

**Questionnaire Survey concerning the Protection of the Water Quality of Lake Nojiri:
Results and Commentary
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1. Overview of the Questionnaire Survey

Objective

The collaboration and participation of local residents are essential in the process of executing measures to improve the water quality and waterfront environment of Lake Nojiri; therefore, it is important to understand their awareness about the issue. The objective of this survey is to understand the local residents' perception of the water quality of Lake Nojiri and to find out what they think about environmental issues in general and those related to the lake. It is important to note that Shinanomachi has many villas and many non-resident visitors, especially in the summer. Because of the lake's status as a sightseeing spot, it is important to consider the role tourists play in the promotion of the local economy when taking measures to preserve the water quality of the lake. For this reason, the survey also included a consciousness survey of villa visitors to understand how they assess the water quality of Lake Nojiri and to find out what they think about environmental issues in general and those related to the lake.

Questionnaire items

Questions concerning environmental problems in general: Q1-Q5

Questions concerning the protection of Lake Nojiri water quality: Q6-Q20

Face sheet

F1-F3 (for all the subjects)

F4-F6 (for the residents)

FB4-FB5 (for visitors to Nojiri-kogen Daigakumura and Nojiriko Green Town),

FK4-FK5 (for visitors to Kokusaimura)

Survey method (for the residents of Shinanomachi)

-Subjects: Residents of Shinanomachi (as of April 1, 2010; age 20 or older)

-Number of subjects: 1,203

-Sampling method: Randomly sampled from the Basic Resident Registration by age

group

-Survey method: Mail questionnaire

-Period: August 1–20, 2010 (only questionnaires returned by October 1, 2010 were included)

-Effective collection rate: 50.0% (600/1,199; the number of effective collections over the actual number of questionnaires delivered, after excluding the four undelivered questionnaires)

Survey method (for the villa visitors)

-Subjects: Villa visitors who stayed in Nojiri-kogen Daigakumura, Nojiriko Green Town, or Kokusaimura in August 2010

-Survey method: The questionnaires were delivered to the visitors through the administrative offices of the respective villa villages. The completed questionnaires were put into questionnaire return boxes placed at these offices. For Kokusaimura, both Japanese and English versions of questionnaires were prepared.

-Period: August 2010

-The number of questionnaires collected: 150; Nojiri-kogen Daigakumura (37), Nojiriko Green Town (40), unknown (1), and Kokusaimura (72; English 55, Japanese 17)

2. Counting Method

Questionnaire results were counted for the residents of Shinanomachi (hereafter referred to as "the residents") and villa visitors, respectively.

The response rate of the residents for the respective items listed for each question represents the ratio of the respondents who selected an item to the actual number of questionnaires delivered (1,199). The responses of villa visitors were counted separately for the Japanese and English versions (95 and 55, respectively), and their response rates for the respective items listed for each question were calculated separately. Totally, 95 villa visitors responded to the Japanese version of the questionnaire (hereafter referred to as the J villa visitors), of which 37 stayed in Nojiri-kogen Daigakumura, 40 in Nojiriko Green Town, 17 in Kokusaimura, and 1 stayed in an unknown location. Fifty-five villa visitors staying in Kokusaimura responded to the English version of the questionnaire (hereafter referred to as the E villa visitors). The J villa visitors are considered to represent those respondents who are Japanese or those who have a good command of written Japanese. The E villa visitors are considered to represent those who are non-Japanese.

The response rate for respective items listed for the questions that restrict respondents (Q9, Q10, Q18, and Q19) represents the ratio of the respondents who

selected an item to all those who were expected to answer the question.

Q1 and Q7 prompted the respondents to select three items in order of priority from a given list. Concerning these questions, the rate an item was selected as most important (ranked 1st) and the rate it was selected as one of the top-three most important items (ranked “1st–3rd”) are discussed.

Q2, Q3, and Q6 prompted the respondents to select any number of items that apply to them. The response rates for the respective items in these questions were calculated in the same manner as for those that prompted the respondents to select a single item.

Concerning villa visitors, many of the questions had few response counts for respective items. The response tendencies of the villa visitors found in this survey reflect the “consciousness” of only some of the people who stayed at villas in Shinanomachi in the summer of 2010. However, since there have been no consciousness surveys conducted in the past concerning water quality conservation at Lake Nojiri, a comparison between the residents’ consciousness concerning water quality protection of the lake and some tourists’ feelings toward the lake can provide useful information. In the following overview, the survey results for the residents are introduced first, and then the responses of the J villa visitors and E villa visitors are compared.

