.

F, China, C135

I consider that one of the main environmental problems is marine pollution, water supply and lately how to deal with marine litter. We need to act regarding waste water. It is of the utmost importance for the survival of the oceans and the marine biodiversity.

Nelson Andrade Colmenares, Coordinator, United Nations Environment Programme, Jamaica, W323

[China/India]

As far as our country is concerned, the two major agents of environmental destruction are large-scale industrial and mining corporations and energy consumption entities. Regarding the former, we should raise the barriers to market entrants and make it imperative for those in the market to report on their implementation of environmental protection measures, either regularly or irregularly. Their operation should be put under public supervision. Good deeds should be rewarded and bad deeds punished. As for the energy consumption entities, we should raise their awareness of environmental protection and promote a green lifestyle.

F, China, C058

China's education on environmental protection is insufficient. Environmental pollution in the countryside is more severe than it used to be. Suspicion surrounds the entire food production process and this causes great concern.

F, China, C084

Subjectively we may think China's environment goes hand in hand with economic development but objectively it is the inevitable result of environmental destruction. Raising awareness about environmental protection must start with each small deed from every one of us.

Wang Jing, Legal Counsel, Legal Department, White Peak Beijing, China, C118

Why Ganga could/would never get cleaned: Causes of failure of previous action plans include (i) adoption of unscientific and arbitrary effluent standards (legally permissible concentration of any pollutant in wastewater) which should have been worked out scientifically using mass balancing concepts from pre-fixed stream/river standards taking account of the river's self-purifying abilities in terms of kinetic coefficients and ratios of river-effluent flow-rates. These effluent standards would thus vary for different polluters, (ii) ignoring of Indian conditions in formulating strategies, e.g. (a) many Indian streets are too narrow to install sewer pipelines that require deep excavations creating structural dangers to street buildings. Consequently, wastewater generated from homes in these types of streets flow directly into the Ganga, (b) many private homes in India carry on small-scale industrial activities such as plating, generating toxic wastes that flow unabatedly into the nearby river or percolate into the ground and later seep into the river, (c) slums generate large volumes of wastewater in unsewered urban areas that ultimately seep into the river, (d) religious mass bathing gatherings that are regularly held along the Ganga generate wastewater that flows directly into the river, (e) drains channel wastewater upstream of bathing platforms (ghats), (f) open defecation apart from the disposal of dead human and animal bodies (only to be scattered all over by the stray dogs and birds) degrade riverbank areas, (g) riverbanks are also used as dumping sites for solid organic wastes, including polythenes, so these substances leach into the river. All this uncollected waste causes 50 percent of urban, untapped, untreated wastewater to flow unabatedly into rivers. (iii) further, the Indian culture and religion demand a very high water quality level at the Ganga banks where millions of Hindus perform religious rites (including aachman) in the river, thus pollution control strategies successful in western countries cannot be successful or appropriate in India. (iv) lack of pollution control defensive strategies (v) not implementing proactive or offensive strategies (vi) comprehensive river pollution control requires professionals with knowledge of several fields including civil engineering, public health or environmental engineering. The lack of experts in these fields (or high dominance of pseudo environmentalists incompetent to identify the relevant literature or real experts) with decision-making responsibilities within the Indian Ministry of Environment has been disastrous for success in previous Ganga clean-up projects, (vii) political connections or bribery used to secure high positions in government, judiciary, and academia have also stymied efforts to clean up the Ganga. (viii) fine collectors demand bribes. A hefty bonus (kind of bribe legalization) to the fine collectors would ensure honest, duty bound and dedicated fine collectors in Indian situations. (ix) the Indian political system, (xi) the Indian public (including saints) has been ineffective in building any pressure to clean the rivers. Increased awareness through seminars, media, non-governmental organizations, and public education could help enhance public support and participation in clean up campaigns. For these reasons, the implementation of numerous action plans cannot ever result in a pollution-free Ganga River. The stated fool-proof strategy ensuring that not a drop of any wastewater would enter the Yamuna at Delhi would be ideal and only solution for Delhi, the national capital situated along Yamuna, a tributary of Ganga.

Devendra Swaroop Bhargava, former/Retired Professr (Environmental) of IIT Roorkee & Asian Institute of Technology, Bangkok, Environmental Engineering Division of Civil Engineering Department, Indian Institute of Technology (IIT), Roorkee, India, W142

The government should strengthen the management of water and air pollution. We should not blindly pursue economic profit.

F, China, C178

I believe China's environmental protection is not good at all. We still need to increase our efforts and learn from those countries in the west. This is the right thing to do.

M, China, C193

[Food and Water]

I am very concerned with agricultural diversity issues and the industrialization of food production.

F, USA, 038

The degradation of soil globally due to intensification of agriculture to feed the burgeoning global population is a major problem that has yet to be addressed. If such practices continue, the provision of food is going to be impacted upon. Sustainable means of providing food whilst protecting the world's soil is a challenge to date that has largely been ignored.

M, UK, W058

"Water is Life." This slogan is used locally to promote awareness, knowledge, and action to protect this vital resource.

F, Jamaica, 072

Desertification, which is an area my organization specializes in, is still not receiving the required attention it deserves from governments in Africa. It is partly the cause for the increased rates of conflicts and skyrocketing food prices that is prevalent. Improper farming techniques and deforestation activities have aided the loss of farming and grazing lands hence affecting the gross domestic product (GDP) of these African countries. The impact of desertification knows no bounds as even some regions in the Mediterranean countries are fast losing land to this phenomenon. A concerted approach is required globally and then regionally to fight this phenomenon with performance indicators established for adequate monitoring and evaluation. It is our

belief that for a successive campaign, community participation and involvement is key. This can be adopted using women and youth advocacy programs and projects. This is the primary focus at Fight Against Desert Encroachment (FADE).

Newton Jibunoh, Founder, Environment,

Fight Against Desert Encroachment (FADE), Nigeria, W171

WATER AND FOOD INSECURITY

Yogendra Chitrakar, Director, Environmental Camps for Conservation Awareness (ECCA), Nepal, W189

Although climate change is a major threat to survival, environmental degradation and pollution caused by mining and extraction such as tar sands and fracking are a more immediate threat to the environment and its ability to sustain life. Water is being wasted and polluted in vast quantities, and sources of pure water, both fresh and sea water, are being depleted at an alarming rate.

M, U.S.A., W246

Energy security, water security and food security are most serious issues in coming decades.

M, Vietnam, W317

I am very concerned by the current waste of food in every country. Before transforming more forests, grasslands or wetlands into agricultural lands, the problem of transport, conservation, and consumption of food needs to be addressed in a rational manner.

F, Argentina, W322

[Interdependence]

Dealing with environmental issues of our planet requires everyone's participation. Different countries and industries should effectively take up their own corresponding responsibilities.

M, China, C071

All environmental subjects are too interrelated, so if one is affected, air, water, land; all of them will be affected, including biodiversity and men like species of it.

Alejandro Molina-Garcia, Vice-Director, Direction of Protection Against Sanitarian Risks, Ministry of Health at Michoacan State, Mexico, W072

We should focus on solutions to the environment, energy and economy together because one cannot be solved without consideration of others. This will also highlight opportunities for new and innovative enterprises for the rest of this century and beyond.

M, Switzerland, W122

The environmental issues under consideration are not separated but clearly interrelated. Population growth has had a considerable impact on land use, unsustainable land use has contributed to global warming, while both factors are instrumental in accelerating species extinction and loss of biological diversity. One can trace similar causal relationships in defining the sources of air, river and ocean pollution, together with the diminution of usable fresh water. The manic demand for energy, without a realistic evaluation of its consequent environmental impact, has led to the highly dangerous use and production of radioactive material. Really there is only one issue to consider: our failure to respect the world in which we live.

David Black, Trustee, Ecology/Publicity, Oxleas Wood Challengefund, UK, W157

My concern is that biodiversity loss has gone far beyond sustainable planetary limits, and that climate change will exacerbate this, change water availability and food supply, and disrupt the lives of millions. Of course, this is all driven by population (1) and lifestyle choices (2), so when asked to rank the threats to the planet then one might reasonably put population at the top, because that is the root of the problems. But the direct threats to the planetary system that we see now are biodiversity loss, and - sooner or later - climate change. So it is rather difficult to decide which should be ranked higher or lower. Population is the root, but the urgency of dealing with population is perhaps less than the urgency to reduce greenhouse gases, or actions needed to prevent species loss which are happening now. One can wait a little while to deal with populations, but one cannot wait if we intend to save the tiger or other critically endangered species.

M, China, W158

The Earth is our shared and only home, and environmental protection requires extensive global cooperation. No country or region should limit itself to its own economic development and local interests. For any country or region, the environment is something that, when you destroy a specific part of it, you also end up destroying the whole, and vice versa. We can establish

a global fund for environmental protection to be funded by developed countries according to a fixed ratio, and the fund would be used for compensating slowed economic growth because of environmental protection and rewarding countries and regions that have made contributions.

Wu Zhenxiang, China, C176

Main contributing factors to the human and environmental crisis we face is the lack of seeing the planet as a whole - an inter-dependent, living system and the lack of political will to make the necessary decisions to ensure a viable future for all.

Kristina Mayo, UN Representative, International Programs, Shumei International, U.S.A., W223

[Climate Change]

There is no current policy in Taiwan which actually helps alleviate climate change or global warming. Everything is meaningless. Low carbon emissions cities, conserving energy, and reducing carbon emissions -- it's all just empty slogans and show...

Taiwan, T005

The story on climate change and environment is slowly fading away in the interest of the countries pursuing their economic development. Sometimes, it is hard to believe why we humans tend to face the risk which we are associated with. The game play creeps in building the nations in economic development as a mitigation measure for better preparedness (more capital resource at disposal) to face the climate change impacts while the most vulnerable countries to watch and see their people vanishing in the clouds of climate change. What a pity!

Dago Tshering, Research Officer, Research Program, Royal Society for Protection of Nature, Bhutan, W012

Research and develop technology for reducing carbon dioxide emissions, reduce greenhouse gas emissions, increase regulations on pollution, and research sulfur removal technology before burning coal.

M, China, C104

For more than 40 years, I am keeping up with the climate changes that occur in an area of 500 kilometers. Since 1992 I answer our work, known as: "Questionnaire on Environmental Problems and Survival Humankind". For 20 years I see the migration of the bird known as swallow and each year I noticed that the population of this species and ever smaller. The swallows arrive in our region and announce the beginning of winter; however, today the fluctuations in temperature are so divergent and indefinite that your arrival has happened yet with high temperatures and in a fiery sun, because here the winter is ending, forever. In other times, in our region, in the months of April, May and June, the swallows arrived at low temperatures. During the day, it is tired and breathless. Two species too arrived in this period, known as swallow great and tail of scissors currently we see not this birds, frequently. Another curious fact is occurring in the rainy season, two other species of birds, tirizil and "Pope-rice" is increasingly scarce in our crops. Several species of fish and native animals no exist in abundance over these past years are virtually extinct not to say categorically extinct. There are periods in which relative humidity of the air are below the minimum standards required. I have already said in other comments on storms that have brought economic losses including great loss of human life pollution in rivers with toxic products on the consumerism exaggerated and the drop in local food production. On the basis of the criteria who are questioned I attract for me the responsibility of pulling the clock forward. We are in the area study increasing the pollution by carbon dioxide in excess and methane released daily into the atmosphere. We are experiencing a rapid growth of the fleet of vehicles powered by fossil fuels with the indiscriminate use of same. We have witnessed the increase of landfill for waste from household waste in open terrain. I have awareness of the fact that I'm writing here. I have data proving my comment. I remain optimistic that humanity will have trial before being ordered to its extinction. I do not open here a series of discussions even because I feel that it is in vain to do them. In truth the guilt and the lack of environmental education and awareness of the world's population no only in his style of life but to understand worry and charge the men more important the world that have decision power. The prophecies contained in my book "a point at infinity" if continue this form soon will be fulfilled. If I can philosophizing ally to this distress in witnessing the environmental degradation and increased global warming I see the moral degradation ethics and social that spreads throughout the world and suffocated how the greenhouse effect the human coexistence.

Ricardo Rocha de Sousa, Advisor, Vice President, ANBV-Associação Nascentes Bela Vista, Brazil, W115

It is vital that some globally-agreed upon price/penalty for greenhouse gas emissions be established and adhered to by developed and developing countries alike and similarly, that all global subsidies for fossil fuel-generated energy be removed as quickly as possible.

Peter Bull, Owner/Producer, Carbon Productions LLC, U.S.A., W117

Even though, climate change affects the whole world, the poor and destitute countries are by large devastated. The developed countries and the so called big companies should have the gut to reduce their profit and save the planet. Leaders and elites of

the poor countries should feel ashamed of themselves for not creating awareness and for not taking action in their respective countries.

M, Ethiopia, W213

Climate Change issues.

M, Nepal, W225

We are past the tipping point on climate change. I hope James Lovelock is wrong.

Robert Glenn Ketchum, Fellow and Founder, International League of Conservation Photographers, U.S.A., W245

This is the extreme danger from the Arctic that is being ignored by environmental experts: This is the situation in a nutshell: the Arctic is warming rapidly, much faster than global warming; the sea ice volume is plummeting; a collapse in sea ice extent is likely by 2015; a collapse in sea ice means loss of habitat and biodiversity, risking the breakdown of an important marine food chain; a collapse in sea ice also means faster warming of the Arctic, creating more climate disruption and weather extremes in the Northern Hemisphere. This is bad enough. Add to this the menace of Arctic methane. Consider that: methane's potency as a greenhouse gas is about 105x that of CO₂ over 20 years, weight for weight [2]; there's a vast quantity of methane frozen into Arctic seabed [3]; loss of sea ice cover allows storms to mix the warmed surface water with colder water beneath, causing shallow seabed to warm, thawing out methane-holding structures; because of warming and instabilities in the seabed, large quantities of methane could be released quite rapidly, enough to drastically exacerbate global warming [4]; methane bubbles have now been observed in huge plumes, over 1km across, in shallow sea [5], suggesting an escalation of methane emissions could be happening already, even without further warming of the Arctic; Arctic methane may be contributing to rising global levels of methane in the atmosphere [6]. The worst fear is that methane could build up in the atmosphere sufficiently to start a runaway cycle of greenhouse warming and more methane release, leading to abrupt and catastrophic climate change. The only way to prevent a chain of events which could lead to such a runaway cycle is to cool the Arctic, save the sea ice and dampen methane emissions. To minimise risk, we need to use all possible means. I have formed a group called AMEG (Arctic methane emergency group) to campaign for action, and would welcome support from the Asahi Glass Foundation. Our site is www.ameg.me I can be contacted by email: johnnissen2003@gmail.com Thank you.

John Nissen, Chair, AMEGM, UK, W268

In the United States, nearly half of the population are deeply concerned about climate change and are calling for federal policy changes to deal with the problems, while the other half do not want new policies either because they don't believe in climate change or think it would hurt the economy. This mirrors -- and is deeply intertwined with -- the partisan politics in Washington. The tides are slowly changing, however, thanks to American corporations that are adopting sustainable business practices in order to cut long-term costs, attract investors and gain publicity. I believe large corporations have the ability to influence public opinions about climate change as naysayers could easily turn into supporters once they think being green means jobs.

F, U.S.A., W291

Archives from Antarctic ice, an uninhabited continent at the other end of the world of the developed countries, show the global impact of humans on the environment of the Planet we are living on: -We have found the relationship between climate and greenhouse gases emitted by human activities. -We also found at South Pole radioactive dust from the North Hemisphere nuclear events. The ozone hole is due to CFC human pollution.

Lorius Claude, Emeritus, Earth Science, CNRS France, France, W301

[Lifestyle Choices]

More awareness is needed about how people can live enviable lifestyles with very low total environmental impacts -- i.e. combine efficient housing, public transportation, recycling, composting, farmers markets, green purchasing, enjoying services provided by local people (e.g. arts, education, recreation, health and fitness, restaurants) or virtually (e.g. electronic content) rather than buying consumer goods, traveling by air, accumulating possessions, etc. Let's squeeze adverse environmental impacts out of our lifestyles like water from a sponge.

F, U.S.A., W015

There was a time when the virtue of consumption had been emphasized while passing through the age of development. Showing off what you had was a symbol of success. South Korea is still in a consumer society which has been a trap of rapid economic growth after the Korean War. It is time to set up the notion that co-existence and saving can be considered virtues like developed countries in Europe. Indices that can compensate the the level of development with GDP has been discussed at the Rio+20. I welcome it. I hope the indices like measuring happiness or sustainable growth will be adopted in all countries.

M, South Korea, K033

The fundamental cause to the sorry state of environmental degradation we find ourselves in stems from the very lifestyle that we

humans adopted while other species continued to live a natural form of life. We heavily depend on processing natural products to build our massive settlements as well as grow our economies. The more we process the more we release by-products that upsets the natural environment (e.g. pollution/contamination, land degradation, GHGs etc.). Ultimately the natural environment does not have the capacity to support all natural life forms, including ours. There is no other choice but to slow down and get rid of some of our needs to process natural, particularly non-renewable, resources. However, this will only happen if we can get every individual to begin to appreciate themselves, the value of life, as well as the role they have to play in influencing change, at their individual level; so that by the time they become part of the various societal committees on policy and decision making or projects implementation etc., they are already at the required level of personal effectiveness.

Benson N. Modie, Managing Director, Professional Training and Coaching, The Center for Knowledge, Botswana, W062

Our planet's environment is getting worse by the day and more people should be focusing on this issue and adopting an eco-friendly lifestyle.

Xu Xiaoning, Research Institute of Unicom, China, C124

Environmental problems are externally caused by the destruction of our natural environment. This destruction is due to the constant need to satisfy our limitless development. This need is the consequence of mankind's insatiable greed. And this greed is the result of our misconception of life itself. Therefore, if we want to solve environmental problems at the root, mankind as a whole needs to once again understand the science of life and the spiritual realm. But how difficult this all is in an age under the reign of materialism.

Wang Qilong, General Manager, Nanjing EMNET Technology Co., Ltd., China, C125

Our lifestyles are causing great damage to the environment. There is need for a behavioral change in lifestyles. There is a limit to what the Earth can give us or we can take from it for our activities. Food waste and losses, a throwaway society is not to be encouraged. Let humans learn to use cheaper alternatives and respect the mother Earth.

Redeemer Kown, Director, Administration, Sunrise Solar Solutions Ltd., Ghana, W181

It is inevitable that we will trade our environment for economic profit. We can only reduce damage to the environment within our own limits, such as starting from our personal lifestyles. I also find publicity of environmental issues to be inadequate and supervision is weak. Finally, I believe we should strengthen people's fortitude against disasters.

F, China, C190

Our lifestyles as individuals, decision-makers' commitment and caring for the people, and mutual respect between countries comprise a solid foundation for environmental protection, and without them any effort would be futile.

F, China, C205

We live in the same Earth, the same world. Advocate a simple, frugal, and practical life, and be against luxury and waste. This cannot only protect the Earth's environment, but also preserve a sustainable, natural, and comfortable way of life.

M, China, C206

The Earth's environment is deteriorating, and this is closely related to our own selfishness. I hope everyone can save resources and care for the environment.

F, China, C229

After attending the Rio Summit in 1992, I had hoped that those who were, at that time, children enlightened by their teachers would have assumed a greater weight in environmental affairs by now, 20 years later. Unfortunately, with only occasional exceptions, I do not see those individuals coming forward to make a difference in political terms. They seem to be as addicted to driving around in their SUVs as everyone else around me is. It makes me very sad.

James D. Morgan, Adjust Professor, Urban Design and Architecture Studies Program, New York University, U.S.A., W269

I am optimistic to achieve a paradigm shift which transforms our current consuming lifestyle to a sustainable lifestyle in a sense that we, human being, have the power (science and technology) and ability (determination of the masses, potential of social system and policy) to do that. Once the masses recognize that a sustainable lifestyle is more important, sensitive and better for human beings, wildlife and nature than our current consuming lifestyle, politics, business and technology would quickly change their directions towards sustainability. Economical, educational and cultural gaps between developed countries and developing countries may be a one of the big issues to overcome, but we may be able to find solutions. However, at the same time, I am quite pessimistic on achieving a paradigm shift which transforms mass people's priority from our current consuming lifestyle to sustainable lifestyle. We, the people of developed countries, love our current consuming lifestyle and we do not want to lose our prosperity. We, the masses, are not clever enough to imagine an alternative lifestyle without having it. Environmental problems need long term (10-100 years) vision and determination to deal with, and its effect is not visible

immediately (less than 10 years). Environmental problems need an international political approach to deal with. 20 years history since the Earth Summit in 1992 in Rio clearly tells us our current political system does not have the ability to deal with this problem. I can not see how people can be convinced to give up their beloved consuming lifestyle and how they can keep their determination for more than 10 years without clear rewards.

Takamasa Tsubouchi, Postdoctoral researcher, Japan, W287

[Economic Systems]

Disasters are not single events-They are causally connected by economic growth, material wealth/consumption and the necessary infrastructure. We need research on the epidemiology of disasters.

Ian Burton, Independent Scholar, Canada, 007

Main problems are: 1) lack of an alternative to the economic growth paradigm 2) lack of my incentive for social and economic change.

John Geoffrey Mosley, Director, CASSE,, Australia, 016

When economic concerns overwhelm people, they have no time/energy/consideration about the state of Earth's environment.

Diane Tegarden, President, Firewalker publications, Inc., U.S.A., 021

Economic short term concerns override any concerns about higher environmental security and desire for any kind of sustainable use. It's all about the economy and making more money for big industry. Were this not the case we would be much more reliant on solar, or other sustainable sources of power by now. The technology exists! The present societal and economic investment in the petroleum industry results in such an high level of inertia that our dependence on fossil fuels cannot and, in my opinion, will never change. There is simply too much money invested in the current system and too many jobs depend on it for any changes to ever be made. We will stop using fossil fuels when we run out! Populations continue to increase demanding more in terms of resource use resulting in conversion of natural lands to urban centers or agroecosystems.

Robert Anderson, Research Scientist, Research, Canadian Museum of Nature, Canada, W032

Our definition of economic self-interest are outdated & misguided. We need to factor in externalities to the long term far differently.

F, U.S.A., 042

We need economic development but there is only one Earth and most natural resources are not renewable. My hope is that we can sacrifice profit for the sake of the environment, not the other way around.

F, China, C042

Use heavy taxation to reduce or eliminate industries with high energy consumption; prohibit individual consumption of disposable products.

M, China, C109

The key to any problem is man, and environmental issues are no exception. The pursuit of profit is something that is implanted in the "elites" during long years of education, especially higher education. If one day the pursuit of profit and the protection of environment appear with the same weight attached to them in schools, we can perhaps solve environmental problems.

M, China, C141

For those corporations with higher levels of environmental destruction, I suggest raising the fees charged them and use this for environmental governance, and reducing the number of approved production projects of such corporations, or even refusing to grant approval.

M, China, C153

In circumstances in which productivity levels are inadequate and the standard of living has not yet reached a certain level, we have to continue economic development regardless of environmental destruction.

M, China, C201

There is no evidence that humankind could change the trend if we continue the same economic pattern.

Liutauras Stoskus, Lithuania, W203

Change the extensive economic growth model, change the view that GDP is a good measure of political performance, and

incorporate environmental indicators into the evaluation standards for government officials.

M, China, C218

The income tax system in the U.S. should be adjusted to ensure society moves from away from unsustainable patterns of consumption and resource use. Apply a combination of incentives and disincentives with care not to provide social safety nets and ensure shifts that are not too disruptive to current economic and social systems. Correct current income disparities.

*Weston A. Fisher, IAIA Board Member/Principal at the Cadmus Group,
International Association for Impact Assessment, U.S.A., W241*

During the past 60 years, people have impacted the environment more extensively than in any other period in human history. Increasing natural resource exploitation is encouraged by a continuous need for growth which is determined by the current economic system. This phenomenon cannot continue forever within a finite system like the Earth, which already exceeded its carrying capacity in the seventies. Since that time humanity has been living in a state of overshoot, in which people are consuming natural resources faster than they can be regenerated. In other words, we are using up resources which were meant to serve future generations. As a consequence of this overconsumption, the scarcity of fossil resources such as oil, on which our present society is heavily based, is already becoming a reality. Moreover, the impacts of unsustainable resource use are already being felt through a growing number of economic, environmental and social issues such as: economic tension because of resource depletion and unequal access to scarce resources; climate change and biodiversity loss; and health problems due to pollution. Until now we have been focusing on problems within the established sectoral framework and continue to apply 'end-of pipe' solutions, without tackling the drivers. However, as drivers remain unchanged, they continuously regenerate the problems. Bearing in mind the importance of applying holistic approaches instead of sectoral ones, it is crucial to look beyond the pressures and consider the driving forces behind them. Therefore, CEEweb for Biodiversity is advocating for international resource limitation through the so-called energy quota scheme, the description of which can be found at:

http://www.ceeweb.org/wp-content/uploads/2011/12/Energy_quota_system_for_Europe.pdf

Veronika Kiss, CEEweb for Biodiversity, Hungary, W302

Individual centric/ market oriented governance driven by human- desire- driven positive feed back mechanisms is the principal cause of global environmental deterioration. Such self enhancing mechanisms driven by extrinsic forces never follow the principles of sustainability and likely lead towards disasters.

Center of Advanced Study in Botany, Banaras Hindu Univeristy, India, W310

[Developed and Developing Countries]

Generally, in the developing countries not much about environmental problems have been happening. Very little if any deliberate efforts are made towards environmental problems through policies and/or public enlightenment.

*Abubakar Musajo, Managing Director, Inex Cleaners [Environmental
Services], Nigeria, W034*

The principle of "common but differentiated" is correct. Developed countries should bear greater responsibility. The key is for them to promote lifestyle change among their own population and to transfer energy-efficient technologies to the developing countries.

M, China, C059

The problem is that Western governments (developed) got to where they are today by using "dirty technologies" such as coal power stations. Some of them do not want to take responsibility for the damage they have caused and are still causing. Developing countries do not have access to the latest cleaner technologies and if the developed world does not assist them, they will continue to pollute because they do not have a choice.

*Dr. Flora Pule-Meulenberg, Lecturer, Botswana College of Agriculture,
Botswana, 080*

Environmental problems in developing countries are mainly problems of the mode of economic development and governing mechanism. Economic development cannot be promoted merely by relying on cheap labor force and abuse of natural resources. Local authorities' supervision over corporate production in various regions of our country is highly inadequate.

M, China, C082

My worry is with the developing countries, and Nigeria in particular. Many environmental problems can be effectively avoided but the government is just not ready to do the right thing. Air pollution can be cut out if the country's power sector can be restored, yet the issue is handled with kids gloves as if air pollution is harmless and does not result from burning fossil fuel to power cars, motorbikes and power generators. Nigeria is the only country with a population of over 150 million people and without any functional rail transport system or a reliable power plant serving any of her numerous millionaire cities.

Aliyu Kawu, Coordinator - Research & Development, Centre for Disaster Risk Management & Development Studies, Federal University of Technology, Nigeria, W083

We often talk about sustainable development. Obviously we need it but when you see the survival strategy of people you will find out that your science is not applicable there. Everyone loves to see the world by their own lenses but the truth is necessity follows no rule. You will never understand the problem of third world developing countries if you are not born here. Sustainability is an ideology here, a myth considering current problems.

Mahboob Elahi Akhter, Assistant Director, Forex Reserve & Treasury Management Department, Central Bank of Bangladesh, Bangladesh, W089

Developing countries are victimized by the excessive utilization capacity of energy power of developed countries these days and this trend has been increasing day by day. For the welfare of the whole population of this planet, developed, developing and under-developed world has to come up with the common agendas to cope the challenge of global warming and to solve the environmental problems so that current crisis can be solved.

M, Nepal, W103

1. Environmental problems are inevitable, objective phenomena that occur when the economy and society's development reaches a certain stage. If we do not effectively solve them or refuse to recognize their existence, our chances of survival and development will be severely restricted and we will ultimately move toward self-destruction.

2. To solve environmental problems, we have to reduce the gap between countries and achieve a moderate balance between the rich and the poor.

3. It is urgent that we transform the mode of economic growth. Sacrificing speed of economic growth before this is worthwhile in the long run.

M, China, C114

I think our global environmental problems are caused by the wasteful consumption patterns of over-developed countries, and the rich and burgeoning middle class in developing countries. We must redesign our economies to do away with planned obsolescence and conserve the Earth's limited resources for our children.

Pei Ling Gan, Environmental Columnist, The Nut Graph, Malaysia, W120

Environmental protection is an international issue that requires global cooperation and collective effort. The environmental pollution we have now is to a large degree caused by a few developed countries during their development and they have impaired the interests of mankind. Developed countries should clarify and take up responsibility, and give technical and economic support to developing countries to help them formulate strategies for effective and reasonable protection of the environment, rather than just shouting slogans.

Guo Haiyan, Director, HR Department, Datong North China Star Real Estate, China, C132

The main environmental problems now and in the near future are the gradually increasing gaps between the developed and developing countries in social and economic development and standard of living. Obviously a new international mechanism needs to be established to modulate these gaps in order to achieve a balance between the developed and developing countries in economic development and the use of natural resources. If we do not take actual measures to change our lifestyles now, our planet is truly at the brink of a one-way trip to self-annihilation.

F, China, C143

More assistance is needed from private sector and governments from countries such as Japan to support work to address environment and natural resource management in developing countries including the strengthening of civil society organisations to support work for sustainable management.

Faizal parish, Director, Global Environment Centre, Malaysia, W168

The requirement for global management of the environment is a global consensus and reasonably divided responsibilities based on such consensus. This not only depends on whether developed countries can provide financial and technical support as well as human capital and guidance to the developing countries, but also whether the former can effectively help the latter achieve economic development and reduce poverty.

Zhou Shaojie, Assistant Professor, College of Public Administration, Tsinghua University, China, C203

This survey quite rightly focuses on the "growth" dilemma faced by heavily indebted developed economies. Other solutions than growth should be considered.

Bernard Fisher, Principal Scientist, Evidence Directorate, Environment Agency, UK, W250

The poor and developing countries like Nepal and Bhutan has the insignificant green house gases emissions, but they are suffering more from the adverse environmental impact due to lack of knowledge and coping capacities with the environmental change.

Samjwal Ratna Bajracharya, Remote Sensing Specialist, MENTRIS, ICIMPD, Nepal, W259

Managing water and air pollution and solid waste management in developing countries needs major attention and investment.

Joyashree Roy, Professor, Economics, Jadavpur University, India, W261

Sustainable livelihood is essential for minimizing environmental problems at local and regional scales in poor countries.

Ogunjinmi, Anthony Adekunle, Lecturer 1, Department of Ecotourism and Wildlife Management, Federal University of Technology, Nigeria, W286

Much of the knowledge on which the clock can be turned back was already available at the meeting in Kyoto. Although there has been some progress in applying knowledge this has varied greatly from one country to another especially from “developed” countries - a particular example being Canada - to “developing” countries some of which have made considerable progress - in particular China.”

Mike Baker, Member, former Vice-President, International Science Writers Association, France, W289

All efforts to conserve or restore the environment are challenged by poverty, greed and civil war in most of the developing nations.

M, India, W313

[Energy (Including Nuclear Power)]

The 2011 Fukushima nuclear power plant disaster reflected the fact that the cost of nuclear power does not take into account the enormous cost of life-cycle consumable materials and accidents, the cost of establishing the highest grade security mechanisms, or of dealing with terminal radioactive waste material. As it is difficult to locate landfills, the site used for the plant must be abandoned for 10,000 years, and there are devastating prices to be paid when disasters occur, the overall cost is considerably high. Thus, Taiwan’s top priority should be establishing legislation for the mandatory phase-out of nuclear energy to clean energy sources.

M, Taiwan, T003

Make all denuded hills full of greenery. Go with renewable energy sources. Make your own home as power plant with full of renewable energy sources. Invest on it and not to nuclear power and weapons. It can save our nature, then only we can breathe clean air, can survive and exist in this earth. Remember, there is only one god gifted earth in this universe.

M, Nepal, W003

Nuclear lobbyists have so much money, no NGO can compete!

Cingal Georges, Pilote Mission Europe Affairs Internationale, France Nature Environment, France, 005

The full costs of nuclear power should be included in the costs to consumers. This includes waste disposal, which would make investors think twice about building new power plants.

M, U.S.A., W009

Nuclear fuels do not emit greenhouse gases. It is a clean development mechanism. Studies after 65 years of Hiroshima and Nagasaki atomic bombing and about 25 years after the Chernobyl Nuclear Accident have shown no heritable genetic effects in the children and only negligible increase in the cancer incidence over spontaneous rates. Let us not forget that all the living beings evolved when the Earth’s radiation levels were higher than today. In the southwest coast of India (Kerala) there is very high level natural radiation. The records shown human inhabitation in this region for over 1000 years. With the scientific assessment in which I have been involved, I can say the people in Kerala living in the high level natural radiation areas are as healthy and intelligent as those in normal level background radiation. In fact, cancer epidemiological studies reveal slightly reduced incidence of cancer among the population living in high level radiation areas. Similar data are available from the high level natural radiation area in Chennai.

P. C. Kesavan, Emeritus Professor, Sustainable Development, M. S. Swaminathan Research Foundation, India, W017

It is all upbeat PR. Canada still believes nuclear energy is too cheap to meter. They still hope CANDU will catch on in the global market. We should get out of this business. I am so sorry for what happened to your beautiful country. It could happen here.

F, Canada, 020

It is time for investing in the development of alternative energy.

Jang, yoosik, Lawyer, South Korea, K027

Given that nuclear power offers one of the only no/low carbon options, we need to figure out how to use it safely.

F, U.S.A., W027

Mortality from nuclear accidents is extremely low when compared to the pollution and threat of climate change associated with traditional forms of energy (e.g. oil, coal).

M, U.S.A., W035

Stop nuclear power.

Antonio M. Claparols, Ecological Society of the Philippines, Philippines,039

Nuclear power can be a good short-term solution if applied safely, as it is a zero-carbon energy source. However, in the long-term it is too dangerous to be continued and should be phased out and be replaced by renewable sources.

Inga Vesper, News editor, Editorial, Research Europe, UK, W040

In the U.S., the environmental movement appears to be struggling with a historic opposition to nuclear power that now exists in tension with awareness of the severity of climate change and the urgent need to transition away from fossil fuels immediately.

F, U.S.A., 046

The major obstacle with nuclear power is that it is far too expensive, already as is. If we are to follow reasonable security principles, which we are currently not, the costs would skyrocket even more. What our leaders don't know, is to model futures that are sustainable with regard to energy, and then to model transition routes to get there in economically attractive ways. This is a competence that most leaders do not have, but it can be taught. After such teaching, it is impossible to defend nuclear power as an option for the future.

Karl-Henrik Robert, Professor, PhD, Doctor, Blekinge Institute of Technology, and The Natural Step (NGO), Sweden, W054

I think power stations are very much responsible for environmental pollution. We should have some policies and methods to reduce these emissions of green house gases.

Md Shafiullah, President, Association for Energy & Environment Bangladesh, Bangladesh, W107

After Fukushima, the government continued to push new nuclear power plant despite the accident and rising public opposition.

Onder Algedik, responsible, Climate and Energy, TUDEF-Consumer Associations Federation, Turkey, W113

With improved risk management nuclear energy can represent a positive force for mitigating carbon emissions/climate change.

David Rodier, formerly Sen VP Env. Safety and Health, Noranda Inc., Canada, W119

We need to spend more time focusing on the entire life cycle of our energy. Too often people don't know where their energy comes from, how it's process or generated, what resources are used, what it really costs -- on all levels, what types of wastes are created, how those wastes are managed, or how much energy they use. I don't necessarily think people don't care, I think they don't know what's going on and that if they had more information and more knowledge about how to make positive changes that they would care and they would act to make those changes.

F, U.S.A., W125

True understanding of environmental problems and decision-making could happen if there was an honest assessment of build-out and amortized costs of each component of the energy system. That way there could be honest assessments of each energy sectors true cost, both to the environment and the economy. Then you can bring in health and safety issues to come up with a true cost/benefit analysis. Such an exercise would be quite beneficial nationally for each developed and developing nation and region, to include the cost of a distribution system.

M, U.S.A., W141

I am proud that the majority of people and then the government in Austria already decided against nuclear power in 1978 and

are engaging in really sustainable energy options. Unfortunately the European Union is still more or less in favour of nuclear power and of other not so sustainable energy sources. But even the EU is promoting renewable energy very successfully and supports a lot of good alternative projects.

Margarete Kerschbaumer, Environment, Division Environmental Economics and Sustainable Energy Matters, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria, W152

Energy more generally is a serious problem that needs greater attention; virtually every option (except conservation) involves environmental trade-offs. These need to be addressed with detailed research and investments in seeking green” forms of energy.”

Jeffrey A. McNeely, Senior Science Advisor, IUCN, Switzerland, W163

Particularly the developing countries are seeking to increase the energy sector according to needs of country demand but it is good to make sure to tap environmentally sustainable energy source instead of environmentally destructive sources such as fossil fuel, coal etc which has adverse effects to all sectors.

Ajith Tennakoon, Director, Environmental, Sewalanka Foundation, Sri Lanka, W164

With the present policy to phase out existing nuclear power plants and stay away from the construction of new ones we stop research and development of new technologies that could eventually solve future energy problems.

Schwob Rudolf, Chief Environment Officer, Environmental protection, F. Hoffmann-La Roche Ltd., Switzerland, W180

Reduction and finally discontinued use of nuclear and fossil fuels is achievable so long as a comprehensive and total review of energy production, distribution and consumption is fully planned and thought through at a global, regional, national and local level.

Poul Wend Hansen, Head of sustainability – transformation, Group, Lend Lease Corporation, Australia, W185

Nuclear power plants should NOT be built on seashores, where there is a risk of tsunamis.

F, Finland, W190

Micro-generation of power (solar power, ground-source heat pumps, etc.) and improving the efficiency of homes globally would reduce power requirements considerably.

M, UK, W208

We may consider energy from the nuclear power plant, along with other alternative sources of energy like wind, solar. Otherwise we will rely heavily on fossil fuel which is the main emitter of greenhouse gases and thus the cause of global warming.

Sithy S. Iqbal, Senior Lecturer, Chemistry, Open University of Sri Lanka, Sri Lanka, W238

We vastly exaggerate the loss of human life associated with nuclear power, and ignore the many risks from existing fossil fuels, associated pollution and devastating damage that will be caused by climate change.

Camilla Toulmin, director, Directorate, IIED, UK, W292

I believe our i.e. the USA government agencies, like the recent Japan counterparts, practice the mantra: “Don’t Alarm the Public!” as they have over the decades with serious nuclear weapons testing fallout effects (Strontium 90 contamination of the milk supply) and recently with nuclear power plants’ disasters like 3-Mile Island and other nuclear power plant “incidents” rather than “Protect the Public First and Foremost!” Our government has demonstrated by its actions and inactions in the radiological protection area that it can not be trusted. Also one of our government’s most insidious falsehoods is to claim that nuclear energy is clean safe and competitive when it has failed to solve the nuclear waste problem and continues to underwrite nuclear power plants’ disaster insurance because if the nuclear power plant operators had to guarantee safety the price of nuclear power could not compete with other energy sources. The final irony is that there is another nuclear energy power alternative that was developed decades ago and is relatively clean and safe: the thorium power cycle. Because the uranium-based power industry is a monopoly this alternative has been heretofore ignored.

Shimon Schwarzschild, Freelance Environmental Journalist, Society of Environmental Journalists, U.S.A., W297

Substantial change in the global energy use to renewable energy is happening faster than many planning agencies understand or acknowledge and this will mean poor investment decisions in existing energy infrastructure are taken in the short term.

Nuclear power can be made safe using new technology. It should be part of future energy planning.

F, U.S.A., W314

Only by meeting the Freiburg Environmental Laureates did we learn the dire nuclear power dangers we face as a global community.

Martha Ruiz Corzo, Director, Grupo Ecologico Sierra Gorda IAP, Mexico, W316

[Environmental Awareness/Education/Publicity]

Our awareness of environmental protection has gradually been increasing, and this is a topic we emphasize when educating the next generation. Most residents help conserve the environment through their own specific actions such as separating garbage by type and organizing garbage bags by themselves when they go out. But at a certain stage of the overall economy's development there could be some difficulties in carrying out actions geared at environmental protection. We therefore need to maximize our efforts to the extent possible and within certain limits. Individuals, groups, corporations, and the government all need to be committed to environmental protection. The task is daunting and arduous, and can only be achieved through ceaseless effort.

F, China, C001

Fully carry out education and popularization and formulate relevant policies.

M, China, C002

To improve the understanding of the seriousness of climate change, we need to a much longer extent than at present, to link climate change with the loss of species and in the longer term, to the deterioration of the foundation for human survival. The dissemination of concrete examples of such links and consequences will be important in achieving this.

KARE OLERUD, Norway, 022

Continuous publicity of environmental protection. Major countries and people with status should take the lead. Governance structure should be further improved and implementation strengthened. Economic support should be given to underdeveloped regions and impoverished social groups.

Liu Hanfei, China, C022

“Demand that energy users implement complete conservation techniques (conserving electricity, insulating properly, conserving energy in their everyday behavior).” The concept and execution of this should be included in children's education (education from parents as well as kindergarten and elementary school education) so that conserving energy becomes a natural lifestyle habit.

F, Taiwan, T024

We would have to insist on educating children from a very young age to become environmentalists, for theirs is the world we must take care and respect.

Maria Monica de Rivas, webmaster, www.ecoargentina.org, Argentina, 035

Everybody recognizes the environmental issues, but there is still a view considering them a social movement, not what we can practice in our daily life. And this makes the people think the issues are difficult to deal with. I think it is necessary to devise how to make the public think this is not only the problems for a part of people.

Lee, myungje, Assistant Manager, Hansol education co. ltd, South Korea, K045

A massive education and awareness program on the environment should be started globally, starting at primary school level and continuing all the way up past university and into the adult continuous education level.

Bert Kohlmann, Director of the Centre for Renewable Energy, Applied Ecology, EARTH University, Costa Rica, W047

Environment education in countries depend largely on individual minister/officer-this should be more institutional/continuing.

A. Sethunarayanan, India, 056

Free information (+regulated advertisement) and (environmental) education as well as a functioning constitutional legality are crucial to solve environmental problems in a long term perspective. There is no justice without environmental protection and free information and no environmental protection and free information without justice.

In my view, the environmental issue has not even been made a priority. I think that human beings, mostly, have not yet accepted the need to be friendly to the environment, focusing instead on biased perceptions, often following misconceptions dumped by those who manipulate data erroneously based on speculations than on serious studies, and that leads to further mistakes. The environment is still a blur for a large majority and the usually speak when specific events occur that impact their lives, in the form of disasters, but then, in general, they move on and forget, and repeat the same errors. Sometimes I think part of the scientific community also put forth subjective propositions rather than objective. Moreover, I also believe that there is political complicity among certain members of the scientific community, to misinform rather than inform seriously on real basis of studies. Such actions benefit narrow economic interests, instead of the altruistic and the real, using the ignorance that the majority has about environmental issues, since by nature, for our species to be well, (or believing that we are well) does not equate to caring much for the good of the planet.

María Cristina Bó de Hermo, Argentina, 065

When we were young we paid attention to environmental issues. But as we grew up we became increasingly indifferent. I suppose everyone maintains a sense that, "it won't happen to me anyway."

F, China, C068

Strengthen education and, hopefully, raise the awareness of environmental issues among all the world's people.

M, China, C089

Dissemination of climatic information can develop awareness among the the people, which help them to take appropriate adaptation measure.

M, Bangladesh, W091

We should strengthen publicity. Local governments should pay more attention to this issue and even incorporate environmental protection into the assessment of political achievements. NPOs are also expected to be more active and influential.

Ji Wen, Director, Teaching Affairs Office, Hainan Radio and Television University, China, C097

Overall awareness of environmental issues is low, understanding of environmental protection is poor, and publicity of environmental protection is inadequate.

F, China, C115

Reasonably curb human desires by taking comprehensive measures such as education and publicity. The current means of development and survival imply a full conspiracy theory. Everyone is shirking their responsibility while also promoting the deterioration of the situation.

Mu Wei, Vice General Manager, Legal Department, Beijing Orient Landscape Co., Ltd., China, C120

Increase publicity, in time severely punish those who destroy the environment, and take care of the weak. Only by these actions can we really learn to take care of the Earth's environment.

F, China, C136

Whatever we do, we should think about the environment as much as we can and try to add one more patch of green to the indispensable environment in which we live.

Li Yingjie, Manager Assistant, Cost Control Department, Excellence Group, China, C137

Increase publicity to the general public, accurately communicate knowledge about environmental protection and the existing problems, and cooperate globally.

M, China, C152

I hope publicity can be increased to allow more people to learn about the relationship between the Earth's environment and human survival and development.

F, China, C160

Raise environmental problems to the level where all nations will be aware of the issues and participate. Things will become much easier if everyone treasures the environment.

Zhu Xinkai, Director, Film Production Department, Huaqiang Fangte Film Investment Co., Ltd., China, C163

Obviously not enough attention is being paid to environmental problems. I believe we should not only increase publicity, but also systematically and reasonably carry out publicity, popularization, and education, to allow people to truly realize the importance of environmental protection and understand that it is not just about shouting slogans.

M, China, C177

The Earth is our shared homeland. We need more publicity and everyone needs to participate in order to protect the Earth.

F, China, C184

We need to increase publicity, raise the sense of crisis and urgency, and have everyone participate in environmental protection.

F, China, C186

It is important to raise public awareness. Everyone needs to participate and this also requires the support of science and technology.

M, China, C192

The Earth is our shared homeland. We need more publicity and everyone needs to participate in order to protect it.

F, China, C196

The main barrier to addressing environmental problems seriously and realistically is the reluctance of politicians to act. This is because there is not enough ground level understanding of the problems to create a ground swell of public opinion pressing for change. Politicians fear acting appropriately will lose them votes. Much wider education of the risks of not acting is required.

*Stephen Bown, Prof. of Laser Medicine & Surgery,
National Medical Laser Centre, University College London, UK, W200*

Explain and communicate scientific conclusions about environmental protection to the public to encourage them to take action. Maintain pressure so that we will be motivated to continuously look for practical and feasible solutions to the increasingly serious environmental problems.

F, China, C214

Increase publicity.