3. Overview of the Questionnaire Results

Environmental problems in general

Q1 Environmental issues considered to be most important (Figure 1)

In this question, respondents were asked to select three items from a given list (in order of priority) they considered to be the most important concerning the environment. The environmental issues the residents considered most important (percentage an item was chosen first or among the top three choices, respectively) were “Global warming” (40.2% and 69.2%), followed by “Increase in rubbish/garbage” (30.7% and 52.7%). The response rates for these items were particularly high compared to those for other items. The environmental issue the J villa visitors considered to be most important determined from the rate selected for the 1st and that selected for 1st-3rd was also “Global warming” (45.3% and 64.2%). However, the second most important issue for the J villa visitors based on the rate selected for 1st-3rd was not “Increase in rubbish/garbage” (28.4%), but “Reduction in forests” (38.9%); this was followed by “Reduction in biodiversity” (33.7%). For the E villa visitors, the item with the highest response rate was “Water pollution,” both in terms of the rate selected for the 1st and that for the 1st-3rd (32.7% and 56.4%), and the item with the second highest response rate was “Global warming” (25.5% and 43.6%).

Q2 Steps or efforts taken to help preserve the environment (Figure 2)

Respondents were asked to select any number of items from a given list that apply to particular steps or efforts they take to help preserve the environment in their everyday life. Among the residents, the item with the highest response rate was “I cooperate in separating recyclable waste including newspapers, cardboard, PET bottles, aluminum cans, batteries etc.” (96.3%), indicating that most of the residents are involved in such efforts. The item with the second highest response rate was “In my daily activities, I try to conserve electricity and water” (82.3%), followed by “I don't pour items such as cooking oil or leftover food down the sink” (78.7%). The item “I cooperate in separating recyclable waste including newspapers, cardboard, PET bottles, aluminum cans, batteries etc.” had the highest response rates among the J villa visitors and E (92.6% and 96.4%, respectively) as well. The total response rates for all the listed items were 694.8% for the residents, 737.9% for the J villa visitors and 801.8% for the E villa visitors, indicating that the average number of items selected was 6.9 for the residents, 7.4 for the J villa visitors, and 8.0 for the E villa visitors.

Q3 Actions to be taken in the future to help protect the environment (Figure 3)

Respondents were asked to select any number of items from a given list that apply to the actions they would like to take in the future to help protect the environment. The residents selected “I would like to make more effort in my daily life towards environmental protection” with a particularly high response rate (84.8%). The highest response rates for the J villa visitors and E were also observed for this item (97.9% and 92.7%, respectively). Other items with a response rate of 50% or higher were “I would like to cooperate in some way towards raising the necessary funds for protecting the environment” (the J villa visitors; 50.5%) and “I would like to take part positively in local public activities and events towards protecting the environment” (the E villa visitors; 52.7%). The total response rates for all the items were 168.7% for the residents, 190.5% for the J villa visitors, and 201.8% for the E villa visitors.

Q4 Relationship between schemes to protect the environment and economic development (Figure 4)

Respondents were asked to select an item from a given list that most closely resembled their ideas about the relationship between schemes to protect the environment and economic development. Among the residents, the response rate was highest for “Efforts to protect the environment help promote economic development to some degree” (31.2%). The total response rates for “Efforts to protect the environment

help promote economic development to some degree” and “Efforts to protect the environment significantly promote economic development” (49.0%) were almost triple those of “Efforts to protect the environment present a slight barrier to economic development” and “Efforts to protect the environment present a significant barrier to economic development” (17.4%). Likewise, among the J villa visitors and E, the total response rates for “Efforts to protect the environment help promote economic development to some degree” and “Efforts to protect the environment significantly promote economic development” were higher than those for “Efforts to protect the environment present a slight barrier to economic development” and “Efforts to protect the environment present a significant barrier to economic development.”

Compared to the residents and the J villa visitors, the E villa visitors showed a lower response rate for both “There is little or no relationship between efforts to protect the environment and economic development” (1.8%) and “Don’t know” (3.6%); however, the E villa visitors had a higher response rate for “Efforts to protect the environment help promote economic development to some degree” (43.6%) and “Efforts to protect the environment present a slight barrier to economic development” (25.5%).