China, C217

In spite of the great concern among earth science professors and researchers, there is still not enough emphasis in environmental problems in the curriculum of graduate and post-graduate humanity and social sciences courses.

Silvia Elizabeth Moraes, Professor, Dept of Teaching Theory and Practice, Federal University of Ceara, Brazil, W219

I believe what is most important is to raise people's awareness on environmental protection. The methods that should be adopted are the concern of certain people. For the general public, it is enough to think about how not to damage or pollute the environment in their everyday lives.

F, China, C224

Only those who have experienced environmental disasters can understand the urgency of environmental problems, while people generally refuse to recognize the existence of such issues. The need for collective responsibility means we as individuals tend to skirt responsibility and feel no sense of guilt. I believe it is feasible to increase publicity and education, and to solve environmental problems with the development of technologies. It will be difficult for all people of the world to have a sense of crisis.

M, China, C226

The environment continues to deteriorate, so we need to raise public awareness of environmental protection, and carry out actions by ourselves and within our abilities to reduce energy consumption and pollution.

M, China, C228

Scientists are not good communicators. Much more social science and psychological research is needed on communicating the risk of climate change including research on how human mind perceives risks and how we can appeal to both the rational and emotional half of the human mind. Gloom and doom scenarios are turning off people especially since not enough specific information on solutions is offered especially in poor countries. The link between understanding, perception and action has to be understood properly to engage people.

*Raghu Murtugudde, Professor and Executive Director-CBFS,
Atmospheric and Oceanic Science, Earth System Science Interdisciplinary Center, U.S.A., W236*

I think that the most important problem related to the environmental destruction is the absence of good education associated to green development concepts. We must develop a new kind of culture, integrated with the ideas of collectivism and sustainability. Thus, with more knowledgeable people, we can create a new economy and change our methods of production and consumption, turning our society able to exist in long term.

M, Brazil, W280

Ignorance of the plain fact that the whole is more than the sum of its parts. Lack of awareness of the tragedy of the commons “especially with regard to the fact that by far most things deemed ‘free’ are limited goods.” All things considered there seems to be too much emphasis, too high preference for consumption rather than production. Increasingly, resources have been tapped to meet demand of the service sector, notably tourism, at the expense of the natural environment, in particular. In this regard, golf courses / links have posed grave threats in terms of encroaching into nature reserves, unproductive use of land, triggering landlessness, squandering of water, pollution caused by pesticides... consumption of electricity...

*Karl E. Weber, advisor/writer/editor, volunteer:Asian Disaster
Preparedness Center/King Mongkut’s Institute of Technology Ladkrabang/ National Identity Board Thailand/The Siam
Society, Thailand, W315*

There is urgent need for training teachers who can inspire students into active environmental consciousness. Politicians in charge of ruling country are abysmally ignorant and need special training on environment and its looming crises.

N. D. Jayal, The Himalaya Trust, India, W319

The problem I have is that there are problems that we can face at the level of the masses but ignorance and the lack of means don’t allow people to act. For example, I want to point out the problem of loss of biodiversity, there are many plants, very useful for the humanity which are going to disappear if nothing is not done. Maybe there are many voluntary workers to act with us to safeguard them.

*Badjagou O. Pascal, Chairman, Sustainable Agriculture,
Association Orukutuku, Republic of Benin, W321*

[Government and Politics]

Climate change and radioactivity problem should be dealt as the environmental issues not only in this year but also in future. It is urgent to prepare practical measures at the pan-government level. The government makes the people think how they handle the environmental problems by themselves, giving the accurate information, not causing a mood of being scared.

M, South Korea, K003

The crisis of democracy – It will be an obstacle to solve the environmental issues if democracy doesn’t have an enough power to go against the policies led by nation which are not eco-friendly.

*Lee, Jie-on, Alternative policy coordinator,
Korea federation for environmental movement, South Korea, K005*

Right now, Taiwan’s policies tend to profit private groups and harm the natural environment. Although there are many fine fields in Taiwan, the government’s “planned” changes and leniency in development regulations allows newly established factories in Taiwan to avoid environmental evaluation and conduct construction in these fields. Due to an imbalance of knowledge, the poor public only realizes that the environment around their homes is being raped once the factories have begun construction. The Taiwanese government’s myopia has left a lasting impression on the people of Taiwan. I hope that in the future, the government will develop a conscience and stop destroying Taiwan’s environment.

Tu Fang-yu, Executive secretary, Kaohsiung Green Association, Taiwan, T014

Since all our political systems fail to implement appropriate solutions to environmental challenges, I strongly advocate employing the citizens themselves to come up with solutions which they are willing to implement and to adhere to. The appropriate method for this are “citizens reports with planning cells,” an established and scientifically proven method for citizen participation. It combines expert knowledge with the fresh common sense of randomly selected citizens. The results of this very transparent process display common sense, have the common good in mind and, very important, are acceptable for the general public. “Citizens reports with planning cells” can be organized in parallel and very frequently on any regional level in any country and also worldwide, on any type of question of public interest. This way they can help us to solve the burning questions of our survival within a relatively short time span.

Wolfgang Scheffer, Presidnet, Solare Bruecke, Germany, 017

Politics are full of compromises, which is why the government is afraid to tell people the truth or even face the truth! Whether it's the misuse or uneven distribution of environmental resources or yielding to the pressure of economic growth and corporate groups instead of implementing policies which benefit the environment, these are all causes of why today's issues have come to a standstill. We must face the issues in an honest and responsible way in order to be able to face our children in the future.

Lin Kun-hai, President, Kaohsiung Wild Bird Society, Taiwan, T031

To protect the environment, in addition to enforcing protective measures and reducing the damage brought by environmental destruction, of greater importance is formulating a complete set of institutions, laws, and regulations for the purpose of protection and strengthening the enforcement of environmental laws. Laws should be enforced strictly and activities that intentionally destroy the environment in pursuit of economic interest should be severely punished. We need closer international exchanges to promote cooperation among countries and regions for the goal of environmental protection.

M, China, C037

My hope is that the government can attach great importance to environmental issues. Apart from that, large state-owned enterprises should also take into account the problems caused by excessive development.

M, China, C044

The international environment regulation which allows neighboring countries in the affected areas to demand compensation should be prepared. It is as if a defeated nation has to pay reparations to a victories country.

Lee, Meekyoung, Secretary General, Korea Green Foundation, South Korea, K051

I feel that my government has ample power and flexibility to deal with environmental problems, as long as the right person is in office, but if the wrong person is in office, they have equal power and flexibility to destroy it. We would all be living in a very different world if Al Gore had been made president of the US for example. On the other side, as a regular citizen, he did more for global understanding of climate change than anyone else has been able to do.

F, U.S.A., W053

Governmental compromise is lacking in the face of environmental problem. Further, there is lack of motivation on the part of people who are affected by this phenomenon that seems irreversible.

F, Columbia, 058

The government must tackle both economic and environmental issues, and raise the awareness of environmental protection among the entire population.

M, China, C072

Both cultivation of mentality and construction of institutions are necessary. For the former, the government and academic world should deepen and guide people's understanding so they realize that man is an integral part of nature. For the latter, governments around the world should act in the spirit of public good, and work together to establish sound measures and policies for environmental protection for the present and the future.

M, China, C077

Different countries have different interests, so solving the issue is challenging.

M, China, C087

At the present, different regions and social classes have not yet reached a consensus on how environmental protection benefits them, and this will greatly hinder the implementation of many policies and measures aimed at environmental protection.

M, China, C088

Politicians are now concerned only for their own benefits, not even the national benefits. So forget about global level.

M, Thailand, W130

Not enough attention is being paid, protection is inadequate, and law enforcement is weak.

M, China, C130

Environmental problems are already quite severe, and the general public feels this the strongest since they are the direct victims. But policymakers think of nothing but the pursuit of economic interest and sometimes will sacrifice anything just so they can get promoted. Environmental problems are no more than a stumbling block to their personal success, and it will never occur to them that these are genuine problems and should be dealt with, so it is impossible to solve environmental problems.

He Yuanhui, SE, IT, Beijing Miteno Communication Technology Co., Ltd.,

I personally feel the present laws and regulations as well as institutions do not have any problem in themselves, but implementation by various entities and agencies is largely compromised.

M, China, C133

COP-17 convinced me that there will not be a political solution (a fair, ambitious and enforceable international carbon regime) in time to save the planet from devastating climate change. Our political leaders are too narrow-minded, willfully ignorant, and corrupt. We can therefore only hope that a technological solution will be found in time.

M, Switzerland, W134

The degree of obliviousness to the serious consequences of our environmental mess is stunning. The political process in the United States is paralyzed, so that the country cannot take necessary steps. The future looks very, very frightening.

M, U.S.A., W135

Climate change is happening at a rate faster than what even the scientists have predicted. The actions of most government, especially in the developing countries, are not encouraging. They prefer to spend money on relief materials than to make the people to adapt. There is a need for greater level of awareness to make them stand up to environmental issues.

John Ajigo, Programme Officer, Community Based Adaptation Pilot Projects,

Nigerian Environmental Study/Action Team., Nigeria, W138

We should promote communication between governments as well as between the government and the people, transform “green” into a new competitive edge, and reconcile the contradiction between economic development and environmental protection. When it comes to environmental issues, we should also ignore the differences of ideologies and political systems and try to regulate through strict laws.

F, China, C139

Ban the activities of corporations that are heavy polluters and severely punish corporations, individuals, and groups that pursue economic interests regardless of the environment. Cultivate each citizen’s awareness of environmental protection. Each one of us should start from small deeds by ourselves and build a sense of responsibility.

*Liu Lili, Editor of books on psychology, Editorial Division,
Beijing New Curves Publishing and Consulting Co., Ltd., China, C142*

The Earth’s environmental problems have already become extremely serious, but governments around the world are still not paying enough attention to the issue (there has been some attention but it is far from sufficient), and the measures being taken by various countries have little impact. All countries of the world should have a long-term vision and the courage to carry out initiatives, and in the long run, environmental problems will be more important and urgent than most of the other problems we are facing. If things continue in this way, the Earth, our common home, will sooner or later be destroyed, and we will also cease to exist. What is worrying is that this possible scenario of ultimate destruction is often unpredictable, and it may descend upon us at any time, like a nightmare, and then it will be too late for mankind to have regret. To cope with the Earth’s environmental problems, we cannot expect everyone to reach a consensus before taking action. There will always be countries that ignore environmental issues to protect their own interests. We should act with a sense of responsibility for the whole of mankind and take measures boldly and strongly to punish and stop countries and corporations that pollute the environment. If we are afraid of taking action and are bothered with petty concerns over various obstacles, we will end up achieving nothing, just like in the past 20 years.

Chen Wanli, Student, Central Party Graduate School, China, C150

Environmental problems have caused increasing concern among the government and the general public. With improved knowledge and technology, environmental protection and governance should step onto a road of development that is both well regulated and scientific.

F, China, C157

Environmental problems is less prioritized than the world political debate and economic issues.

*Dilli Ram Bhattarai, M.Sc. Student, Environment and Climate Change,
Central Department of Environmental Science, Tribhuvan University, Nepal, W198*

There are no clear reward-and-punishment provisions in the government’s laws and regulations. We do not have incentive measures for those who protect the environment, nor severe punishment measures against those who destroy it.

F, China, C209

The government should inform the public of the truth about environmental issues and should not lie to the people. Only when the people understand the reality of our planet's environment and the right ways of protecting it can they take initiatives to set up a correct outlook on life, adopt a reasonable way of living, and truly protect the Earth's environment.

M, China, C211

More power for international conventions is needed. New binding agreements should be found.

Huttunen Satu, Professor Emeritas, Department of Biology, University of Oulu, Finland, W216

The key is to improve the institution and establish a deterring mechanism.

M, China, C225

From my experience as head of vehicle emission control for Canada in the '70s and early '80s I am concerned that government and environmental groups are far too quick to blame the personal automobile for environmental problems. Not only does it bring many economic benefits and great personal happiness but, where it has been properly regulated (as in North America), its pollutant emissions are negligible in comparison with industrial sources. Moreover, if governments wish to regulate/reduce the energy consumption of private automobiles (as well they should) they should recognize family requirements and tax in accordance with 'capacity classes'. That is, the maximum tax would be the same for the highest fuel consumption of 4-passenger cars and 8-passenger minivans but would result in consumers purchasing the lowest consuming vehicle which meets their needs.

Allen Gullon, ACEs, Canada, W227

I hope environmental protection can become an issue for every citizen. The government should also formulate relevant policies and measures to protect the environment and reward and punish accordingly so as to make everyone take actions on their own initiative. Protecting the environment is everyone's duty.

F, China, C232

For more than 25 years, I've been involved in different roles in the field of environmental protection. In this time window I've seen the work of non governmental organizations leading to environmental awareness in the population and how this pushed governments towards more sustainable policies at local level. At global scale, where scientific uncertainties are higher and the pressure of the population is less effective, not much progress has been done. The role of "serious" science is crucial to orient sound environmental policies but this is of limited help with the present level of political commitment

Claudio, JRC, Italy, W239

It's ridiculous for a society to ignore their environment while considering their national interests. How can national interest bypass the healthy survival of citizens??

Taymoor Arif, IUCN, Pakistan, W254

I am quite desperate about the level of public "non-debate" about most of the issues dealt with in the questionnaire. The GFC has effectively shifted (the relatively small) attention away from the environmental issues in Australia and no political party except the Greens are willing to do anything fundamental. We are governed by parties who want to offer global and national capitalist crutches so that this system keeps "hobbling on" in spite of it showing real cracks and that these cracks become worse by any new "crisis"... and the ecology keeps being put back year upon year.

Jacques Boulet, Director, Borderlands Cooperative, Australia, W278

In countries like ours, with a strong private sector, a state that seeks to weaken it and assumes its regulatory role with difficulty, the scarce environmental progress is associated with greater progress in the democratization of society, in the transparency in the management, in the willingness of the authorities to assume their responsibilities in making policy decisions.

Vicente Paeile, Profesional, Division de Recursos Naturales Renovables y Biodiversidad, Ministerio de Medio Ambiente, Chile, W283

Environmental and economic policy necessary to change from global (UN) to national and regional levels.

Evgeny V. Krasnov, Professor, Geography, Immanuel Kant Baltic Federal University, Russia, W290

One of the biggest problems is the lack of political will, especially when there is scientific certainty of the negative effects that threaten real humanity. As a result of the greed of a few unscrupulous see only the money. It is very clear that the rulers succumb to these spurious interests, therefore, lack of political will.

Juan Ortiz Burgos, Presidente, Asoc. Proteger, Argentina, W308

[Multiple Recommendations]

Global systems allowing corporations, particularly large multinationals, to act irresponsibly because a corporation can't go to jail and can buy influence is having a shockingly degrading effect on the environment. Two things must change: 1. Overpopulation is our single largest problem—if women worldwide had reproductive choice through access to reliable, affordable birth control, world population would slowly decline—a long solution but better than any other. 2. Corporate responsibility must be enforced by reining powers of corporations and punishing principals of corporations who cause harm.

Candice J Vetter, Canada, 015

We must strive to limit or reduce human population. We must find non fossil fuel, non-nuclear sources of energy, If we don't, our species & many others are at risk.

Kent Blacklidge, U.S.A., 029

The world should fund and support research (as an immediate crash project) into sustainable high-efficiency energy production, This will help curb resource contamination and overuse. Also population controls need to be implemented & enforced. The last point is that the world (all nations) must begin thinking of how to sustain the ecosphere so that their descendants may also be able to service and thrive (we natives call it “seven-generation” philosophy).

Debra Krol, Member, Society of Environmental Journalists, U.S.A., 032

1. Should be more focus for environmental issues on G-8 summits.
2. There should be more funds on the level of UN organizations for protection of different polluted environmental areas (water, air, ozone layer, forests etc.) Funds provided for protection in Agenda XXI from Rio de Janeiro summit 1992 are insufficient.

Nowacki, Professor, Low, Administration Univerisyt of Wroclaw, Poland, 063

Adjust industrial policies.

M, China, C079

1. Sufficient environmental education must be taught from early-childhood.
2. Environmental development activities would be under secular body as the power exercised by Election Commission in India.
3. Coordination between countries must be so essential to implement the environmental activities.

A. MARIADOSS, Secretary, General, Multipurpose Community Development Society, India, 085

1. Corporations, especially those that are heavy polluters, should be punished more severely if they cause environmental problems. Corporations should realize the serious consequence of environmental pollution and the executive branches of the government must strictly enforce the law so that corporations will not formulate the idea that “only x amount of pollution is not a big deal.”

2. The government should make people place greater importance on environmental issues both in thought and deed, and promote a sense of citizenship among the public so their mentality is not stuck at a level of thinking, “it's none of my business.” The government should also help formulate an atmosphere of public supervision in society.

3. The most important thing is that governmental agencies should make people aware of the current severity of environmental issues, through institutions, laws, execution of policies, and informing the public, so that everyone, from the individual level to society as a whole, will fulfill their responsibility.

Cai Xinhua, Teacher, Water Conservancy and Hydropower College, Wuhan University, China, C86

1. Strengthen publicity to enable awareness of environmental protection to become deeply entrenched in people's minds. Only when everyone on Earth makes efforts together can we effectively tackle environmental problems.

2. The government and relevant corporations should pay attention to environmental protection when developing and using natural resources. If these activities cause any danger or harm to the environment or people's health, they must be stopped immediately. We should stop overdevelopment and overuse as well. We cannot exchange the health of future generations for temporary profit and fleeting prosperity.

F, China, C090

Measures adopted by various governments need to be implemented sustainably and effectively by combining comprehensive governance with specific governance, to promote awareness of environmental issues among corporations and the public.

Chang Qihai, Chief Engineer, General Contracting Company of Road & Bridge International Co., Ltd., China, C099

Formulate strict standards, evaluation systems, and laws and regulations for environmental protection; increase penalties for illegal activities; strengthen public advertising for environmental protection; advocate the use of energy-saving materials,

especially the development and utilization of solar energy.

M, China, C102

Strengthen publicity concerning environmental protection, reduce manmade destruction of the environment, proactively develop a low-carbon cyclic economy, foster and expand new environmentally friendly industries, reform and upgrade traditional industries, increase fiscal expenditure on environment protection, expand the coverage of environmentally friendly and energy-efficient products, and realize harmonious coexistence between human beings and nature.

M, China, C103

The government needs to encourage the establishment of venous industry that matches with arterial industry through legislation and support policies, and to collect environmental taxes (for excessive product packaging, extreme waste of resources, etc.) from corporations in arterial industry to supplement venous industry. The government should also apply a great deal of investment and human resources to improve specific facilities in our living environment such as garbage classifying facilities, and provide executable policies. Corporations should take on the social responsibility of environmental protection, refrain from excessive packaging, and establish a recycling system for used products. Groups and individuals should raise their awareness of environmental issues and be more active in carrying out actions to protect the environment. The above three parties should jointly deal with this issue.

Guo Meishan, China, C117

1. Carry out public promotion of environmental protection to let the majority of people realize the importance and urgency of this issue. Protecting the environment starts with our own small deeds.
2. Develop and utilize more forms of energy and strengthen research and development of forms of renewable energy.
3. Increase investment in regulation and governance of the environment, fix the business profit to be collected from environment-polluting corporations and used for environmental governance at 20%-50%, increase penalties for corporations' failure to regulate environmental pollution, and establish laws and regulations that determine who has polluted and who should bear the cost of governance.
4. Increase research and development of environment management technologies to achieve the best effect in governance with the least economic cost.

Li Wensong, Associate Director, 43rd Project Supervision Department, Quartet Beijing Co., Ltd., China, C119

(1) Control the population globally. (2) Implement a long-term mandatory promotion mechanism of new forms of energy and renewable energy on a global scale. (3) Strengthen education, publicity, and training on environmental protection. (4) Developed countries should help underdeveloped countries to incorporate environmental protection plans into their construction plans in the early phase of development. (5) International environmental organizations should exert more extensive influence to promote the normalization of global forms of energy and environmental problems.

M, China, C123

The priority is to reduce the role of large (multinational) corporations in governance. More transparency, more controls on election funding, public funding for non-corporate lobbying, etc. Government for the people could rapidly enforce polluter pays rules, marine conservation zones, etc. and remove subsidies for exploitative business practices. e.g. Make pollution (heavy metals, acid rain, etc.) expensive and coal burning will get replaced by renewable sources and industry will be motivated to get more efficient. Carbon taxes are probably an unwieldy and unnecessary distraction. We also need strong controls on advertising (promotion of consumerist lifestyles).

M, UK, W132

We must continue to work on individual problems. However, it is far more important to deal with the causes as revealed by the IPAT formula, and with our economic system to get it to a level of sustainability rather than being dependent on perpetual growth. We must shrink our population, the world's wealthy must live more modestly, and we must raise the living standards of the poorest.

Peter Seidel, U.S.A., W144

1. To solve pollution of the Earth, our interests as individuals must be closely related to environmental problems so as to restrain our personal behavior.
2. Increase the cost of environmental pollution for corporations and other social organizations.
3. Environmental protection relies on the strength of society as a whole, and the key is implementation.

M, China, C147

Promote public awareness of environmental protection, restrain the behavior of various organizations, groups, and individuals who unrestrictedly pursue maximal profit irrespective of environmental deterioration. The government should take governance

of the environment as the main evaluation standard for political achievement.

Chen Zhijian, Deputy Director, Hebei Handan Construction Bureau, China, C148

Control the population and greatly develop clean energy applications such as solar and wind energy.

M, China, C155

In accordance with each country's level of development, responsibility should be divided based on each country's historically accumulated influence on the environment. We should set up a mutual fund as well as a rotating the administrative mechanism to carry out unified cross-border environmental management on a global scale.

M, China, C170

A strong movement against war and warfare production, strict control of population, encouraging massive use of renewable energies by large investment in energy subsidies and restructuring of international relations and re-defining security are the most important things. But none of them seem to be possible with the current governance in the world. Environmental and also social doomsday is not so far. Thank you very much for your effort

M, Iran, W186

In our everyday lives we should reduce unnecessary waste of resources, implement resource recycling, reduce reliance on non-renewable resources, discover and develop alternative resources, perfect management systems, and strengthen publicity, to let the public realize that protecting the environment is everyone's responsibility and to carry out actions.

F, China, C188

1. Increase publicity, raise national awareness of environmental protection such as through comparison with other countries.
2. Policymakers in the government should have an overall grasp of environment protection.

Wang Haixia, Student, Chemistry College, Henan Normal University, China, C198

Research and develop renewable resources, popularize knowledge of new forms of energy, and strengthen publicity concerning knowledge on environmental protection.

F, China, C219

The Earth is mankind's shared homeland, and environmental problems concern everyone's vital interests. We have to place great importance on this issue and try to solve global environmental problems by focusing on both the present and the long-term future. I would suggest the following:

1. Increase support for environment-related research to more accurately grasp the reality, existing problems, deep reasons, and countermeasures concerning the global environment.
2. Carry out cooperation in environmental management among countries on a global scale through international organizations such as the United Nations, establish scientific mechanisms of cooperation, and formulate and implement a scientific system of standards concerning the environment.
3. Increase education on the environment, raise public awareness and knowledge on the environment around the world, carry out long-term publicity of environmental protection, and convey more comprehensive and accurate information about the environment that is easier to understand and implement, so that everyone can participate in the protection of our global environment to clean and defend our planet.

M, China, C220

Emphasize long-term interests to provide a healthy environment for future generations. Introduce relevant environmental governance policies and severely punish activities that destroy the environment.

F, China, C237

[Others]

Companies have been destroying the environment a lot to make a profit. Getting resources has to be done in a sustainable and planned way. It is urgent to develop alternative energies to prevent environmental destruction.

M, South Korea, K002

It is necessary to develop an eco-friendly alternative technology.

M, South Korea, K006

Due to excessive construction and demolition, as well as poor management and maintenance, investment in energy-efficient buildings and infrastructure cannot continuously bring about its expected effects. Low-carbon economy and industry have been reduced to mere economic indicators, and low-carbon products are unable to reduce carbon dioxide emissions.

Our lives could be healthier if there was no world factory.

Miao Yulong, Assistant Planner, Planning Department, ICON China Limited, China, C008

There have been too many discussions on environmental problems at the global level which requires international travel of delegates. Was there any cost-benefit analysis of such travel vis-a-vis actual solutions that have been developed and have become successful?

Emmanuel C. Talag, Senior Researcher, Electric Power Industry Management Bureau, Department of Energy, Philippines, W011

There is a need for developing mature society (for the awareness of the environmental problems including nuclear power issues) and forming proper governance. It is essential to set and implement green policies which can be done in a daily life.

Hwang, hojoung, Teacher, Nok-cheon middle school, South Korea, K015

Time is limited and the task is daunting. If we take no action now it might be too late.

Du Wencheng, Planner, Planning Department, ICON China Limited, China, C019

All citizens have the power to change policies. Make members of the National Assembly enact or revise a related law.

M, South Korea, K020

The debate on environmental problems need to move away from the political arena to a more science-led, evidence-based discourse. The conflicting views on global warming between developed and developing countries is a case in point.

Moses Mengu, Chief Consultant, Research Coordination, Danish Technological Institute, Denmark, W021

The earth's current environmental issues no longer stem from a single source. Human society has brought it upon ourselves. Many environmental pollutants are causing strange and unheard-of diseases within the human population, in addition to contributing to ever-rising cancer rates. What causes these incurable diseases is that everyone is so used to modern conveniences. This is an environmental issue for our planet which everyone must take seriously.

Lin Yu-peng, Director, Sales Department, Natural Beauty, Taiwan, T025

The spreading of epidemics: bacteria grows easily due to global warming, in addition to the rapid development of technology, it creates more opportunities for interpersonal exchanges. This results in the dissemination of diseases, such as SARS and influenza viruses in the past.

F, Taiwan, T027

Following the laws of nature and protecting the Earth is everyone's responsibility.

F, China, C030

Besides the energy crisis, which I see to be the most important crisis to cope with, we also have to take into account the upcoming crises in relation to natural resources, biodiversity and water, see also OECD outlook report 2050 or SOER 2010. In parallel, we have to ask ourselves how we see the fact that we live on a finite planet with ecological limits at the dawn of peak oil. We all want truly green solutions and we will need such global solutions very soon. It will be a fact that all, not only industrialized countries but also emerging countries and global powers such as those within the BRIIC group will - independently of fairness and other issues- have to shoulder more responsibility in due time. Dialogue between north- south will then become finally less simple: not to simply reject EU or other approaches such as those on climate including air transport for instance but proposing better approaches than the EU and developing more ambitious global schemes that may ultimately enable us to stay below the 2°C target (450 ppm). With our behaviour and our more and more similar lifestyles we otherwise risk exploiting some of these very sensitive limits and the destabilisation of the global ecological system — which is very much linked with our societal and economic system. It is in question if we are prepared for the impacts of possible crises that might occur in the near future. Therefore, we have to develop our resilience through prevention and adaption. Special focus should be given to systemic changes. We have to think about our institutions, models and structures. We should also reflect how different mind-sets have contributed to the given situation e.g. responsibility of the nuclear power industry in case of emergencies, safe radioactive waste disposal, contaminated land issues, external costs for next generations, proliferation etc.

Stimmer-Kienesberger, Desk Officer, Environment, MoE, Austria, W031

Nuclear power is not for Africa. Pollution & contamination is the main issue in Africa. The Next problem is e-waste.

Nabil Bashir, Professor, Department of pesticides & Toxicology, University of Gezira, Sudan, W036

The very survival of we humankind, now, depends very much on the safeguarding of the planet-Earth and every citizen of us is responsible to take care of this environment. Awareness and the prompt action is urgent and the Asahi Glass Foundation has done a great job and I do appreciate this effort very very much indeed.

U Ohn, Vice Chairman, Forest Resource Environment Development & Conservation Association(FREDA), Myanmar, 041

Until humanity comes together and forms a united government, and until we weaken the influence of the big financial conglomerates and establish a communal society, environmental problems can never be solved.

M, China, C043

Since 2011 tsunami debris from Japanese earthquake is arriving on North America Pacific shores-styrofoam, buildings insulation, fishing gear debris, floats, toxic containers etc. There is no plan federal or provincial to deal with mounds of debris arriving on shores from Alaska, to California, Hawaii, is unable to handle on rugged coasts-100% worse than Exxon Valdez. Costs to cover clean up unavailable. Styrofoam etc., cannot be recycled-Only solution: foams at sea to stop debris before arriving on Pacific shores. This requires global solution—fast! No roads on coastlines, etc. Distances great, etc. Marine life in danger in Pacific Ocean.

F, Canada, 044

In my opinion it is fundamental that a sense of community ownership of process is evolved. I also believe that a more complete sharing of information and strategy on an interdisciplinary basis needs to be addressed.

Simon Read, Senior Lecturer in Fine Art, Middlesex University, UK, W048

Human population growth must be curbed. All nuclear facilities should be closed and decontaminated; made SAFE for 100,000 years.

Albert G. Cohen, Executive Director, Southern California Ecumenical Council, U.S.A., 049

The corporations and politicians in Brazil seem to behave like wait and see “thus leading to inaction despite the urgency of the environmental problems.”

Milton Nogueira da Silva, Executive Secretary, Climate Change Forum Minas Gerais, Brazil, W050

The lack of institutions to account for intergenerational equity. In my opinion this is the main governance problem, and the main reason we have not achieved global agreements on a number of environmental issues (including climate).

Tomasz Zylisz, Dean, Faculty of Economic Sciences, University of Warsaw,, Poland, W055

Maybe nuclear explosions caused the hole in the ozone. Not a good option. Then coal + other resources caused too much CO2-Oxygen problem. Rain problems. Bad policies should be abandoned.

Erika K Lorentzen, U.S.A., 057

It is not man who pollutes, it is too many men that pollute. Population control, control of human greed, sustainable development and meticulous planning would save this earth.

Kamala Kanta, Satpathy, Scientific Officer H, Head Environmental & Safety Division, Department of Atomic Energy, India, 059

All nations or individuals are not equally responsible for creating environmental problems, yet even the innocent suffer for no fault of their own. I only wish that the global organizations are not influenced by the size of a country both in terms of geographical area and population; by economic standards rich vs poor or developed vs underdeveloped, or by political power, but by genuine concerns for one and all, especially for the most vulnerable and marginalized people. However, I also feel that no matter what measures and efforts are taken to solve global problems, there cannot be a solution without “LOVE” & “SACRIFICE”

Pankaj Thapa, Asst. Professor, Geography & Planning, Sherubtse College, Royal University of Thutan, Bhutan, W064

To promote responsible sustainable development on bio-cognitive-geo-engineering-information-nano (bcgin) sciences and technologies (s/t) - earth charter

De Leut, Founder/Manager, Responsible Sustainable Development, NGO Eco Center Charles Darwin, Croatia, W065

Rwanda is a country with a small space. It is bordering with countries with wider superficies such as the DRC, Uganda and Tanzania. The efforts made in Rwanda from local governments to national level would be vain if these countries do not do the same. UN should monitor this issues.

Nzisabira Placide Dieudonne, Founder, Top Management, AJDR, Rwanda, 068

The rich can contribute money; the rest can devote their energy.

F, China, C076

The phenomenal growth of population all over the world is the prime cause of all other forms of environmental problems. Another thing lack of public awareness related to environmental issue, the major environmental disasters had a large impact on the development of public participation mechanisms, caused by human error, accident, lack of planning, corner cutting during industrial processes, greed, or by simple lack of awareness. Water connected disasters are not natural, but are caused by a combination of natural and human induce hazards joined among human social and economic susceptibility to those hazards. Natural and human induced hazards are probable to rise further owing to climate change. Environmental management tackles all of these hazards, in one way or another and takes the complete range of scientific, technical and decision making skills and techniques to bear on preventing mitigating and responding to their effects.

M, India, 078

I hope the proposed solutions and strategies can be put into practice, and implementation of each part should be strengthened. In the future, we should not set about protecting the environment only after having polluted it.

F, China, C078

In the 21st century, we are facing destructive natural events, earthquakes, tsunamis, cyclones, high tides as well as harmful diseases. These man-made events have undesirable and disastrous effects on human and environment.

S. K. Shringi, Associate Professor, Education Department, India, 079

We need to reach a global consensus and jointly tackle this issue. This requires the efforts of all the world's people.

F, China, C080

The recent exponential increase in ambient electromagnetic radiation (Non-ionizing radiation from cell phones, wireless systems, etc) is an environmental problem that needs more attention due to potential human health, biological health, and atmospheric effects.

F, U.S.A., 082

Air, water and soil are the essential components granted freely by the nature. We could enjoy these components understanding ecology to some extent. Understanding economy these days have developed a big gap due to increasing population and unplanned land use leading to climate change and natural disasters. Implementing orderly and strong environmental governance is the need of the hour to check further devastation. Can we really think of environmental education with environmental citizenship? Decision makers should take a note of it in the larger interest of our future generation.

Laxmi Kant Dadhich, Patron, NGO, Paryavaran Parishad (Environmental Society) kota, India, W088

Retreating is not a way out; we can only move forward. Further development is the key to solving environmental problems.

M, China, C093

Poor environment, severe pollution

M, China, C096

Important is also an independent research not sponsored by private sectors.

F, Italy, W099

Conform to nature, protect the environment, and develop reasonably.

F, China1, C107

Human psychology, the structure of the human brain, and innate instincts operating often at the sub-conscious level seem to prevent appropriate actions to mitigate many critical environmental issues. Given the seriousness of the environmental crisis, it is essential for the human species to become more aware of the tendency of the brain to prefer complacency over discomforting action and the illusion of a positive interpretation over often dire reality.

J. Anthony Cassils, Canada, W111

Face reality and cooperate wholeheartedly to create a better future for mankind.

Si Yanni, Social Livelihood Department, Work Leadership Group Office of Shanxi National Resources Economic Transformation Synthetically Coordinated Reform Testing District, China, C134

Cherish the Earth's environment and pursue scientific and pragmatic ways of using and recycling the Earth's natural resources.

M, China, C159

A very large shift in various aspects is required in order to allow humans to live on earth peacefully. The potential for social unrest, wars and large scale suffering which is inherent in today's economic system, human value systems and today's individual consumer patterns is largely underestimated.

Heike Hoedt, Vice President, Solare Bruecke e. V., Germany, W162

In confronting the deterioration of the Earth's environment, mankind must come together, love the land on which we live, and let everyone participate in environmental protection in order to promote development of the green economy and develop our production and consumption in a more sustainable and harmonious way. Only in this way will the Earth's environment get increasingly better.

M, China, C162

First of all, environmental problems ultimately remain issues that only concern ordinary people. The upper class and the rich could not care less because they can afford to live in the most convenient locations with the best environment. It is the ordinary people, especially those living in the cities, who have no choice but to live in the most polluted areas. If politicians and the rich seem to care about the environment, it is only because they have to cater to the voters or improve their corporate image. In their agenda, environmental issues always come last.

Second, developed countries have high standards of living and their populations have no worries about clothing and food, so they can afford to concern themselves with issues concerning the world and our future. But for the developing and poor countries, eradicating starvation and improving the standard of living still take top priority, and environmental issues are naturally of less importance. Many people in poor countries do not even have enough to eat and are always at the brink of starvation. How can they discuss the world's environmental problems when they are in such a condition? On this point, developed countries should show some understanding toward developing countries. Historically, developed countries have also gone through stages of destroying the environment and polluting the atmosphere, and their history of pollution is much earlier and longer than that of developing countries, so they need to assume responsibility, and not only this; they should in fact bear the main responsibility.

In addition, the fundamental reason why various countries cannot act in unity to tackle environmental problems is that sovereign states are still the dominant agents of action in the world. For a sovereign state, environmental security is obviously not an existential threat, and security in the conventional sense is still most important in an age when sovereign states dominate.

Zhen Wendong, Student, Graduate School, Institute for Strategic Studies of Central Party School, China, C166

The Earth's environment is gradually deteriorating, but each country does things in its own way and it is difficult to take unified and coordinated action. We are definitely destroying the future of our planet.

F, China, C167

Protecting the environment starts with taking action ourselves.

Yang Binbin, Architect, Design Department, Shenzhen Huahui Design Co., Ltd., China, C169

Further research and develop new technologies and develop new green energy in line with the idea of sustainable development to benefit future generations.

F, China, C171

We need to speed up environmental protection, and it has to start from our own actions, from small deeds.

F, China, C174

Countries have not taken the problems of the environmental degradation seriously. More effort, awareness creation and funding needs to be allocated to this sector

Emmanuel Salu, Director, Environmental Education Department, Environmental Protection Agency, Ghana, W176

My opinion: military, drought, deforestation, food security, insecurity, overgrazing, population, land degradation, natural disaster (floods, slides, volcanos, etc.)

Unless mankind realizes that in contemporary times, countries in the west are looting the entire planet, which leads the world into an irreversible and vicious development model, the situation will be difficult to change.

M, China, C182

The roots of global environmental degradation are arguably the demand placed on the natural resources to satisfy the unsustainable lifestyle of the burgeoning human population, the inequitable sharing of wealth and the lack of respect for the true value of natural systems. The human population has claimed ownership of the Earth's natural resources and given little to no consideration for the other species, both plant and animal. Many civilisations have ignored the delicate balance between human existence and the natural systems which requires a harmonious relationship between biotic and abiotic components for sustainability. Continued uncontrolled consumption of resources and perturbation of the natural cycle will eventually lead to our demise unless a massive global response can be engendered. A global campaign has to be initiated drawing on all capacities to get the message across that the time to act is NOW! The collective of scientists, artists, musicians, politicians, educators, philanthropists must join hands in this effort to work together to shift the hands of the doomsday clock into reverse. The scientists have assessed and clearly articulated the impacts, political directorates have established the panels and signed protocols, the NGOs have identified needs but communication at the level of the individual is too limited to register effective change. It's time to leave the conference rooms and get into the trenches.

*Sonia Peter, Head, Departments of Chemistry and Environmental Sciences,
Barbados Community College, Barbados, W184*

We need the support of national policies as well as high public awareness.

Wang Panhao, Student, Chemical and Environmental Science College, Henan Normal University, China, C185

Eliminate objections and promote collective development.

M, China, C187

The will to save our life and the environment is the most important thing, so life would continue to exist.

F, Philippines, W188

We must pay attention to the issue and increase measures to manage the environment.

Li Chao, Student, Nanchang University, China, C189

We must pay attention to the issues and increase measures to manage the environment.

M, China, C195

There is a great deal of interest from research communities, policy, private sector, civil society etc in tackling many of these grand challenges. The difficult part is creating long term visions, objectives and action plans that all can sign up to. Little resource is dedicated to actually moving beyond the rhetoric and good will.

F, UK, W195

It is urgent that we solve environmental problems.

M, China, C204

Every citizen should take action to set an example for others.

M, China, C207

Saving energy and cutting emissions is everyone's responsibility.

Hu Siyuan, People's Government of Qianjia Town, Ledong County, Hainan Province, China, C210

Increase publicity, use energy reasonably, and protect our planet.

M, China, C212

Do not excessively damage the Earth's environment. Make full use of renewable resources and ban exploitation of non-renewable resources. We should start from our own actions to care for the Earth's environment.

F, China, C213

Existing natural resources should be managed sustainably which will bring solutions to many environment related issues especially climate change. Country top most priority should be to protect the resources and manage sustainably.

Save energy, cut emissions, and reduce waste of natural resources.

Meng Xiangke, Teacher and Staff, Hainan Radio and Television University, China, C215

The issue on environment should include the views of local indigenous people and their ever green knowledge on handling environmental problems as they have the baseline data on all environment.

F, Nigeria, W229

Confronting the increasingly severe environmental problems on a global scale, all relevant entities including the government, corporations, NGOs, individuals, and experts should adopt an attitude of mutual communication to cope with the crisis together.

Meng Jianjun, Professor/Researcher, Industry Development and Environmental Management Research Center, Tsinghua University, China, C230

Where institutions are tailored to the scale of issues, cooperation is possible (for example watershed based management which involves all jurisdictions) and there have been success stories. The main issue with current institutions is that they seldom match the scale and boundaries of the issues - are too small to fix it or too big to notice. This leads to a disassociation of governance from both the key social and environmental issues and the needs of the populace.

Edward Manning, President, Tourisk Incorporated, Canada, W233

Environmental problems of the Earth are problems for everyone. People need to raise their awareness of environmental protection. We also need policy support as well as technological development and innovation.

F, China, C234

If economists politicians talk of balanced budgets, risk and economic sustainability but then made no effort monetize, to know how much money we have, how much debt we carry, how much we make and what we spend, there would be chaos. The same dynamic is true when applied to natural capital and sustainability; however, it is even more critical since it is natural capital that underpins human economic interests. All the global conferences on environment have failed utterly in addressing these issues - RIO+20 will likely not change the trend and the UN will continue to be ineffective as a global agent for change.

Larry Onisto, Senior Scientist, Global Footprints Network, Canada, W237

There is only one Earth, and it cannot be regenerated once it is destroyed. Protecting the environment is everyone's responsibility.

F, China, C239

The biggest problem we are facing now is inequality, of which environmental problems are a partial manifestation. There should be something like environmental action tracker for the governments, rather than only discussion and conferences. There is very few international environmental action monitoring. Climate change needs action oriented and concrete solutions.

M, India, W240

The environment is for everyone, so we all have responsibility. This can be reflected in (1) history and (2) the present. Historically, taking carbon dioxide as an example, the historical total figure of carbon dioxide emission for each country/region should be the same. In terms of the present, each country should pay for the carbon dioxide it produces through consumption.

M, China, C241

A coherent knowledge management system should be established to develop global social-ecological sustainable infrastructure.

Charles, Manager, Synthesis Three, U.S.A., W248

The match between what should be started as responses to what is needed in a timeframe is not sufficient. The responses are too delayed and not sufficiently strong to match the challenges.

M, Sweden, W294

1. Civil use of nuclear power is the gateway to nuclear weapons. 2. The issue of "survival of humankind" is insufficiently addressed by your questions. We live in a world where one single person can make decisions that can undermine or destroy natural living base of large parts or even whole humankind. This would be genocide through ecocide. We need a "Green Security Commandment: no one has the right to destroy or undermine the natural living base of other people".

Gerhard KNIES, Chairperson, think tank, DESERTEC Foundation, Germany, W300

How we can fight against hunger of money worldwide? How can we make people who rule the world understand that the huge importance of nature? Again thank you very much for your kind work, for me is highly worthy. It's really important to have spaces like this for thinking and planning another world. Thank you again.

Fabian, Member, SEJ and REMPA, Mexico, W324

All life forms are being weakened/parasitized/changed by exposures to chemicals that in turn affect immunity and make them also vulnerable to infections.

F, Canada, W325

Only GOD can HELP US!!!!

M, Montenegro, W331

Comments from Japan

[Population Problems]

It has been long said that the global environment would not have the capacity to clothes, feed, and house in a stable or sufficient manner, once the world population reached 10 billion people. However, human beings have not been able to move forward beyond the abstract idea of "economic activities that preserve the environment," which I think is a problem. I think we have arrived at an era in which we must assume that population growth cannot be suppressed, and instead develop tangible proposals on how to respond when the world population does surpass 10 billion.

Hitoshi Fujita, Professor and Director, Department of Environmental Science Research, Aomori University Graduate School, W026

[Scientific Technology]

There has not been an explanation presented in a convincing manner outlining the types of effects economic activity will have on the global environment if continued in the current fashion, and further, what the subsequent effects of those changes will be on the survival of mankind. Because of this, many citizens do not understand how pressing it is to implement environmental strategies. We must enhance scientific knowledge about global warming, and the problems of food supply that will arise as a result.

Kakutaro Kitashiro, Advisor, IBM Japan, W104

The nuclear accident is an indication that there exists a domain of scientific technology that mankind, who are creatures that commit errors without fail, should not get involved with lightly. I fear that genetic engineering is also one of those items.

Isahiko Fujiwara, W153

[20 Years After the Rio Summit]

It has been 20 years since the Rio Summit, a conference on the environment and development. It has also been 15 years since COP3 was held in Kyoto. I feel that the passion with which people thought about the environment, and the commitment with which countries and regions joined hands to improve the environment have diminished greatly. Nonetheless, environmental changes are silently moving forward. The globalization of the economy has thinned differences between countries. However, at the same time, I feel that the awe and fear that countries expressed towards the environment has also become diluted. I would like for us to have once again, "to stop time for discussion, and think through history that reflects a unity of thought," as we did at the Kyoto Conference.

Michiyoshi Furuichi, Office of the President, Japan Atomic Power Company, 094

My impression of watching the 20 years since the Rio Summit is that children gain an understanding of the global environment much faster than adults. I hold hope for the future generation.

Ken Takeuchi, President, Japan Internet News Co., W135

The reality is that global economic problems are given the utmost priority, with the solution of environmental and societal problems placed on the back burner. I hope that countries will be required to adhere to the categories that were adopted at the Rio +20 Conference. That obligation should come with enforcement in order for the survival of mankind to be given the utmost priority, and with those enforcement capabilities, people's way of thinking will be fundamentally transformed. I understand I am speaking of a dream that cannot come true, but I believe that we have come to a place where the world will not change without a significant transformation.

Shigeru Saito, Office of Corporate Social Responsibility, Citizen Holdings Co., W241

[Global Warming]

It is unfortunate and distressing that China and the United States, the major emitters of greenhouse gases, do not step forward to participate in a global framework to suppress emissions.

[United Nations, Construction of an International Framework]

There needs to be the building of a new framework for the solution of environmental problems (e.g., COP, Conference of Parties based on the United Nations framework to develop global warming strategies) that departs from the formula of the United Nations (General Assembly) where all countries are equal. Otherwise, environmental problems cannot be dealt with due to the conflicting interests of different countries and the excessive amount of time necessary for the decision-making process. A new institution that can pursue the benefit of the Earth needs to be established.

Tsutomu Yamaguchi, Director, Initiative for Development of Entrepreneurship in Asia, 006

An important aspect of global environmental problems is the limitless bloating of human activity. I can't imagine that there is too much time left. It seems that we have arrived at a period when we must rethink what wealth means at a national scale, and instead of pursuing traditional strategies based on addition and subtraction, we should change the starting point, or hold discussions at a global scale keeping in mind the birth of a new civilization.

Hideki Ishida, Professor, Graduate School of Environmental Studies, Tohoku University, W208

If environmental problems become even more serious, it is expected that there will be more frequent conflicts around the world and that their scale would become larger. Are we now not at a point where we should recognize environmental problems as the most important problem at the United Nations? The 21st Century is the century of environmental revolution, and the survival of humankind depends on this.