Q5 Relationship between science/technology and environmental problems (Figure 5)

The respondents were asked to select an item from a given list depending on which of the two ideas concerning the relationship between science/technology and environmental problems most closely resembled their view: A. Science and technology progress will solve environmental problems or B. There are environmental problems which can’t be solved even if there is science and technology progress. Among the residents, the total response rate for “Very close to A” and “Tendency to A” was 30.4%, compared to 53.2% for “Tendency to B” and “Very close to B.” Likewise, among the J villa visitors and E, the total response rate for “Tendency to B” and “Very close to B” was higher than that for “Very close to A” and “Tendency to A.” In particular, among the J villa visitors, the response rate for “Very close to B” was high at 48.4%. The residents, the J villa visitors, and the E villa visitors were all observed as having views closer to “B. There are environmental problems which can’t be solved even if there is science and technology progress.”

Protection of Lake Nojiri’s water quality

Q6 Type of activity engaged in concerning Lake Nojiri (Figure 6)

Respondents were asked to select any number of items from a given list that apply to the type of activity they personally engage in at Lake Nojiri. Among the

residents, three items had a response rate of 20% or higher: “Events” (38.5%), “Walking” (24.5%), with the rates for other items remaining below 20%. and “Nothing in particular” (43.7%). The last item indicates that nearly half of the residents do not engage in any activities at Lake Nojiri. Among the J villa visitors and E, “Walking” had the highest response rate (81.1% and 90.9%, respectively). Among the J villa visitors, other items had response rates of 20% or higher were “Events” (38.9%), “Water sports” (33.7%), and “Picnic, looking at flowers” (25.3%). Among the E villa visitors, those items with a response rate of 20% or over (other than “Walking”) were “Water sports” (67.3%), “Picnic, looking at flowers” (58.2%), “Volunteer activities”(50.9%), “Cycling” (41.8%), “Events” (40.0%), and “Jogging” (23.6%). In descending order, the total response rates for all the items were 396.4% for the E villa visitors, 245.3% for the J villa visitors, and 181.7% for the residents, indicating that the villa visitors (in particular the E villa visitors) engage in more activities at Lake Nojiri than the residents do.

Q7 Criteria used to assess the water quality of Lake Nojiri (Figure 7)

Respondents were asked to select three items in order of priority from a given list that they consider the most important criteria for assessing the water quality of Lake Nojiri. The residents selected “High transparency” as the most important criterion both in terms of the percentage an item was chosen first or among the top three choices (52.7% and 67.5%, respectively). The next most-chosen items for the 1st-3rd were “No appearance of ‘freshwater red tide’” (45.3%) followed by “There are many fish” (39.3%). Likewise, among the J villa visitors and E, “High transparency” had the highest response rate in terms of both the rate selected for the 1st and that for the 1st-3rd; this was followed by “No appearance of ‘freshwater red tide.’” Many of the residents and the J villa visitors left the entry spaces for the second and third items blank. Though it is difficult to determine whether the E villa visitors associate an increase in the number of fish with the eutrophication of the lake, their response rate for “There are many fish” was low.

Q8 Assessment of the current water quality of Lake Nojiri (Figure 8)

Respondents were asked to select an item from a given list that reflects their assessment of the current water quality of Lake Nojiri. Among the residents, the total response rate for “The lake is clean” and “The lake is quite clean” was 38.8%, which is more than double their response rate for “The lake is quite dirty” and “The lake is dirty” (16.5%). However, the total response rate for “The lake is not really clean but not dirty either” and “Don’t know” was also high at 43.0%, indicating that many of the residents withhold judgment on the water quality of the lake.

Similarly, the J villa visitors had higher response rates for “The lake is clean” and “The lake is quite clean” (33.7%) than for “The lake is quite dirty” and “The lake is dirty” (22.1%); the difference between the two rates was smaller than that of the residents. The total response rate for “The lake is not really clean but not dirty either” and “Don’t know” was 41.0%.

Among the E villa visitors, while “The lake is not really clean but not dirty either” marked the highest response rate at 49.1%, the total response rate for “The lake is clean” and “The lake is quite clean” was 47.3%, higher than the response rates for the residents and the J villa visitors. Very few of the E villa visitors selected “The lake is dirty.”