Koji Tanto, Visiting Professor, University Education Center, Fukuyama University, W229

[Environmental Education and Public Relations Efforts]

The principal cause of problems is human desire. If we are to curb it even by a little bit, it will likely happen through education.

M, 029

Particularly in recent years, I feel first hand that abnormal weather patterns and natural disasters are becoming frequent. I think that these incidences are deeply related to environmental problems, and that from time to time, should be much more widely publicized and taken up as problems.

Tsutomu Mizutani, 076

It's necessary to raise the awareness of each individual for the environment. If individual awareness is heightened, and the awareness of multitudes of people (at a global scale) begin to take into consideration the environment, they can then move governments and countries, and economic activity will also begin to prioritize the environment over costs. For this to happen, education (especially education in schools) is important, and will require a long time.

M, W083

The tsunami and the nuclear accident on March 11th forced us to re-acknowledge that our lives exist within the natural environment. Nonetheless, it has not lead to tangible action, like rethinking our lifestyles including energy conservation. This is because information about global scale problems like climate change and food shortage, as well as more intimate problems like those of waste disposal and pollution produced by our lifestyles, has not been sufficiently communicated, and as a result, many people do not recognize their importance. We need politicians, experts, and media that can calmly yet seriously communicate the reality of the situation, instead of in ways that stoke people's fears.

Hajime Oshitani, Professor, Faculty of Environmental Systems, Rakuno Gakuen University, W122

1. It is important to identify those among the younger generation, who are living in the environment of the next generation, the personnel who can be expected to wield influence in the future and aggressively give them an opportunity to learn about the realities abroad. (It is essential for them to see for themselves the terrible environmental degradation.)
2. We should invite young people and responsible personnel from rapidly growing countries where environmental destruction is particularly pronounced, to countries where strategies are advanced, so that they can thoroughly learn about advanced technologies, responses, and legal regulations (the responsibility of developed polluting countries).

Shigeo Yasuda, Executive Director, Earthwatch Japan, W218

[Economic Systems]

Ever since the Great East Japan Earthquake and the nuclear accident at the Fukushima Dai-ichi Plant, I think that the situation surrounding environmental problems have become even more complex and serious. The most serious element is that many citizens have not necessarily expressed their active support for proposals that face the situation by incorporating a review of the global economy itself. It seems as though there is a certain type of resistance or resignation towards the review of nuclear

power generation and the global economy (as well as growth strategies) that has promoted nuclear policies, despite heightened support for “post-nuclear” and a shift to renewable energies. I cannot imagine that there is sufficient understanding of the message that the political economy and environmental problems are deeply related.

*Yukihiko Asaoka, Professor, Institute of Agriculture,
Tokyo University of Agriculture and Technology, W106*

[Problems with and the Role of Mass Media]

Interest towards climate change problems has diminished due to the nuclear accident. The media who are calling for an end to nuclear power do not appear to be seriously thinking through climate change problems, energy security, and the effects on the economy. Instead, they only seem to be talking about the dreams of renewable energies. This is lending a hand to the removal of climate change problems from people’s awareness. I am disillusioned by certain portions of the media who loudly speak of “opposition to restarts of nuclear power plants,” and “post-nuclear energy” without a comprehensive commentary that includes the perspective outlined above.

M, W040

Propaganda to formulate public opinion on nuclear power generation continued for many years. And the fact that the major media outlets rode that wave seems to have had a large influence on the formation of the public will. The media must take time to reflect and learn from this history.

Yu Yamada, Editorial Department, Japan Agricultural News, W043

Although environmental problems seem like a topic that anyone can discuss, there are aspects that are not accurately understood. In particular, information out of the mass media is produced so that they can be received favorably by a mass public. In reality, there are conditions that are difficult for ordinary citizens to understand, and thus, it is necessary to nurture talent that can serve in the role of an interpreter for those subjects. Additionally, there are incidents like the data fabrication about global warming at the IPCC, which have not been communicated accurately by the media.

*Kazuki Matsumura, Professor, Division of Environmental Sciences,
Graduate School of Life and Environmental Sciences, Kyoto Prefectural University, W073*

I think that the fact that environmental problems will have a significant effect on the people of the next generation is something that everyone, on some level, have come to realize. But in our country, where it is possible to live a stable life, I feel very fearful that there is too little will on the political stage or in the reporting stance of the mass media to motivate people to act for the future of the environment.

*Shuichi Takanashi, Advisor, Division of Environmental Activity Support,
Chiba Prefectural Environment Foundation, W226*

[Energy]

Nuclear Power Generation

Until now, we worried about militarization and the associated industrial growth, which resulted in environmental destruction. But from now on, starting in particular with the large accident in Japan, nuclear power around the world may pose the biggest danger.

Makoto Kobayashi, 031

The tragedy of the Fukushima nuclear power plant has resulted in the simplistic and emotional “anti-nuclear” movement to take over, which describes today’s atmosphere. I sense an environment in which properly thought-through expressions of how Japan will live its future are looked upon as if they were uttered by a witch. Today’s Japan, a country in which politicians have turned into a mob of opportunists, is in an extremely dangerous situation not only from the standpoint of the national finances but also for the environment surrounding nuclear power as well as from the perspective of the survival of the nation.

M, W050

People do not have as much knowledge about the effects of radiation, the product of atomic fission, as they do about other harmful substances. In particular, the ignorance of the people involved with government, and their stances in pushing nuclear power into the national policy is pitiable. It is meaningless to debate the pros and cons of nuclear power generation in this state. What I think we should do instead is to devote our efforts to communicating the most accurate information possible to the people of the world.

Keiichi Kohyama, Director, Refriends, 053

It is clear that the accident at the Fukushima Nuclear Power Plant will continue to bring demerits to us and our children and grandchildren. I feel that the government and Tokyo Electric Power Company should make public what that timeframe, scope, and financial costs are, and to discuss what sacrifices are necessary. It is difficult to understand how they even think about

restarts of nuclear plants given the circumstances.

M, W184

At my university, I work on providing explanations of environmental problems (the ones that the United Nations has incorporated into treaties). And when I think about the realities of Chernobyl, and the expansion of the effects of the Fukushima nuclear accident (from the incidences of leukemia in children to ocean contamination, damages to agriculture including those in neighboring regions, and suicides), I cannot help but say that there is no environmental pollution problem that surpasses this one (I feel an emptiness when I am lecturing about other environmental problems). My stance is this: given the realities of neighboring countries, Japan cannot cease the education and training of researchers studying nuclear power generation (risk researchers). But when it comes to power generation, we must limit the existing plants to maintenance, to take place only under very strict safety management, and forego all construction of new plants. By making public a correct cost calculation that incorporates past governmental subsidies related to nuclear-power, Tokyo Electric Power Company's marketing costs and compensation costs for the accident, it will become apparent that new construction of nuclear-power plants do not make economic sense. We must also outlaw regional monopolies of power generation and distribution.

Tadakatsu Okubo, Professor and Vice President, Utsunomiya Kyowa University, W254

Future Energy Policy

Environmental problems have become more serious with the expansion of human activity. Energy is an important element supporting human activity. However, as it has a significant impact on the environment, the form in which we secure energy is one of the most important issues for us mankind. It is necessary to view energy problems with a long-term perspective, to create a road map so that we are able to procure a large portion of our energy from solar origin in 100 years, and to take action now. Further, although we will need to depend for some time on fossil fuels and nuclear-power, we need to have the gumption to discontinue nuclear power generation within 50 years. Our wisdom, human wisdom, will be tested in the next half-century.

Keiichi Uchida, W120

All citizens must alter their lifestyle, based on being in a "state of emergency" when it comes to environmental problems, halt the thinking of "business as usual," and instead build our life on the thinking, "knowing when is enough" and "everything is good in moderation." In particular, with nuclear power generation, we must act towards an immediate cessation. In the case of Japan, we must shift immediately towards geothermal power and solar power. We need bold decisions in government towards this end.

Katsuhide Kitatani, Chairman, NPO 2050, W236

[Responses to Environmental Problems]

I fear that societal interest towards environmental problems is diminishing. The earthquake and the nuclear accident are indeed pointing out human arrogance towards nature and scientific technology. We should accept this as a warning, and use this as an opportunity to contribute aggressively towards building a sustainable society, bringing to life the wisdom of Japanese people and the national character of taking care of the next generation.

*Konoe Fujimura, Joint Representative,
Japan Association of Environment and Society for the 21st Century, W060*

Environmental problems and human economic activity are two sides of the same coin. In other words, to stop environmental problems, we need to first stop economic activity in its current form. The alternative system to follow will need to be built with a structure that operates without being dependent on "currency." The key is a transformation in our values about what constitutes happiness. On the island of Tuvalu, in the South Pacific, where we do work, life is both materially and financially inadequate. But around 98% of the islanders say that they are happy with their lives. As long as they are able to eat, they can sleep in safety, and their families are healthy, they are happy enough. I think that we need to start over, by first gaining the "basics of happiness."

Shuichi Endo, Representative, Tuvalu Overview, W096

Many environmental problems are made difficult to solve because "although the involvement of each individual is negligible, all people are involved, and as a result it becomes a phenomenon of massive consumption." In other words, even if we know that the future of the environment is in an extremely precarious situation, 1. The effect of my own actions alone is negligible, and even if I somewhat change my actions, it doesn't have much of an effect; 2. In a situation where others, who seem to have a much worse impact, is not responding appropriate, there is no reason for me to lead the efforts to change; 3. Economic wealth and comfort is difficult to do away with; 4. Some solution will come about through technological development. Due to reasons like these, I believe people do not proactively take initiative. In order to overcome such circumstances (the prisoner's dilemma), the leaders of the world need to unify their values concerning the environment and exhibit leadership qualities to the people on this Earth.

Satoshi Fujioka, Senior Staff, Research Institute of Environment,

At the simplest level, the global environment consists of four elements: the atmosphere, water, soil, and biodiversity. These constitute the basis for survival for mankind and all living creatures. And environmental destruction is to destroy our very own basis for survival under the banner of improving the quality of life and of economic growth. In other words, it can be said that we're strangling ourselves, flinging stones at ourselves. Moreover, that effect is passed from the current generation, who is the culprit of environmental destruction, down the axis of time to the next generation. In other words, the problem is not self-contained within the current generation, and instead, the next generation is forced to pay the price. For example, carbon dioxide, a greenhouse gas emitted is said to remain in the atmosphere for several hundred years. Additionally, plutonium, a radioactive material extracted from spent fuel in nuclear power generation to be reused as fuel, has a half life of 24,000 years, and in Japan, its final disposal location hasn't even been determined (it remains mostly undetermined throughout the world). And, there is no one who can answer the simple question of who will be responsible for managing this radioactive material, which will remain poisonous for mankind far into the future. We adults are doing things that we couldn't answer if a child asked about them. Of course, everyone in the world, including me, thinks that they want a rich life. That is a natural thing. However, if those desires expand limitlessly, I fear that the Earth will reach a point of no return in the not very distant future. Perhaps environmental destruction has already advanced to the point where it is no longer reparable. The fact that we can anticipate these dangers may indicate that it is indeed too late. Although it may not be possible for developing countries that have not enjoyed economic fruits, developed countries, who have enjoyed ample benefits must be the ones to lead the world and take the helm to leave this "beautiful Earth" to the future. That, I think, is the wisdom of mankind and our responsibility to the future.

M, former environmental reporter at a national newspaper, W182

The idea of the ecological footprint is one that should be recognized widely as a tool to identify problems that we share. We as mankind would not be able to find a resolution to problems like greenhouse gases, water, rare metals, forest preservation, and the food supply as long as we treat them as single issues. That's because there's necessarily a burden to be paid somewhere.

M, W227

I think that each of us needs to recognize that the reality at the Fukushima Dai-ichi Nuclear Power Plant has provided mankind with the minimum lesson about our possibility for survival. Perhaps the ultimate task is the creation of a framework in which human economic activity at a global scale, production, in other words, resource development, and environmental pollution can be controlled comprehensively. But it may be that a universal way of thinking that prevails over the boundaries of nation states will take longer to be born, until the time on the Doomsday Clock advances further.

Shigeo Onda, Deputy Director of Sales, Tonichi Printing Co., W228

[Others]

The depletion of marine life and ocean resources is an extremely crucial problem. Currently, production levels are rapidly increasing due to farm-raising, but its certain collapse can be expected in the near future. This is not just limited to marine life. Only when there is a healthy primary sector of industry, can much of the environment be maintained in a healthy state. I would hope that both developing and developed countries would think about the revitalization of the primary sector, and not as an agri-business.

Tadahisa Oume, Professor, Faculty of Marine Bio Science, Fukui Prefectural University, W007

No matter what the field may be, there is a limit to scientists being able to speak to people outside of their discipline about their research in a way that is easily understandable. What we need are properly trained "science communicators," and research institutions and universities should have people on staff in such roles. And they should provide proper and easily understandable explanations to people who are debating on the basis of their emotions without a firm understanding of the facts.

*Michio Kishi, Professor, Faculty of Fisheries Sciences,
Graduate School of Fisheries Sciences, Hokkaido University, W015*

Ever since the Great East Japan Earthquake, the problem of radioactive contamination aside, interest towards environmental problems like the advancement of global warming, the destruction of biodiversity, and the depletion of water resources has been diminishing among politicians, government, citizens, and the mass media. We must acknowledge the growing seriousness of these problems, and Japan should aggressively tackle them, taking a leadership position to appeal to the world about them.

Shigeru Sumitani, President, Global Environmental Forum, 018

Partial optimization of specific organizations has prevented the solution of many different problems as well as promoted the unnecessary creation of organizations, a phenomenon not just limited to environmental problems. When it comes to problems like climate change, people rushed to build a robust system that didn't allow for differing opinions on the subject, which I feel has led to the stagnation of international negotiations. Corporations are able to transform themselves by using the important

measurement of profit as a basis. However, because self-preservation of the organization becomes an objective in and of itself in governments and in international organizations, these entities diverge from the needs of the society. In Japan, despite the nuclear accident, there hasn't been a proper discussion of who will take what kind of responsibility and what the response will consist of when a similar accident occurs again. Instead, it is regrettable that an obscene amount of energy has been spent on the prolongation of existing organizations. I feel as if we have missed the opportunity for societal transformation.

M, W067

I am saddened by my colleagues who only think about issues in the extremely short term and use the words long-term to explain about the year 2050.

M, 070

What I am currently most concerned about when it comes to environmental problems is the problem of genetic modification. As there is a high probability that it will significantly harm biodiversity, I think that its production and use for profit-making purposes should be prohibited.

Kaoru Otsu, Lecturer, Environmental Preservation Center, Yamagata University, 102

It is truly difficult to suppress human desire. Still, there is no question that we need to transform our thinking from our current material civilization to one in which we suppress our desires to some degree. A system of governance that limits the use of products and energy is undeniably needed.

Kiyoshi Koike, President, Kix, W197

I think we have arrived at an era in which we should not depend only on gigantic systems. In addition, this era requires that experts not stay only within their field of expertise but become true experts with the ability to think critically towards their own discipline through a long-term and global perspective. In companies where young people will find employment in the future, corporations must think with a broad, global and long-term perspective and have a strong awareness toward the sustainability of interrelated living creatures instead of keeping their focus on the management of the company and the pursuit of profits (I am convinced that this will be important in any field and in education as well).

Koichi Kitano, Professor Emeritus, Toyama University of International Studies, W239

V. 2012 Data by Region

1. AWARENESS OF THE CRISIS FACING HUMAN SURVIVAL—ENVIRONMENTAL DOOMSDAY CLOCK

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 chart 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.

Rank 1 Category

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
1. Climate Change	42	47	52	39	39	56	33	31	45	35	15	56	40	48	34	29	28	59	54	32
2. Biodiversity	5	2	4	9	5	8	4	19	6	0	23	0	7	4	6	12	5	8	8	0
3. Land Use	4	3	2	6	6	4	6	5	9	0	0	11	5	3	6	2	6	2	8	0
4. Pollution/Contamination	12	8	3	3	22	10	26	10	3	0	12	0	14	7	22	6	30	8	14	16
5. Water Resources	7	7	6	10	7	6	7	17	3	0	15	22	8	7	8	12	6	8	3	26
6. Population	9	13	12	14	4	2	5	0	6	29	4	0	7	12	4	12	5	0	3	0
7. Food	2	4	1	1	2	1	2	5	0	0	8	0	2	3	2	4	2	0	3	0
8. Lifestyles	4	3	4	4	3	3	3	5	3	18	4	11	4	4	3	10	3	6	0	5
9. Global Warming Measures	2	3	5	2	1	1	0	2	9	0	0	0	2	3	1	0	0	0	3	0
10. Environment and Economy	4	4	3	6	4	4	3	0	3	6	4	0	4	4	3	4	3	6	3	11
11. Environment and Society	1	1	2	2	1	0	1	2	0	0	0	0	1	1	1	0	2	0	0	0
12. Other	1	2	1	3	1	2	0	0	3	0	4	0	1	2	0	2	0	4	0	0
No Response	5	2	6	2	7	1	9	5	9	12	12	0	6	3	9	10	11	0	3	11
Number of Responses	[1039]	[348]	[99]	[117]	[357]	[88]	[269]	[40]	[30]	[15]	[23]	[9]	[691]	[652]	[339]	[47]	[211]	[51]	[36]	[17]
Time for Rank 1 Category	9:50	9:41	10:12	10:19	9:34	9:41	9:32	10:15	10:35	10:47	9:44	10:13	9:55	9:52	9:42	10:09	9:28	9:46	9:34	9:40

- Climate Change.....Atmospheric concentration of CO₂; global warming; ocean acidification; climatic aberrations (droughts, torrential rains and flooding, severe storms, heavy snow, abnormal temperatures, drying of rivers and lakes, desertification, etc.)
- Biodiversity.....Acceleration of species extinction; effects of contamination, climate change, land use
- 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
- Pollution/Contamination.....River and ocean pollution: eutrophication caused by excessive nitrogen and phosphorus and contamination by chemical substances; atmospheric pollution: particulates suspended in the atmosphere, soot and chemical substances
- Water Resources.....Diminution of usable fresh water resources (depletion, contamination)
- Population.....Population growth beyond what the Earth can support; aging of the population
- Food.....Diminution of food supply from land and oceans
- Lifestyles.....Transformation of lifestyles away from excessive consumption of resources like energy
- Global Warming Measures.....Progress of measures for mitigation and adaptation
- Environment and Economy ... Progress towards an economic system to reflect environmental costs, e.g., social costs: taxes for fossil fuels that emit CO₂, which cause global warming-related damages; TEEB (The Economics of Ecosystems and Biodiversity), etc. An environmentally conscious economy: realization of green economy, sustainable economic development, etc
- Environment and Society.....Environmental awareness at the individual and societal levels, progress of environmental education; poverty; the status of women

Rank 2 Category

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
1. Climate Change	12	10	11	16	14	11	15	10	15	12	4	0	13	12	15	6	15	12	8	32
2. Biodiversity	11	12	14	17	8	12	7	17	9	6	4	11	11	13	8	6	5	16	8	5
3. Land Use	8	5	6	9	9	6	10	7	15	12	31	0	9	6	10	19	11	4	8	11
4. Pollution/Contamination	14	11	9	8	23	18	24	0	6	6	8	33	16	11	20	12	28	12	27	11
5. Water Resources	17	12	23	14	18	15	19	21	15	18	23	22	19	15	19	21	18	12	19	11
6. Population	9	15	15	4	3	6	3	12	3	18	0	22	6	12	4	10	3	2	11	5
7. Food	7	11	2	7	3	7	2	7	12	0	8	11	4	9	3	6	1	12	0	0
8. Lifestyles	5	6	4	5	5	10	3	0	6	0	4	0	4	6	3	2	3	16	3	0
9. Global Warming Measures	4	5	3	4	3	3	3	2	3	0	0	0	3	4	3	0	2	4	3	11
10. Environment and Economy	5	5	4	8	4	8	3	12	0	12	8	0	5	6	3	8	3	6	11	0
11. Environment and Society	3	2	1	6	2	3	2	7	3	6	0	0	3	3	2	2	1	6	0	5
12. Other	0	1	2	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0
No Response	5	3	7	2	8	1	10	5	9	12	12	0	7	3	9	10	11	0	3	11
Number of Responses	[1037]	[348]	[98]	[117]	[356]	[88]	[268]	[40]	[30]	[15]	[23]	[9]	[689]	[651]	[338]	[47]	[211]	[51]	[36]	[17]
Time for Rank 2 Category	9:08	8:57	9:48	9:44	8:46	9:06	8:40	9:57	9:30	9:35	8:57	9:27	9:13	9:14	8:54	9:15	8:30	9:23	8:38	9:00

Rank 3 Category

Unit: %

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
1. Climate Change	9	8	9	9	10	9	10	17	12	0	12	11	10	8	11	8	11	10	8	5
2. Biodiversity	9	9	15	10	6	4	7	12	9	29	12	11	9	10	8	17	7	6	0	16
3. Land Use	10	9	10	5	12	9	13	12	6	12	15	11	10	9	12	13	12	4	16	11
4. Pollution/Contamination	8	7	9	10	8	3	9	2	6	24	15	22	9	7	8	19	9	4	3	5
5. Water Resources	13	13	14	16	13	13	13	10	18	6	4	11	13	14	13	6	13	14	14	5
6. Population	10	13	10	11	9	10	8	14	0	0	4	0	9	12	8	2	8	10	11	11
7. Food	7	11	5	7	3	4	3	7	15	12	4	0	5	9	5	6	2	6	3	11
8. Lifestyles	8	5	1	9	13	18	11	7	3	6	4	22	9	7	10	8	12	22	14	21
9. Global Warming Measures	3	5	0	3	4	7	4	0	0	0	0	0	3	4	3	0	4	2	14	0
10. Environment and Economy	9	10	12	13	6	11	4	2	12	0	12	0	8	11	5	6	5	8	16	0
11. Environment and Society	6	6	5	3	8	9	7	10	9	0	4	11	6	6	8	4	7	16	0	5
12. Other	1	1	2	1	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0
No Response	6	3	8	3	8	1	10	5	9	12	15	0	7	3	9	12	11	0	3	11
Number of Responses	[1033]	[347]	[97]	[116]	[356]	[88]	[268]	[40]	[30]	[15]	[22]	[9]	[686]	[648]	[338]	[46]	[211]	[51]	[36]	[17]
Time for Rank 3 Category	8:37	8:31	9:17	9:13	8:09	8:41	7:59	9:24	9:36	9:50	8:13	8:29	8:41	8:47	8:18	8:48	7:40	9:13	7:52	8:10

2. IMPEDIMENTS TO ADDRESSING ENVIRONMENTAL PROBLEMS

We are surveying the reasons why solutions and responses to address environmental problems have shown little signs of progress. What do you think are the impediments to addressing environmental problems? Please circle three items from the list below that you think represent the most significant impediments.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1093]	[357]	[104]	[118]	[387]	[89]	[298]	[41]	[33]	[17]	[26]	[9]	[736]	[668]	[372]	[52]	[237]	[51]	[37]	[19]
1. Problems in communicating information	24	24	36	19	19	26	17	34	36	35	23	33	24	25	20	29	14	16	41	21
2. Pursuit of economic profit	82	88	71	74	85	89	84	76	73	65	69	56	79	83	82	65	90	96	78	63
3. Global economic system	61	64	61	74	56	74	51	63	39	76	69	44	60	67	51	67	53	76	70	37
4. Problems in decision-making systems	48	47	51	47	46	48	46	51	58	47	62	56	48	48	47	56	41	49	46	74
5. Governance problems	47	40	50	58	48	40	50	51	64	41	46	78	51	45	51	50	45	47	32	68
6. Lack of technical resources	21	25	4	5	30	20	33	7	18	6	4	33	19	18	29	10	37	16	27	16
7. Other	6	6	9	11	3	2	4	10	3	12	4	0	6	7	4	6	3	0	5	5
Unknown	2	0	6	4	1	0	1	2	3	6	8	0	3	2	2	6	0	0	0	5

2-1. There are problems in communicating information, thus the conditions of the global environment remain poorly understood.
(Continued from Question 2)

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit:%

Number of responses		Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
		[261]	[87]	[37]	[23]	[73]	[23]	[50]	[14]	[12]	[6]	[6]	[3]	[174]	[170]	[76]	[15]	[34]	[8]	[15]	[4]
1. Information is insufficiently communicated from environmental experts to political decision makers involved in the development of policy.	A	5	1	5	4	3	0	4	0	25	33	17	0	6	2	7	20	6	0	0	0
	B	16	13	22	13	19	17	20	21	0	17	17	0	17	15	17	13	26	13	20	0
	C	11	15	11	4	12	13	12	0	0	0	0	33	9	12	8	7	18	0	20	0
	D	41	51	38	57	37	48	32	29	0	17	17	67	36	48	26	27	29	63	40	0
	E	26	20	24	22	26	22	28	43	67	33	33	0	29	21	37	27	18	25	20	75
	No response	2	1	0	0	3	0	4	7	8	0	17	0	3	1	5	7	3	0	0	25
2. Easily comprehensible information not successfully communicated from environmental experts to the public	A	4	1	11	9	3	0	4	0	8	17	0	0	6	4	4	7	6	0	0	0
	B	8	7	8	13	7	13	4	7	8	17	0	33	9	9	5	13	3	25	7	0
	C	7	8	3	4	10	13	8	0	0	0	17	0	6	7	5	7	9	13	13	0
	D	45	53	57	39	41	57	34	43	17	33	17	33	41	52	33	27	38	63	53	25
	E	34	30	22	35	37	17	46	43	58	33	50	33	36	27	47	40	41	0	27	50
	No response	2	1	0	0	3	0	4	7	8	0	17	0	3	1	5	7	3	0	0	25
3. Discrepancies in acknowledging environmental problems among environmental experts weakens ability of information to appeal to public.	A	5	2	11	13	4	4	4	0	8	17	0	0	7	6	4	7	6	0	7	0
	B	13	6	30	22	10	9	10	7	25	17	0	0	16	14	12	7	9	13	7	25
	C	21	20	8	9	32	48	24	14	25	33	17	33	21	19	22	27	29	50	47	0
	D	41	51	41	39	34	26	38	43	25	0	50	67	36	44	37	33	32	25	27	25
	E	18	21	11	17	18	13	20	29	8	33	17	0	17	17	20	20	21	13	13	25
	No response	2	1	0	0	3	0	4	7	8	0	17	0	3	1	5	7	3	0	0	25
4. Environmental experts focus communication of information too heavily upon political decision makers, failing to reach the public	A	5	2	11	4	5	4	6	0	8	0	0	0	6	5	5	0	6	0	7	25
	B	20	21	22	17	22	26	20	14	17	17	17	33	20	21	18	20	21	38	20	0
	C	28	36	27	22	29	30	28	14	8	33	0	33	24	31	22	20	32	50	20	0
	D	31	30	27	39	27	35	24	29	33	50	50	33	31	31	26	47	24	13	47	25
	E	14	10	14	17	14	4	18	36	25	0	17	0	16	11	22	7	15	0	7	25
	No response	2	1	0	0	3	0	4	7	8	0	17	0	3	1	5	7	3	0	0	25
5. Information from environmental experts are confused by negative campaigning	A	4	1	0	9	5	9	4	0	33	0	0	0	6	3	8	0	3	0	13	25
	B	16	11	8	13	26	35	22	21	8	33	17	0	18	14	20	20	15	38	33	0
	C	23	38	3	26	15	17	14	21	25	17	17	67	16	26	17	27	18	13	20	0
	D	32	39	22	22	36	30	38	29	25	33	17	33	29	32	34	27	38	38	27	25
	E	21	9	68	30	14	9	16	21	0	17	33	0	28	25	14	20	21	13	7	25
	No response	3	1	0	0	4	0	6	7	8	0	17	0	3	1	7	7	6	0	0	25
6. Political decision makers consider environmental problems secondary, disregarding the opinions of environmental experts	A	2	1	0	0	4	0	6	0	0	17	17	0	3	1	4	13	6	0	0	0
	B	12	13	8	26	12	4	16	0	8	0	17	0	11	12	12	7	24	0	7	0
	C	13	23	5	0	14	13	14	0	0	17	0	0	7	15	9	7	18	13	13	0
	D	37	44	27	52	29	22	32	29	50	50	17	33	33	38	34	33	32	25	20	0
	E	34	18	59	22	37	61	26	71	33	17	50	67	43	34	36	40	15	63	60	75
	No response	2	1	0	0	4	0	6	0	8	0	0	0	2	1	5	0	6	0	0	25
7. Political decision makers do not communicate information from environmental experts to the public	A	2	2	3	4	1	0	2	0	0	0	17	0	2	2	1	7	0	0	0	0
	B	8	10	5	9	4	0	6	14	0	17	17	0	6	8	7	13	9	0	0	0
	C	19	28	16	17	21	22	20	0	0	17	0	0	15	23	13	7	29	13	27	0
	D	36	32	24	35	45	48	44	21	58	50	17	67	38	33	42	40	38	75	33	25
	E	33	26	51	35	25	30	22	64	33	17	50	33	36	34	32	33	18	13	40	50
	No response	2	1	0	0	4	0	6	0	8	0	0	0	2	1	5	0	6	0	0	25

Continued from Question 2

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of responses	Overall [261]	Japan [87]	U.S.A. & Canada [37]	Western Europe [23]	Asia [73]		Latin America [14]	Africa [12]	Oceania [6]	Eastern Europe & former Soviet Union [6]	Middle East [3]	Over-seas Total [174]	A Regions [170]	B Regions [76]	C Regions [15]	China [34]	South Korea [8]	Taiwan [15]	India [4]		
					Asian Four [23]	Rest of Asia [50]															
8. Political decision makers deny the very existence of environmental problems.	A	11	13	3	22	15	13	16	0	8	17	0	11	12	12	7	24	13	13	0	
	B	26	36	16	30	25	26	24	0	25	33	17	33	29	20	27	29	13	33	0	
	C	21	31	3	13	15	22	12	36	25	33	17	67	16	21	18	33	15	25	20	0
	D	12	16	51	26	27	26	28	21	25	17	67	0	32	26	26	33	21	50	13	50
	E	12	3	27	9	14	13	14	43	8	0	0	0	17	11	18	0	6	0	20	25
No response	2	1	0	0	4	0	6	0	8	0	0	0	2	1	5	0	6	0	0	25	
9. Public does not value the information provided by environmental experts unless disaster occurs in their vicinity.	A	3	2	0	0	4	0	6	0	0	33	0	3	1	4	13	3	0	0	0	
	B	11	10	19	26	8	4	10	7	0	17	0	12	14	8	7	12	13	0	0	
	C	10	13	3	9	10	13	8	14	8	33	0	9	10	9	13	9	0	20	0	
	D	47	53	51	35	47	43	48	29	25	67	50	67	44	49	41	60	47	88	20	25
	E	27	21	27	30	27	39	22	50	58	0	0	33	30	26	33	7	24	0	60	50
No response	2	1	0	0	4	0	6	0	8	0	0	0	2	1	5	0	6	0	0	25	
10. Non-profit organizations overemphasize communications efforts on political decision makers.	A	2	0	5	9	1	4	0	0	0	0	0	3	3	0	0	0	0	7	0	
	B	20	20	30	22	19	22	18	14	8	17	17	0	20	22	16	13	15	25	20	25
	C	41	59	24	35	37	30	40	14	33	50	33	33	32	44	34	40	53	38	27	0
	D	25	17	24	22	30	30	30	50	33	0	33	67	29	21	34	27	24	25	33	50
	E	9	3	16	13	8	13	6	14	17	17	17	0	12	9	9	13	3	13	13	0
No response	3	1	0	0	4	0	6	7	8	17	0	0	3	1	7	7	6	0	0	25	
11. Non-profit organizations, which exist in close proximity to the public, have not been effective and the information of environmental experts does not reach the public.	A	2	2	0	0	3	0	4	0	0	0	0	1	1	3	0	3	0	0	0	
	B	13	13	27	26	7	4	8	0	0	17	0	13	16	5	7	6	0	7	0	
	C	25	33	11	30	26	30	24	14	0	17	33	33	21	28	18	27	32	38	27	0
	D	44	39	49	39	42	48	40	43	75	67	17	67	46	42	46	47	41	50	47	25
	E	15	13	14	4	18	17	18	36	17	0	50	0	17	12	21	20	12	13	20	50
No response	2	0	0	0	4	0	6	7	8	0	0	0	3	0	7	0	6	0	0	25	
12. Certain education level is necessary for accurate understanding of environmental information, and environmental education is lacking.	A	3	5	3	4	1	0	2	0	0	0	0	2	4	1	0	0	0	0	0	
	B	7	3	8	13	11	13	10	7	0	0	0	9	7	8	0	12	13	13	0	
	C	11	8	5	13	12	17	10	21	8	33	17	0	12	9	12	20	12	38	7	0
	D	39	36	62	48	36	43	32	14	25	67	33	33	41	44	28	47	35	25	53	0
	E	39	47	22	22	37	26	42	57	58	0	50	67	34	35	47	33	35	25	27	100
No response	2	1	0	0	3	0	4	0	8	0	0	0	2	1	4	0	6	0	0	0	

2-2. For certain individuals, organizations, and corporations, the pursuit of profits is the upmost priority, making environmental problems secondary. (Continued from Question 2)

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of responses	Overall [892]	Japan [314]	U.S.A. & Canada [74]	Western Europe [87]	Asia [328]		Latin America [31]	Africa [24]	Oceania [11]	Eastern Europe & former Soviet Union [18]	Middle East [5]	Over-seas Total [578]	A Regions [554]	B Regions [304]	C Regions [34]	China [213]	South Korea [49]	Taiwan [29]	India [12]		
					Asian Four [79]	Rest of Asia [249]															
1. National interests often take precedence.	A	5	4	8	6	5	4	5	6	0	6	0	5	5	5	3	5	4	3	0	
	B	8	10	3	2	9	8	10	13	8	9	6	20	8	7	10	9	10	8	7	8
	C	7	3	8	11	7	4	8	13	4	18	22	0	9	5	9	18	8	4	3	8
	D	30	39	27	30	23	29	21	23	21	45	22	40	25	35	21	32	22	37	17	25
	E	48	43	53	51	53	56	52	39	67	27	39	40	51	47	52	35	51	47	69	50
No response	2	1	1	0	3	0	4	6	0	6	0	0	2	1	4	3	4	0	0	8	
2. Individuals tend to make decisions based on immediate profit or loss.	A	7	7	7	3	9	3	11	3	0	6	0	7	6	10	3	11	0	7	0	
	B	8	10	1	6	10	6	11	3	4	9	0	20	7	8	10	6	12	8	3	8
	C	6	11	3	7	3	4	3	3	4	9	0	0	4	8	3	3	3	6	0	8
	D	38	47	23	36	35	53	29	13	33	36	39	20	32	43	28	35	30	65	34	17
	E	39	25	66	48	40	34	42	71	58	45	50	60	48	35	46	50	40	20	55	58
No response	2	1	0	0	3	0	4	6	0	0	6	0	2	0	4	3	4	0	0	8	
3. The economic profits of a corporation, or organization, or a region are prioritized so much that environmental considerations are not taken into account.	A	9	5	7	2	16	3	20	3	0	9	6	0	11	5	16	6	22	2	3	0
	B	11	12	4	7	15	8	18	0	0	0	0	20	10	10	14	3	19	10	3	8
	C	8	14	3	2	6	11	5	0	4	0	6	0	5	10	4	3	6	16	3	0
	D	32	43	18	31	29	43	24	16	17	36	28	20	27	38	23	29	24	59	17	8
	E	39	26	68	57	32	34	31	77	75	55	56	60	46	38	39	56	26	10	72	83
No response	1	0	1	0	2	1	2	3	4	0	6	0	2	0	2	3	2	2	0	0	

2-3. The global economy, which emphasizes growth as represented by GDP figures, has destroyed the environment. (Continued from Question 2)

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit:%

Number of responses		Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
		[671]	[229]	[63]	[87]	[217]	[66]	[151]	[26]	[13]	[13]	[18]	[4]	[442]	[445]	[190]	[35]	[125]	[39]	[26]	[7]
1. Maximization of individual profits pursued at significant detriment of the global environment, and the benefit of the whole.	A	5	3	2	5	9	9	9	8	0	0	6	0	6	4	8	3	8	8	12	14
	B	4	3	8	5	4	5	3	0	0	0	6	0	4	4	3	3	2	8	0	14
	C	4	3	5	9	3	5	2	4	0	0	11	0	5	4	2	6	2	8	0	0
	D	33	41	25	26	31	48	24	19	31	46	17	0	28	37	24	26	23	59	35	14
	E	53	48	57	55	52	33	60	69	62	54	56	100	55	49	61	60	62	18	54	57
	No response	2	2	3	0	1	0	2	0	8	0	6	0	2	1	2	3	2	0	0	0
2. World economy unable to depart from GDP as a measurement; exclusive devotion to growth not directed towards sustainable/stable recycling economy.	A	4	3	6	2	5	0	7	4	0	0	6	0	5	3	6	3	6	0	0	0
	B	4	5	2	5	5	5	5	0	0	0	0	0	4	4	4	0	6	0	12	14
	C	6	11	2	1	4	6	3	0	0	0	11	0	3	7	2	6	2	10	0	0
	D	34	46	27	22	31	38	28	35	8	15	33	25	28	38	27	26	30	41	35	0
	E	50	33	60	70	53	50	54	62	85	85	44	75	59	47	57	63	52	46	54	86
	No response	2	1	3	0	3	2	3	0	8	0	6	0	2	1	3	3	4	3	0	0
3. Tragedy of the commons (propensity to inexhaustibly consume "free" things), which tend to occur with natural resources, has been tolerated.	A	5	3	6	6	7	3	9	4	0	0	0	0	6	4	8	0	10	0	8	0
	B	4	4	5	5	4	6	3	4	0	0	11	0	4	4	3	6	2	8	4	0
	C	12	16	3	8	12	9	13	8	15	8	11	0	10	11	13	9	14	8	12	29
	D	39	49	27	32	38	38	38	23	31	15	39	25	33	41	36	29	42	46	27	43
	E	38	27	56	49	35	44	32	62	46	77	33	75	44	38	37	54	28	38	50	29
	No response	2	1	3	0	3	0	4	0	8	0	6	0	2	1	4	3	5	0	0	0
4. Economic systems like The Economics of Ecosystems and Biodiversity (TEEB), reflecting societal costs, have not been pursued.	A	3	2	5	5	2	0	3	4	0	0	6	0	3	3	3	3	2	0	0	0
	B	5	4	3	8	6	3	7	4	8	8	6	0	6	4	6	6	6	0	8	0
	C	18	18	6	11	28	21	30	12	8	0	11	0	18	16	26	6	36	13	35	0
	D	37	48	30	34	33	50	25	19	23	23	22	0	31	43	24	20	26	59	35	14
	E	35	26	52	41	29	26	30	62	54	69	44	100	40	33	36	60	25	28	23	86
	No response	2	1	3	0	3	0	5	0	8	0	11	0	3	1	4	6	6	0	0	0
5. Corporations devoted to maximizing short-term profits and uninterested in long-term benefits accounting for environment in their business goals.	A	4	4	6	2	6	3	7	4	0	0	6	0	5	4	6	3	6	0	8	0
	B	9	11	5	7	9	6	11	0	8	8	0	25	7	9	9	6	10	10	0	29
	C	9	17	2	3	6	11	4	0	0	15	11	0	5	11	3	11	5	13	8	0
	D	33	43	16	26	35	44	31	15	31	23	22	25	28	36	29	23	31	49	38	29
	E	43	23	68	61	42	36	44	81	54	54	56	50	53	39	50	54	45	28	46	43
	No response	2	2	3	0	2	0	3	0	8	0	6	0	2	1	3	3	3	3	0	0

2-4. There are limits to the decision-making systems of countries, international organizations like the United Nations, societies, and individuals, in managing interests that are shared throughout the world like the environment. (Continued from Question 2)

2-4-1. Problems with national systems

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit:%

Number of responses		Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
		[523]	[167]	[53]	[55]	[179]	[43]	[136]	[21]	[19]	[8]	[16]	[5]	[356]	[318]	[176]	[29]	[98]	[25]	[17]	[14]
1. National decision-making systems are based on partial optimization prioritizing national interests; policies that optimize the whole become secondary.	A	3	2	6	4	3	0	4	14	0	0	0	0	4	3	5	0	3	0	0	7
	B	5	6	2	7	4	2	5	10	5	0	0	20	5	5	6	3	7	4	0	0
	C	7	9	2	7	8	2	10	5	5	0	13	20	7	7	9	10	10	0	6	7
	D	41	46	43	40	37	42	35	33	32	88	31	0	38	44	35	41	33	48	35	43
	E	42	35	45	42	46	53	43	33	58	13	56	60	45	41	44	45	45	48	59	36
	No response	2	2	2	0	2	0	2	5	0	0	0	0	1	2	2	0	2	0	0	7
2. National decision-making systems influenced by political, business, and organizational interests and do not reflect the will of the public, who shoulder the environment.	A	3	3	4	2	4	0	5	10	0	0	0	0	3	3	5	0	5	0	0	0
	B	6	8	8	5	3	2	4	0	0	25	0	0	4	7	3	7	4	0	6	7
	C	11	14	13	11	7	5	7	10	11	13	13	0	9	12	8	10	7	4	6	7
	D	37	44	26	38	39	47	36	14	32	13	38	20	34	41	33	28	40	60	24	7
	E	42	28	47	44	46	47	46	62	58	50	50	80	48	36	49	55	41	36	65	79
	No response	2	2	2	0	2	0	2	5	0	0	0	0	1	1	2	0	3	0	0	0
3. Changes in national policy face great resistance (inertia), and as such it tends to stay with business as usual.	A	2	2	4	4	1	2	1	5	0	0	0	0	2	3	1	0	0	0	6	7
	B	7	7	4	7	8	0	10	14	11	0	6	0	7	6	11	3	11	0	0	7
	C	14	17	0	11	16	9	18	0	11	13	25	0	12	12	15	17	18	12	6	21
	D	40	52	30	24	39	58	32	38	32	38	38	20	34	44	33	34	31	60	59	29
	E	35	19	60	55	34	30	35	43	47	50	31	80	43	34	37	45	36	28	29	29
	No response	2	2	2	0	3	0	4	0	0	0	0	0	2	2	3	0	4	0	0	7

2-4-2. Problems with the systems of international organizations like the United Nations

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India	
	[523]	[167]	[53]	[55]	[179]	[43]	[136]	[21]	[19]	[8]	[16]	[5]	[356]	[318]	[176]	[29]	[98]	[25]	[17]	[14]	
1. International organizations like the U.N. are affected by the will of countries, and do not optimize the whole.	A	2	2	6	2	1	0	1	10	5	0	0	0	2	2	2	0	0	0	7	
	B	5	7	4	9	5	0	7	0	0	0	0	0	4	6	5	0	5	0	0	7
	C	9	11	8	7	9	9	10	10	5	0	19	0	9	9	9	10	11	0	24	7
	D	35	46	28	18	30	30	30	38	47	75	25	40	30	36	33	41	29	32	29	14
	E	43	31	47	64	47	49	46	43	42	25	56	60	49	42	45	48	50	48	47	36
	No response	5	4	8	0	8	12	7	0	0	0	0	0	5	5	5	0	5	20	0	29
2. Voting system at the U.N. with its adherence to the fundamental principle of unanimous consent, makes decision-making difficult.	A	3	3	8	2	2	0	2	5	0	0	6	0	3	3	2	3	1	0	0	14
	B	7	6	4	4	11	9	12	5	0	0	6	20	8	6	10	7	15	12	6	0
	C	13	15	8	9	16	19	15	14	0	13	13	20	12	13	13	14	17	20	18	7
	D	35	38	25	22	37	35	38	33	47	50	38	0	33	33	38	34	32	24	47	43
	E	37	34	49	64	26	26	26	38	53	38	38	60	38	41	30	41	28	24	29	7
	No response	5	4	8	0	9	12	8	5	0	0	0	0	6	5	7	0	7	20	0	29
3. International organizations like the U.N. are not provided enforcement powers or other forceful methods of coordination.	A	3	2	6	4	2	0	2	14	0	0	0	0	3	3	3	0	1	0	0	7
	B	7	7	4	2	9	5	10	10	5	13	13	0	7	5	10	10	11	4	6	14
	C	12	16	9	9	13	12	13	0	5	25	13	0	11	13	11	14	15	8	18	7
	D	37	46	26	27	37	47	34	24	32	63	25	40	33	39	32	38	32	44	47	21
	E	36	25	47	58	31	26	33	48	58	0	44	60	40	35	38	34	35	24	29	21
	No response	5	4	8	0	8	12	7	5	0	0	6	0	6	5	6	3	6	20	0	29
4. Systemic and organizational reforms are needed, but have not been implemented.	A	2	2	2	4	1	0	1	10	0	0	0	0	2	2	2	0	1	0	0	0
	B	6	6	6	5	7	5	7	5	5	13	13	0	6	6	7	10	6	0	6	21
	C	22	24	23	29	18	21	17	5	32	38	19	0	21	24	17	21	18	24	18	0
	D	43	44	42	36	45	44	45	57	21	50	38	60	42	42	44	45	47	44	47	29
	E	23	20	21	25	23	19	24	19	42	0	31	40	24	21	26	24	23	12	29	21
	No response	5	4	8	0	7	12	6	5	0	0	0	0	5	5	5	0	4	20	0	29

2-4-3. Limitations to individual decision-making (societal, cultural, and behavioral scientific problems)

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit:%

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India	
	[523]	[167]	[53]	[55]	[179]	[43]	[136]	[21]	[19]	[8]	[16]	[5]	[356]	[318]	[176]	[29]	[98]	[25]	[17]	[14]	
1. Absence of reverence towards the natural environment and life forms.	A	3	2	9	0	4	2	4	0	11	0	0	4	3	5	0	4	4	0	0	
	B	13	22	13	11	8	12	7	5	21	0	0	9	17	9	0	5	8	18	14	
	C	16	23	13	16	9	14	8	10	26	25	13	0	12	19	10	14	7	12	18	0
	D	34	32	36	44	30	33	29	48	16	63	38	100	35	35	30	55	31	40	24	14
	E	27	14	25	27	39	28	43	38	26	13	50	0	34	20	40	31	46	16	41	43
	No response	6	7	4	2	9	12	8	0	0	0	0	0	5	6	6	0	7	20	0	29
2. Societal and cultural practices and bases that place importance on "common good," like environment, are lacking or fragile.	A	2	2	4	2	1	0	1	5	5	0	0	2	2	2	0	1	0	0	0	
	B	11	16	15	9	7	7	7	0	16	13	0	8	14	7	3	5	0	18	7	
	C	11	16	2	9	12	12	12	14	0	25	6	0	9	12	11	10	12	8	18	7
	D	43	44	36	47	40	53	36	52	47	38	69	40	43	45	39	55	34	64	35	36
	E	26	15	38	31	31	16	36	24	32	25	25	60	32	22	34	31	41	8	29	21
	No response	6	7	6	2	9	12	8	5	0	0	0	0	6	6	7	0	7	20	0	29
3. Societal practices and traditions that value the weak, including environment, are few and far between.	A	3	4	8	0	1	0	1	5	0	13	6	0	3	3	2	7	1	0	0	
	B	16	25	13	11	12	23	9	10	32	13	0	0	12	20	11	3	7	20	29	7
	C	21	28	21	20	14	14	14	24	16	13	31	20	17	23	15	24	13	20	6	14
	D	37	32	34	47	40	42	40	48	16	50	31	80	40	36	38	45	37	40	47	36
	E	16	5	21	18	23	9	27	10	37	13	25	0	21	11	26	17	34	0	18	14
	No response	7	7	4	4	9	12	9	5	0	0	6	0	6	6	7	3	8	20	0	29
4. At most, people have capacity to recognize environmental conditions and effects on local level, but are incapable of recognizing problems globally.	A	4	6	8	7	2	2	1	0	0	0	6	0	3	6	1	3	0	0	6	7
	B	21	30	17	15	15	30	10	10	16	38	38	20	16	25	10	34	10	32	24	14
	C	16	19	17	13	16	14	16	19	11	0	6	20	15	17	16	7	17	8	24	7
	D	35	29	36	38	39	26	43	38	42	50	38	20	38	31	42	38	48	24	29	14
	E	18	10	19	25	20	16	21	29	32	13	13	40	22	15	23	17	16	16	18	29
	No response	6	7	4	2	9	12	9	5	0	0	0	0	6	6	7	0	8	20	0	29
5. Human decision-making process is based on self-preservation; it does not consider happiness of others or of future generations.	A	5	5	11	5	3	2	4	5	5	13	0	0	5	6	4	3	3	0	6	7
	B	18	25	23	13	14	21	12	19	16	38	6	0	15	22	13	14	13	20	24	7
	C	19	24	15	13	17	9	19	14	11	38	19	20	16	19	18	24	16	8	6	21
	D	38	34	36	45	41	42	41	33	26	13	44	60	40	37	39	38	44	44	41	29
	E	14	6	11	22	16	14	16	24	42	0	31	20	18	11	20	21	16	8	24	7
	No response	6	7	4	2	9	12	8	5	0	0	0	0	6	6	7	0	7	20	0	29
6. Human nature to care for others is overwhelmed by behavioral principles based on economic considerations.	A	3	1	4	0	4	2	5	10	0	0	0	0	3	2	5	0	4	4	0	0
	B	9	13	11	7	8	12	7	10	5	0	6	0	8	11	7	3	6	8	12	14
	C	15	22	15	11	11	12	10	5	11	0	19	0	11	18	10	10	10	12	12	7
	D	44	45	38	47	44	37	46	29	42	100	38	60	44	43	44	59	53	44	29	14
	E	23	13	28	33	23	26	23	43	42	0	38	40	28	21	27	28	18	12	47	36
	No response	6	6	4	2	9	12	9	5	0	0	0	0	6	6	7	0	8	20	0	29
7. Value systems that respect one's own environment and daily economic activity are inconsistent with each other.	A	2	2	8	0	2	0	2	5	0	0	0	0	2	3	2	0	1	0	0	7
	B	10	16	2	11	7	9	6	10	5	0	19	0	7	12	6	10	7	4	18	0
	C	17	25	4	9	17	14	18	0	21	25	25	0	13	17	16	21	20	20	6	7
	D	42	39	47	31	46	56	43	43	37	50	38	60	43	41	43	45	44	52	59	21
	E	23	11	36	47	18	9	21	38	37	25	19	40	28	21	25	24	18	4	18	36
	No response	6	7	4	2	10	12	10	5	0	0	0	0	6	6	8	0	9	20	0	29
8. Current lifestyles based on large consumption of energy cannot be abandoned.	A	9	2	21	13	8	5	10	29	11	25	19	0	13	7	12	17	6	8	0	7
	B	17	14	19	29	16	9	18	10	26	38	6	0	18	17	18	14	16	12	6	21
	C	12	17	17	9	8	5	9	0	11	25	13	0	10	14	8	14	10	4	6	14
	D	34	44	17	29	28	40	25	43	32	13	50	60	29	36	28	41	28	40	35	21
	E	22	17	23	18	31	30	31	14	21	0	13	40	25	20	28	14	33	16	53	7
	No response	6	7	4	2	9	12	8	5	0	0	0	0	6	6	7	0	7	20	0	29

2-5. Governance; whether or not governance is a cause of delays in addressing global environmental problems in the post-Rio Summit era. (Continued from Question 2)

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of responses	Overall [516]	Japan	U.S.A. & Canada	Western Europe	Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India			
		[143]	[52]	[68]	[185]	Asian Four [36]	Rest of Asia [149]	[21]	[21]	[7]	[12]	[7]	[373]	[299]	[191]	[26]	[106]	[24]	[12]	[13]	
1. Political system lacks in transparency and accountability, leaving citizens and experts without visibility into it.	A	3	1	4	3	2	0	3	0	5	14	8	0	3	2	3	8	2	0	0	0
	B	11	13	12	13	9	17	7	10	0	0	8	29	10	13	7	12	8	13	25	8
	C	12	11	12	19	8	11	7	14	14	57	8	14	12	13	8	23	9	4	25	0
	D	39	54	42	34	36	42	35	19	10	14	17	29	33	46	30	19	37	50	25	23
	E	36	21	29	31	44	31	48	57	71	14	50	29	41	26	51	35	43	33	25	69
	No response	1	0	2	0	1	0	1	0	0	0	8	0	1	0	1	4	1	0	0	0
2. Decision-making requires time and political system cannot address environmental problems needing a speedy response.	A	4	3	2	1	4	3	5	10	0	0	17	14	4	2	5	12	4	4	0	15
	B	15	8	21	19	18	25	17	14	14	14	8	0	18	15	16	8	17	25	25	8
	C	17	14	8	21	23	11	26	0	0	29	25	0	18	14	20	19	31	4	25	23
	D	34	41	40	25	32	53	28	24	43	14	25	43	32	39	29	27	27	58	42	23
	E	29	34	25	34	21	8	23	52	43	43	17	43	27	29	29	31	19	8	8	31
	No response	1	0	4	0	1	0	1	0	0	0	8	0	1	1	1	4	2	0	0	0
3. In many cases, political system is short-sightedness as priority is to win elections; it cannot handle environmental problems, which require a more long-term perspective.	A	3	4	4	3	2	0	2	5	0	0	8	14	3	3	2	8	2	0	0	0
	B	5	3	2	4	8	8	8	5	5	0	8	0	6	4	7	4	8	4	17	8
	C	3	3	0	4	5	3	6	0	0	0	8	0	4	3	5	4	8	4	0	8
	D	31	42	21	24	28	42	25	29	24	14	42	57	27	34	25	38	26	58	8	0
	E	56	48	71	65	56	47	58	62	67	86	25	29	60	56	59	42	54	33	75	85
	No response	1	0	2	0	1	0	1	0	5	0	8	0	1	0	2	4	2	0	0	0
4. Political systems tend to disproportionately benefit certain sectors and cannot adequately address global environmental problems.	A	3	3	4	4	1	0	1	5	0	14	8	14	3	3	2	12	1	0	0	0
	B	6	6	6	6	6	14	5	0	10	0	8	0	6	7	5	4	2	17	8	15
	C	6	10	2	4	4	8	3	0	5	0	8	14	4	7	3	8	0	4	17	8
	D	43	52	23	54	39	50	37	29	38	29	33	43	39	47	36	35	37	63	25	38
	E	41	27	62	31	48	28	52	67	48	57	33	29	47	34	53	38	58	17	50	38
	No response	1	0	4	0	1	0	1	0	0	0	8	0	1	1	1	4	2	0	0	0
5. Basic decision-making occurs at country level; political system is incapable of governing towards the optimization of the entire world.	A	3	2	4	4	1	0	1	5	0	0	8	14	3	3	2	8	0	0	0	8
	B	12	9	19	7	13	11	13	14	29	14	0	0	13	11	15	4	14	13	8	15
	C	11	8	10	7	15	17	14	19	5	14	17	14	12	9	14	15	17	17	17	0
	D	43	46	37	44	39	47	38	48	33	57	67	43	41	44	38	58	34	46	50	46
	E	31	34	29	37	31	25	32	14	29	14	0	29	29	33	30	12	33	25	25	31
	No response	1	0	2	0	1	0	1	0	5	0	8	0	1	0	2	4	2	0	0	0
6. Significant cause is the low level of public interest towards environmental governance.	A	6	2	12	9	6	6	6	14	5	0	8	29	8	6	7	12	4	4	8	8
	B	19	18	23	24	16	14	17	14	38	0	17	14	19	20	19	12	10	17	8	8
	C	19	31	12	21	12	25	9	14	10	29	25	14	14	24	9	23	8	29	17	8
	D	36	39	33	29	37	44	36	43	29	43	25	14	34	36	36	27	40	46	42	46
	E	18	10	12	18	26	11	30	14	14	29	8	29	21	12	27	19	36	4	25	23
	No response	2	0	10	0	2	0	3	0	5	0	17	0	3	2	3	8	2	0	0	8

2-6. Lack of Sustainable Technical Resources

Which of the following technologies needs to be cultivated most urgently? Please circle three items that you think are the most pressing.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India		
	[229]	[90]	[4]	[6]	[115]	[18]	[97]	[3]	[6]	[1]	[1]	[3]	[139]	[118]	[106]	[5]	[86]	[8]	[10]	[3]
1. Solar power	68	53	75	67	77	72	77	100	83	100	100	100	78	58	78	100	78	75	70	67
2. Wind power	39	30	50	33	44	39	45	67	33	100	0	67	45	32	45	60	43	13	60	0
3. Geothermal energy	32	51	0	17	19	11	21	33	17	100	100	33	20	42	21	60	21	0	20	0
4. Wave power	12	12	0	33	11	11	11	33	0	0	0	0	12	13	11	0	12	0	20	0
5. Tidal power	9	10	25	17	8	0	9	0	17	0	0	0	9	9	9	0	9	0	0	33
6. Pumped-storage hydroelectricity	5	6	0	0	3	0	4	33	17	0	0	33	5	4	6	20	5	0	0	0
7. Hydroelectric power	19	24	0	0	16	11	16	0	50	0	100	0	16	20	18	20	10	13	10	67
8. Carbon capture and storage	35	27	50	67	43	39	43	0	33	0	0	0	41	31	42	0	47	38	40	0
9. Thorough conservation technology on the consumption side	58	62	50	50	57	56	58	33	33	0	0	67	55	60	56	40	60	50	60	100
10. Other	11	16	50	17	7	17	5	0	17	0	0	0	9	17	6	0	5	25	10	33
No response	2	0	0	0	4	11	3	0	0	0	0	0	4	2	3	0	3	25	0	0

3. ABOUT NUCLEAR ENERGY AND THE ENVIRONMENT

The earthquake and tsunami that struck the Tohoku region of Japan on March 11, 2011 damaged 5 reactors at the Fukushima Nuclear Power Plant, of which 3 had meltdowns. One year after the nuclear crisis, approximately 160,000 residents of Fukushima remain in evacuation.

3-1. Public awareness of nuclear power

Have there been any changes in public awareness of nuclear power in your country as a result of the Fukushima nuclear accident?

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	Asian Four	Rest of Asia	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
1. More citizens oppose nuclear power.	67	97	58	68	50	78	42	40	30	35	42	67	52	83	41	44	39	78	76	58
2. No changes	16	1	25	20	18	15	19	48	48	35	38	22	23	10	25	35	16	16	14	37
3. I don't know	15	2	14	11	28	8	34	12	18	24	15	11	21	6	30	17	38	6	11	0
No response	2	1	3	1	4	0	5	0	3	6	4	0	3	1	5	4	6	0	0	5

3-2. Evaluation of nuclear power

How do you feel about the nuclear energy policy in your country after the Fukushima accident? Please circle one item.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1094]	[356]	[105]	[119]	[387]	Asian Four	Rest of Asia	[42]	[33]	[17]	[25]	[9]	[738]	[669]	[373]	[51]	[237]	[51]	[37]	[19]
1. No objections to the nuclear energy policy to date.	8	1	8	12	11	3	13	14	6	24	16	11	11	4	13	18	13	4	0	26
2. Nuclear energy policy should be reviewed.	32	38	22	19	34	37	33	29	30	18	40	22	29	32	32	29	31	33	43	32
3. Nuclear plans should be discontinued, nuclear power abolished.	23	25	28	29	18	39	12	33	15	18	16	33	22	28	14	20	8	51	24	21
4. Nuclear power generation should continue, but reliance decreased.	25	30	18	21	26	17	29	17	24	12	12	33	23	25	27	16	34	10	27	5
5. Nuclear power should be increased and strengthened.	4	0	13	8	6	2	7	0	0	18	0	0	7	4	5	6	7	2	3	11
6. Other	5	4	7	10	2	0	2	7	15	6	12	0	5	5	4	8	1	0	0	0
No response		1	5	2	4	1	5	0	9	6	4	0	4	2	5	4	6	0	3	5

(For those who selected "no objections to nuclear policy to date" in Question 3-2)

3-2-1. Please circle two items from the following list that best reflects your rationale.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[85]	[5]	[8]	[14]	[42]	Asian Four	Rest of Asia	[6]	[2]	[3]	[4]	[1]	[80]	[30]	[47]	[8]	[30]	[2]	[0]	[5]
1. Nuclear power is used in many countries and nuclear energy itself does not pose problems.	53	20	50	43	64	0	69	50	50	33	50	0	55	37	66	38	73	0	0	40
2. Fukushima accident was caused by natural disaster and is a question of responding to the crisis; it should not be generalized to all use.	55	80	63	36	57	67	56	50	100	33	75	0	54	53	57	50	60	50	0	40
3. Nuclear plants have risk management systems to minimize effects of accident.	15	0	0	7	17	0	18	50	50	0	25	0	16	3	23	13	13	0	0	40
4. Nuclear plants (in my country/region) are more technically advanced than the Fukushima plant.	7	0	25	7	2	33	0	0	0	33	25	0	8	13	0	25	0	50	0	0
5. Provides a stable supply of energy.	9	20	13	14	5	33	3	17	0	0	25	0	9	17	4	13	3	50	0	0
6. It is economical	8	0	13	0	14	0	15	0	0	0	0	0	9	3	13	0	20	0	0	0
7. In generating electricity, nuclear does not emit CO ₂ , a cause of global warming.	31	20	13	64	26	67	23	33	0	33	0	100	31	43	23	25	13	50	0	60
8. Other	13	40	25	21	2	0	3	0	0	67	0	100	11	23	2	38	3	0	0	0

(For those who selected "nuclear energy policy should be reviewed" in Question 3-2)

3-2-2. Please circle one item from the following list that you think is most important factor in reviewing nuclear energy policy.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[344]	[134]	[22]	[23]	[127]	Asian Four	Rest of Asia	[12]	[10]	[3]	[10]	[2]	[210]	[212]	[116]	[15]	[70]	[17]	[16]	[6]
1. Stable supply of energy	9	16	0	4	6	9	4	0	10	0	0	0	4	12	4	0	6	6	13	0
2. Cost of energy	4	6	5	4	2	0	2	8	0	0	0	0	2	5	3	0	3	0	0	0
3. Consideration for the environment	20	14	32	4	24	21	26	33	50	0	10	50	24	16	28	13	26	24	19	0
4. Consideration for future generations	23	34	23	39	11	12	11	25	0	0	20	0	16	30	11	13	9	12	13	33
5. Health and safety of citizens	39	23	36	43	54	52	54	33	40	67	70	50	50	31	51	67	54	53	50	67
6. Other	4	7	0	4	2	3	1	0	0	33	0	0	2	5	1	7	1	6	0	0
No response	1	0	5	0	2	3	2	0	0	0	0	0	2	1	2	0	1	0	6	0

(For those who selected "I wish for nuclear energy plans to be discontinued and for nuclear power to be abolished" in Question 3-2)

3-2-3. Please circle two items from below that you think are the most important reasons for discontinuing and abolishing nuclear power.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[249]	[88]	[28]	[34]	[70]	Asian Four	Rest of Asia	[14]	[5]	[3]	[4]	[3]	[161]	[185]	[54]	[10]	[19]	[26]	[9]	[4]
1. Major accidents threaten health and life through contamination, and have negative effects on global environment.	60	63	50	44	67	60	74	64	80	0	100	33	58	57	72	50	84	54	78	75
2. Human judgment is limited; we should not use power like nuclear which doesn't allow for errors.	51	61	39	62	47	40	54	29	40	33	0	67	46	54	46	30	47	38	44	75
3. Price of nuclear power does not reflect costs from accidents or implementing strict safety standards; nuclear power in actuality is costly.	28	23	29	38	26	40	11	36	20	100	25	0	30	30	19	40	11	46	22	25
4. It is highly poisonous and produces nuclear waste, consisting of radioactive substances.	21	16	32	9	27	29	26	36	0	33	25	33	24	19	26	30	26	35	11	0
5. Problems with the final disposal of nuclear waste.	29	30	36	35	23	23	23	21	20	33	50	67	29	30	22	50	11	19	33	25
6. Massive costs for constructing nuclear facilities compared to coal plants.	2	0	7	0	4	3	6	0	0	0	0	0	3	2	4	0	11	0	11	0
7. Public opposition	0	0	0	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
8. Other	4	5	4	9	1	0	3	0	40	0	0	0	4	4	6	0	5	0	0	0
No response	1	0	0	0	1	3	0	7	0	0	0	0	1	1	2	0	0	4	0	0

3-3. A nuclear accident causes massive detriment to the health and livelihood of local residents and to entire regions. What do you think is the level of dissemination of nuclear information by your national local government? Please circle one item that best reflects the situation in your country.

Unit: %

Number of responses	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asia		Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1090]	[354]	[103]	[119]	[387]	Asian Four	Rest of Asia	[42]	[32]	[17]	[26]	[9]	[736]	[665]	[372]	[52]	[237]	[51]	[37]	[19]
1. Sufficient information dissemination	5	3	11	13	2	0	3	5	0	18	12	11	6	6	3	13	2	0	0	0
2. Some information dissemination	32	32	41	42	27	22	29	14	16	41	54	33	32	34	26	46	27	14	35	16
3. Almost no information dissemination	35	40	25	26	36	34	36	48	31	18	12	33	32	35	37	17	38	29	41	47
4. No information dissemination	12	12	5	7	13	17	12	29	34	6	8	11	12	11	16	8	11	16	19	11
5. Other	6	9	6	7	3	2	3	5	13	12	8	11	5	7	4	10	1	0	3	5
No response	11	5	13	5	20	25	18	0	6	6	8	0	14	9	15	6	21	41	3	21

Respondent Affiliation

Employment

Unit: %

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
1. Central government	5	3	2	8	4	4	4	14	12	0	4	22	5	4	6	6	0	2	8	11
2. Local government	10	8	0	1	18	8	21	5	3	0	0	11	10	6	18	2	27	0	19	5
3. University/research institution	35	39	27	50	28	20	31	33	39	35	50	22	33	37	32	40	28	20	19	53
4. Nongovernmental Organization	15	9	18	18	15	37	8	29	27	35	23	22	18	16	12	27	3	43	30	21
5. Corporation	17	17	2	8	27	20	29	2	6	12	0	0	16	13	24	4	36	18	24	0
6. Journalism	5	5	25	2	2	3	1	5	0	0	4	0	5	7	1	2	1	6	0	0
7. Other	13	18	27	13	5	7	5	10	12	18	15	22	11	17	6	17	4	12	0	11
No response	1	0	0	0	1	0	1	2	0	0	4	0	1	0	1	2	2	0	0	0

Gender

Unit: %

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
Male	75	93	64	73	63	64	63	64	82	76	77	67	66	81	65	75	57	65	62	95
Female	24	7	36	27	35	36	34	36	18	24	23	33	32	19	33	25	39	35	38	5
No response	1	0	0	0	2	0	3	0	0	0	0	0	1	0	2	0	4	0	0	0

Age

Unit: %

	Overall	Japan	U.S.A. & Canada	Western Europe	Asia	Asian Four	Rest of Asia	Latin America	Africa	Oceania	Eastern Europe & former Soviet Union	Middle East	Over-seas Total	A Regions	B Regions	C Regions	China	South Korea	Taiwan	India
	[1096]	[357]	[105]	[119]	[387]	[89]	[298]	[42]	[33]	[17]	[26]	[9]	[739]	[670]	[373]	[52]	[237]	[51]	[37]	[19]
20s	14	1	3	5	33	16	39	10	6	0	4	11	20	4	32	4	46	12	22	5
30s	20	7	10	19	38	34	39	7	9	18	8	22	26	13	33	13	45	37	30	16
40s	15	14	11	18	15	31	10	19	30	0	8	11	15	17	13	6	6	29	35	11
50s	21	32	23	19	7	13	5	31	27	35	19	44	15	26	10	29	1	14	11	16
60s	20	30	32	26	3	6	2	19	21	29	35	11	14	27	6	29	0	8	3	16
Over 70	11	16	21	12	2	0	3	12	3	18	27	0	8	14	4	19	0	0	0	37
No response	1	0	0	0	1	0	2	2	3	0	0	0	1	0	2	0	2	0	0	0

About "Number of responses" and "no response"

Number of responses counted the number of valid responses, which consisted of either single answers or when the question asked for multiple responses, selections made under the requested number of choices. When there were more responses than the number requested, the response was invalidated.

No response: Respondent did not provide a selection.

V. 2012 Data by Occupational Affiliation

2-1. There are problems in communicating information, thus the conditions of the global environment remain poorly understood.

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of Valid Responses		Overall	Central government	Local government	Universities/ Research institutions	NGO	Corporations	Journalism	Other
		[261]	[11]	[15]	[85]	[42]	[45]	[20]	[42]
1. Information is not sufficiently communicated from environmental experts to political decision makers involved in the development of policy.	A	5	9	0	4	5	2	10	7
	B	16	9	27	14	17	20	15	10
	C	11	0	27	13	5	16	5	7
	D	41	55	40	42	29	42	40	45
	E	26	27	7	25	40	20	30	26
	No response	2	0	0	2	5	0	0	5
2. Easily comprehensible information has not been successfully communicated from environmental experts to the public.	A	4	9	0	5	2	2	5	5
	B	8	18	7	7	10	7	5	10
	C	7	0	13	5	2	11	10	7
	D	45	45	47	49	33	51	35	48
	E	34	27	33	33	48	27	45	26
	No response	2	0	0	1	5	2	0	5
3. There are discrepancies in the acknowledgement of environmental problems among environmental experts, weakening the ability of the information to appeal to the public.	A	5	9	0	7	7	2	10	2
	B	13	27	7	13	17	4	25	10
	C	21	45	33	13	10	33	10	29
	D	41	9	40	46	45	44	35	36
	E	18	9	20	20	17	13	20	19
	No response	2	0	0	1	5	2	0	5
4. Environmental experts focus their communication of information too heavily upon political decision makers, failing to reach the public.	A	5	0	7	6	10	2	5	0
	B	20	36	7	20	21	16	35	19
	C	28	18	40	29	19	29	15	36
	D	31	45	40	31	24	36	25	29
	E	14	0	7	13	21	16	20	12
	No response	2	0	0	1	5	2	0	5
5. Information from environmental experts are confused by negative campaigning.	A	4	9	0	4	7	2	5	5
	B	16	36	13	19	17	11	20	10
	C	23	36	13	27	19	31	5	21
	D	32	9	53	34	33	38	10	29
	E	21	9	20	14	19	16	60	31
	No response	3	0	0	2	5	2	0	5
6. Political decision makers consider environmental problems secondary, disregarding the opinions of environmental experts.	A	2	0	0	2	0	2	5	5
	B	12	9	33	18	5	13	0	5
	C	13	9	7	11	2	29	10	14
	D	37	73	27	38	31	38	35	33
	E	34	9	33	29	57	16	50	43
	No response	2	0	0	2	5	2	0	0
7. Political decision makers do not communicate information from environmental experts to the public.	A	2	0	0	4	2	0	10	0
	B	8	0	7	13	2	9	5	5
	C	19	9	20	13	14	27	20	29
	D	36	73	53	38	38	31	15	31
	E	33	18	20	31	38	31	50	36
	No response	2	0	0	2	5	2	0	0
8. Political decision makers deny the very existence of environmental problems.	A	11	9	27	15	7	11	0	10
	B	26	36	27	22	24	38	35	17
	C	21	18	20	21	17	27	15	24
	D	27	27	20	27	36	11	35	33
	E	12	9	7	12	12	11	15	17
	No response	2	0	0	2	5	2	0	0
9. The public does not value the information provided by environmental experts unless disaster occurs in their vicinity.	A	3	9	0	4	0	4	5	0
	B	11	9	7	14	7	11	15	12
	C	10	9	13	7	7	13	15	12
	D	47	64	33	49	57	44	25	45
	E	27	9	47	24	24	24	40	31
	No response	2	0	0	2	5	2	0	0
10. Non-profit organizations overemphasize their communications efforts on political decision makers.	A	2	0	0	0	5	0	0	7
	B	20	27	20	21	29	11	30	12
	C	41	18	53	49	21	51	30	38
	D	25	36	20	19	33	29	25	26
	E	9	18	7	8	7	7	15	12
	No response	3	0	0	2	5	2	0	5
11. Non-profit organizations, which exist in close proximity to the public, have not been effective and the information of environmental experts does not reach the public.	A	2	0	0	1	2	2	0	2
	B	13	0	0	14	12	16	25	10
	C	25	36	53	27	10	31	10	21
	D	44	36	27	44	52	40	45	48
	E	15	27	20	13	19	9	20	17
	No response	2	0	0	1	5	2	0	2
12. A certain level of education is necessary for an accurate understanding of information about the environment, and environmental education is lacking.	A	3	0	0	4	2	0	10	2
	B	7	0	0	7	7	16	5	0
	C	11	9	13	12	10	7	10	14
	D	39	64	40	33	40	44	35	43
	E	39	27	40	44	38	31	40	40
	No response	2	0	7	1	2	2	0	0

2-4. Limits to decision-making systems of countries, international organizations like the UN, societies, and individuals, in managing shared benefits like the environment.

2-4-1. Problems with national systems

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of Valid Responses		Overall	Central government	Local government	Universities/ Research institutions	NGO	Corporations	Journalism	Other
		[523]	[29]	[43]	[183]	[84]	[88]	[25]	[68]
1. National decision-making systems are based on partial optimization prioritizing national interests. Policies that optimize the whole, benefiting the entire world, become secondary.	A	3	3	2	5	4	1	4	0
	B	5	14	12	3	5	6	0	6
	C	7	14	9	8	5	11	4	1
	D	41	38	28	45	43	40	32	40
	E	42	31	49	38	43	41	56	49
	No response	2	0	0	1	1	1	4	4
2. National decision-making systems are influenced by powerful political, business, and organizational interests and do not reflect the will of the public, who shoulder the environment.	A	3	3	2	4	4	2	0	4
	B	6	10	5	5	2	8	8	6
	C	11	14	9	11	6	13	20	10
	D	37	24	56	40	30	38	28	37
	E	42	48	26	40	58	38	40	38
	No response	2	0	2	0	0	2	4	4
3. Changes in national policy face great resistance (inertia), and as such it tends to stay with business as usual.	A	2	7	0	3	1	1	0	0
	B	7	7	12	8	7	9	4	3
	C	14	14	19	14	17	9	8	15
	D	40	45	35	43	39	43	16	38
	E	35	28	33	32	35	35	68	41
	No response	2	0	2	1	1	2	4	3

2-4. Limits to decision-making systems of countries, international organizations like the UN, societies, and individuals, in managing shared benefits like the environment.

2-4-2. Problems with the systems of international organizations like the United Nations

A: Strongly disagree B: Somewhat disagree C: Neither (I don't know) D: Somewhat agree E: Strongly agree

Unit: %

Number of Valid Responses		Overall	Central government	Local government	Universities/ Research institutions	NGO	Corporations	Journalism	Other
		[523]	[29]	[43]	[183]	[84]	[88]	[25]	[68]
1. International organizations like the UN are affected by individual countries, and do not move towards the optimization of the whole. (E.g., Large CO2 emitters refuse to become signatories to international treaties. Organizations cannot escape old frameworks like the one pitting developed countries against developing countries.)	A	2	3	0	3	5	0	4	0
	B	5	3	9	8	2	5	0	3
	C	9	3	14	10	12	9	4	7
	D	35	55	19	34	35	42	36	32
	E	43	28	56	40	42	41	52	51
	No response	5	7	2	5	5	3	4	6
2. The voting system at the UN, with its adherence to the fundamental principle of unanimous consent, makes decision-making difficult.	A	3	3	2	5	1	0	8	1
	B	7	7	14	3	12	10	0	6
	C	13	7	26	13	15	11	16	9
	D	35	38	30	40	27	36	40	26
	E	37	38	23	35	39	36	32	50
	No response	5	7	5	4	5	6	4	7
3. International organizations like the United Nations are not provided enforcement powers or other forceful methods of coordination.	A	3	7	0	4	4	1	0	0
	B	7	3	12	5	11	7	4	7
	C	12	10	16	9	6	23	24	10
	D	37	41	40	40	35	31	40	35
	E	36	31	30	36	40	34	28	40
	No response	5	7	2	5	5	5	4	7
4. Systemic and organizational reforms are needed, but have not been implemented.	A	2	7	0	1	1	2	4	1
	B	6	0	5	9	7	6	0	4
	C	22	21	19	19	27	26	28	16
	D	43	38	49	45	36	42	56	41
		23	28	26	21	24	19	8	29
	No response	5	7	2	4	5	5	4	7

VI. Questionnaire as Distributed to Respondents

I. REPEAT TOPICS

The Environmental Doomsday Clock question, which has been surveyed for the first 20 years, has been altered this year. We have modified the way in which the time is determined in order to better elucidate the respondents' rationale. In determining the time, we ask you to first select three categories of environmental issues of greatest concern with prioritization. Then, please indicate a time on the Environmental Doomsday Clock for each category.

1. The Effects of Climate Change

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.

Example

<table border="0"> <tr> <td style="text-align: center;">Category Number</td> <td style="text-align: center;">TIME</td> </tr> <tr> <td>First (1.)</td> <td>9 : 30</td> </tr> <tr> <td>(of the first magnitude)</td> <td></td> </tr> <tr> <td>Second (5.)</td> <td>7 : 40</td> </tr> <tr> <td>(of the second magnitude)</td> <td></td> </tr> <tr> <td>Third (3.)</td> <td>8 : 20</td> </tr> <tr> <td>(of the third magnitude)</td> <td></td> </tr> </table>	Category Number	TIME	First (1.)	9 : 30	(of the first magnitude)		Second (5.)	7 : 40	(of the second magnitude)		Third (3.)	8 : 20	(of the third magnitude)			<table border="0"> <tr> <td style="text-align: center;">Category Number</td> <td style="text-align: center;">TIME</td> </tr> <tr> <td>First ()</td> <td> : </td> </tr> <tr> <td>(of the first magnitude)</td> <td></td> </tr> <tr> <td>Second ()</td> <td> : </td> </tr> <tr> <td>(of the second magnitude)</td> <td></td> </tr> <tr> <td>Third ()</td> <td> : </td> </tr> <tr> <td>(of the third magnitude)</td> <td></td> </tr> </table>	Category Number	TIME	First ()	:	(of the first magnitude)		Second ()	:	(of the second magnitude)		Third ()	:	(of the third magnitude)	
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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%. In the example shown, the time comes to 8:43.

Table. Environmental Issues Considered in This Year's Questionnaire

Category	Main Elements
1. Climate Change	Atmospheric concentration of CO₂ ; global warming ; 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 ; effects of contamination, climate change, land use
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	River and ocean pollution : 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	Population growth beyond what the Earth can support; aging of the population
7. Food	Diminution of food supply from land and oceans
8. Lifestyles	Transformation of lifestyles away from excessive consumption of resources like 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 ₂ , 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.
11. Environment and Society	Environmental awareness at the individual and societal levels, progress of environmental education ; poverty ; the status of women
12. Other	()

II. MAIN FOCUS OF THE CURRENT YEAR'S QUESTIONNAIRE

2. The Effects of Climate Change

This year, on the 20th anniversary of the 1992 Rio Summit, the questionnaire was designed to probe the reasons why solutions and responses to address environmental problems have shown little signs of progress.

What do you think are the impediments to addressing environmental problems? Please circle **three items** from the list below that you think represent the most significant impediments. Please proceed to additional questions only for the three you have selected. Afterwards, please proceed to Question 3 on page 6.

- | | |
|---|---|
| 1. Problems in communicating information | Please also answer Question 2-1 on page 3 |
| 2. Pursuit of economic profit (human desires) | Please also answer Question 2-2 on page 4 |
| 3. The global economic system | Please also answer Question 2-3 on page 4 |
| 4. Problems in decision-making systems | Please also answer Question 2-4 on page 4 |
| 5. Governance problems | Please also answer Question 2-5 on page 5 |
| 6. Lack of technical resources | Please also answer Question 2-6 on page 6 |
| 7. Other: please specify. | Please also answer Question 2-7 on page 6 |

()

2-1. There are problems in communicating information, thus the conditions of the global environment remain poorly understood.

Please circle one item from A – E for each of the categories below.

- | | | |
|-----------------------------|-----------------------------|---|
| A. Strongly disagree | B. Somewhat disagree | C. Neither agree nor disagree (I don't know) |
| D. Somewhat agree | E. Strongly agree | |

- | | |
|---|---------------|
| 1. Information is not sufficiently communicated from scientists and researchers (henceforth:environmental experts) to politicians and strategists (henceforth:policy makers) who are involved in the development of policies. | (A B C D E) |
| 2. Easily comprehensible information has not been successfully communicated from environmental experts to the public. | (A B C D E) |
| 3. There are discrepancies among environmental experts in the acknowledgement of environmental problems, weakening the ability of the information to appeal to the public. | (A B C D E) |
| 4. Environmental experts focus their information communication too heavily upon policy makers, failing to reach the public. | (A B C D E) |
| 5. Information from environmental experts became confusing with negative campaigning. | (A B C D E) |
| 6. Policy makers consider environmental problems secondary, disregarding the opinions of environmental experts. | (A B C D E) |
| 7. Policy makers do not communicate information given by environmental experts to the public. | (A B C D E) |
| 8. Policy makers deny the very existence of environmental problems. | (A B C D E) |
| 9. The public does not value the information provided by environmental experts unless disaster occurs in their vicinity. | (A B C D E) |
| 10. Non-profit organizations put their communications efforts too much on policy makers. | (A B C D E) |
| 11. Although non-profit organizations exist in close proximity to the public, they have not been effective and the information of environmental experts does not reach the public. | (A B C D E) |
| 12. A certain level of education is necessary to fully understand information on the global environment, and such environmental education is lacking. | (A B C D E) |
| 13. Other: Please specify. | () |

To be continued

2-2. For certain individuals, organizations, and corporations, the pursuit of economic profits has been given the up-most priority, making environmental problems secondary.

Please circle one item from A – E for each of the categories below.

- A. Strongly disagree B. Somewhat disagree C. Neither agree nor disagree (I don't know)
D. Somewhat agree E. Strongly agree

1. National interests often take precedence. (A B C D E)
2. Individuals tend to make decisions based on immediate profit or loss. (A B C D E)
3. The economic profits of a corporation, organization, or a region are prioritized so much that environmental considerations are not taken into account. (A B C D E)
4. Other: Please specify. ()

2-3. The global economy, which emphasizes growth using indicator such as GDP has destroyed the environment.

Please circle one item from A – E for each of the categories below.

- A. Strongly disagree B. Somewhat disagree C. Neither agree nor disagree (I don't know)
D. Somewhat agree E. Strongly agree

1. Pursuing maximization of individual interests (partial optimization) has caused a significant detriment in the interest of the whole which is the global environment. (A B C D E)
2. The global economy continue to pursue growth using GDP as an indicator, not pursuing a sustainable and stable **recycling economy**. (A B C D E)
3. **“Tragedy of the commons”**(the economic propensity to inexhaustibly consume “free” things), which tend to occur with natural resources, has been tolerated. (A B C D E)
4. Economic systems which reflect societal costs like TEEB (The Economics of Ecosystems and Biodiversity), have not been pursued. (A B C D E)
5. Corporations have focused too much on maximizing short-term profits and are indifferent in long-term benefits that incorporate the environment in their business objective. (A B C D E)
6. Other: Please specify. ()

2-4. There are limits to the decision-making systems of countries, international organizations like the United Nations, societies, and individuals, in managing interests that are shared throughout the world like the environment.

Please circle one item from A – E for each of the categories in Questions 2-4-1 to 2-4-3.

- A. Strongly disagree B. Somewhat disagree C. Neither agree nor disagree (I don't know)
D. Somewhat agree E. Strongly agree

2-4-1. Problems with national systems

1. National decision-making systems tend to prioritizes national interests, thus could be called a **partial optimization**. As such, policies that **optimize the whole** which benefits the entire world, become secondary. (A B C D E)
2. National decision-making systems are influenced by powerful political, business, and organizational **interests** and do not reflect the will of the public who are deeply concerned about the global environment. (A B C D E)
3. Changes in national policy often face great resistance (**inertia**), and it tends to stay with **business as usual**. (A B C D E)
4. Other: Please specify. ()

2-4-2. Problems with the systems of international organizations like the United Nations

1. International organizations like the United Nations are, in the end, affected by the will of individual countries, and do not move towards the optimization of the whole. (E.g., Large emitters of CO2 refuse to become signatories to international treaties. Organizations cannot escape oldframeworks like the one pitting developed countries against developing countries.) (A B C D E)
2. The voting system at the United Nations, with its adherence to the fundamental principle of unanimous consent, makes decision-making difficult. (A B C D E)
3. International organizations like the United Nations are not provided enforcement powers or other forceful methods of coordination. (A B C D E)
4. Systemic and organizational reforms has been sought, (A B C D E)

but have not been implemented.

5. Other: Please specify. ()

2-4-3. Limitations to individual decision-making (societal, cultural, and behavioral scientific problems)

Please circle one item from A – E for each category below with the country or the region of your residence in mind .

- 1. The absence of a **sense of reverence towards nature and life on earth.** (A B C D E)
- 2. Societal and cultural practices or foundations that place high value on “**common good,**” like the environment, are lacking or fragile. (A B C D E)
- 3. Societal practices and traditions that value **the weak,** including the environment, are few and far between. (A B C D E)
- 4. At most, people may have the capacity to recognize environmental conditions and effects on a **village or township level,** but are fundamentally incapable of recognizing problems at a global scale. (A B C D E)
- 5. The human decision-making process is **instinctively** based on self-preservation, and does not allow for consideration for the happiness of others or of future generations. (A B C D E)
- 6. The human nature to care for others is being overwhelmed by **behavioral principles** based on economy. (A B C D E)
- 7. People’s sence of value that respect one’s own environment are **inconsistent** with their daily economic activity. (A B C D E)
- 8. Current **lifestyles** based on large consumption of energy cannot be abandoned. (A B C D E)
- 9. Other: Please specify. ()

2-5. Governance (Whether or not governance is one of the causes of the delays in addressing global environmental problems in the post-Rio Summit era)

It is conceivable that political systems designed to reflect the public will are not effective in solving environmental problems, and that may be because of the governance issues in the current political system. (On the other hand, there are examples in which the Chinese government has voluntarily implemented specific measures to address environmental problems at a national scale, such as the shift to clean energies, regardless of the existence of international agreements.) Please circle one item from A – E for each category below based on what you have felt in the country or region where you reside.

A. Strongly disagree	B. Somewhat disagree	C. Neither agree nor disagree (I don’t know)
D. Somewhat agree	E. Strongly agree	

- 1. The political system lacks in transparency and **accountability,** leaving citizens and experts out from checking what goes on inside. (A B C D E)
- 2. Decision-making requires time, and the political system is unable to address environmental problems that demand a **speedy** response. (A B C D E)
- 3. In many cases, the political system acts with extreme **short-sightedness** as the priority is to win elections, and as such it cannot handle environmental problems, which require a more long-term perspective. (A B C D E)
- 4. Political systems tend to act in ways that **disproportionately benefit certain sectors** of the population, and cannot adequately address global environmental problems. (A B C D E)
- 5. The basic unit of decision-making occurs at **the country level,** and therefore the political system is incapable of governing and leading towards the optimization To be continued of the entire world. (A B C D E)
- 6. The significant cause is the low level of interest of the public towards environmental governance. (A B C D E)
- 7. Other: Please specify. ()

2-6. Lack of Sustainable Technical Resources

Which of the following categories do you think represents the technology that needs to be cultivated most urgently?
Please circle three items that you think are the most pressing.

1. Solar power
2. Wind power
3. Geothermal energy
4. Wave power
5. Tidal power
6. Pumped-storage hydroelectricity
7. Hydroelectric power
8. Carbon capture and storage
9. Thorough conservation technology on the consumption side
10. Other: Please specify. ()

2-7. What other elements do you feel have acted as significant impediments to addressing environmental problems? Please specify.

()

3. About Nuclear Energy and the Environment

The earthquake that devastated the Tohoku region of Japan on March 11, 2011 and the subsequent tsunami damaged five reactors at the Fukushima Nuclear Power Plant, of which three experienced meltdowns. One year after the nuclear crisis, approximately 160,000 residents of Fukushima have no choice but to remain in evacuation.

3-1. Public awareness of nuclear power

Have there been any changes in public awareness of nuclear power in your country as a result of the Fukushima nuclear accident? Please circle one item from the selection below.

1. More citizens oppose nuclear power.
2. There have been no changes.
3. I don't know.

3-2. How do you feel about the nuclear energy policy in your country after the Fukushima accident? Please circle one item from the selection below that best reflects your opinion.

The earthquake that devastated the Tohoku region of Japan on March 11, 2011 and the subsequent tsunami damaged five reactors at the Fukushima Nuclear Power Plant, of which three experienced meltdowns. One year after the nuclear crisis, approximately 160,000 residents of Fukushima have no choice but to remain in evacuation.

1. I have no objections to the nuclear energy policy **to date**. Please proceed to Question 3-2-1 on page 6.
2. Nuclear energy policy should be reviewed (E.g., revising nuclear power generation plans, cancelling plans for new plants, discontinuing the operation of existing plants) Please proceed to Question 3-2-2 on page 7.
3. I wish for nuclear energy plans to be discontinued and for nuclear power to be abolished. Please proceed to Question 3-2-3 on page 7.
4. Nuclear power generation should continue, but reliance on this form of power should be decreased. Please proceed to Question 3-3 on page 7.
5. Nuclear power generation should be increased and strengthened. Please proceed to Question 3-3 on page 7.
6. Other: Please specify. Please proceed to Question 3-3 on page 7.

()

3-2-1. You have selected "I have no objections to the nuclear energy policy to date."

Please circle two items from the following list that best reflects your rationale. Afterwards, please proceed to Question 3-3 on page 7.

1. In actuality, nuclear power is in use in many countries and nuclear energy itself does not pose problems.
2. The accident in Fukushima was caused by a natural disaster and is a question of managing and responding to the crisis; it is not one that should be generalized to all use of nuclear power.
3. Nuclear power plants are equipped with risk management systems in order to minimize the effects in case an accident should occur.
4. Nuclear power plants (in my country/region) are more technically advanced than the Fukushima plant.
5. Nuclear power provides a stable supply of energy.
6. Nuclear power is economical.
7. When generating electricity, nuclear power does not emit carbon dioxide, which is a cause of global warming.
8. Other: Please specify. ()

3-2-2. You have selected “Nuclear energy policy should be reviewed.”

Please circle one item from the following list that you think is the most important factor in reviewing nuclear energy policy. Afterwards, please proceed to Question 3-3 on page 7.

- 1. The stable supply of energy
- 2. The cost of energy
- 3. Consideration for the environment
- 4. Consideration for future generations
- 5. The health and safety of citizens
- 6. Other: Please specify. ()

3-2-3. You have selected “I wish for nuclear energy plans to be discontinued and for nuclear power to be abolished.”

Please circle two items from below that you think are the most important reasons for discontinuing and abolishing nuclear power. Afterwards, please proceed to Question 3-3 on page 7.

- 1. Major accidents threaten health and life through radioactive contamination, and have negative effects on the environment on a global scale.
- 2. Human judgment and management capabilities are always flawed or limited, and we should not use a power source like nuclear energy which doesn't allow for errors.
- 3. The price of nuclear power does not reflect the massive costs incurred from accidents or those of implementing strict safety standards; as such nuclear power in actuality is an expensive source of energy.
- 4. It is highly poisonous, and produces nuclear waste, which consist of radioactive substances.
- 5. Problems with the final disposal of nuclear waste.
- 6. Massive costs for constructing nuclear power facilities compared to coal power plants.
- 7. Public opposition.
- 8. Other: Please specify. ()

3-3. Once there is an accident at a nuclear power plant, it causes massive detriment to not only the health and livelihood of local residents but to entire regions. What do you think is the level of dissemination of nuclear information conducted by your national or local government? Please circle one item from the following list that best reflects the situation in your country.

Please circle two items from below that you think are the most important reasons for discontinuing and abolishing nuclear power. Afterwards, please proceed to Question 3-3 on page 7.

- 1. There is sufficient dissemination of information.
- 2. There is some level of information dissemination.
- 3. There is almost no information dissemination.
- 4. There are no information dissemination.
- 5. Other: Please specify ()

4. Feel free to write comments on any topic related to environmental problems.

**Results of the 21th Annual
“Questionnaire on Environmental Problems and the Survival of Humankind”**

REPORT

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