These results show a shared tendency among the residents and the J villa visitors and E to feel that the water of Lake Nojiri is more clean than dirty, but the number of those who did not make a judgment (those who selected “The lake is not really clean but not dirty either” or “Don’t know”) exceeds that of those who consider it clean.

Q9 Reason for assessing Lake Nojiri as clean/quite clean (Figure 9)

Respondents who selected “clean” or “quite clean” in Q8 (233 residents, 32 J villa visitors, and 26 E villa visitors) were asked to select an item from a given list that most closely matched their reason for assessing Lake Nojiri as “clean” or “quite clean.” Among the residents, “Because of the progress made in sewage treatment” had the highest response rate (61.8%), and the rates for other items were relatively low. Likewise, the E villa visitors selected “Because of the progress made in sewage treatment” the most (73.1%). However, the J villa visitors gave varying answers, with the highest response rate at 31.3% for “Because the population living in the Lake Nojiri area is quite small,” followed by 25.0% for “Don’t know.”

Q10 Reason for assessing Lake Nojiri as quite dirty/dirty (Figure 10)

Respondents who selected “quite dirty” or “dirty” in Q8 (99 residents, 21 J villa visitors, and 1 E villa visitor) were asked to select an item from a given list that most closely matched their reason for assessing Lake Nojiri as “quite dirty” or “dirty.” Among the residents, the item that had the highest response rate was “The percentage connected to the sewage system is too low” (29.3%), followed by “Sewage treatment systems are inadequate” (20.2%). As for the J villa visitors, though the number of respondents for this question was small at 21, nearly half of them selected “Sewage treatment systems are inadequate.”

Q11 Ideas about Lake Nojiri's future water quality (Figure 11)

Respondents were asked to select an item from a given list most closely resembled their idea of Lake Nojiri's future water quality. Among the residents, 36.7% selected "It would be better if the water quality was significantly improved" and 40.8% selected "It would be good if there was some improvement," indicating that 77.5% of the residents think that the lake's water quality would be better if it were improved in the future. Likewise, these two items had high response rates among the J villa visitors and E, totaling 82.1% and 92.7%, respectively. These figures were actually higher than among the residents. Among the E villa visitors, "It would be better if the water quality was significantly improved" was selected at a particularly high rate (60.0%), indicating that visitors have a greater tendency than residents to desire significant improvements to the lake's water quality.

Q12 Awareness of the "4th Lake Nojiri Water Quality Protection Plan" (Figure 12)

Nagano prefecture formulated the "4th Lake Nojiri Water Quality Protection Plan" (fiscal year 2009-2013) based on the Clean Lakes Law and has been conducting relevant projects to improve the lake's water quality. The plan designates the Nojiri district and the watersheds of Sugekawa and Ichikawa as priority districts for dealing with outflow water (where measures to improve the quality of outflow water from farmland and urban area are implemented).

In this question, respondents were asked to select an item from a given list that most closely matched their level of knowledge of the "4th Lake Nojiri Water Quality Protection Plan." Among the residents, the response rates were 56.0% for "I have not heard of it," 1.0% for "I understand the contents well," 7.0% for "I understand the contents to some extent," and 34.3% for "I recognize the name only." The percentage of residents who understood the contents of the plan was less than 10%. The J villa visitors showed a similar tendency, revealing a low awareness of "4th Lake Nojiri Water Quality Protection Plan." The E villa visitors showed a higher awareness of the plan than the J villa visitors; 32.7% of the E villa visitors understood the contents of the plan, and their response rate for "I have not heard of it" (36.4%) was significantly lower than those indicated by the residents and the J villa visitors (56.0% and 58.9%, respectively)

Q13 Assessment of the efforts to improve the water quality of Lake Nojiri (Figure 13)

Concerning the efforts to improve the water quality of Lake Nojiri, the residents selected "I am satisfied with the current efforts" and "I am generally satisfied with the current efforts" at a total rate of 19.6%, while "I am slightly dissatisfied with

the current efforts” and “I am dissatisfied with the current efforts” represented 13.6% of responses. The response rate for “Neither satisfied nor dissatisfied” was 25.7%, and that for “Don’t know” was 39.2%. Though the rate of residents who were satisfied with the current efforts was a little higher than that of those who were dissatisfied, the total response rate for “Don’t know” and “Neither satisfied nor dissatisfied” (64.9%) indicates that the residents have difficulty judging the current efforts to improve the water quality of Lake Nojiri.

Among the J villa visitors, the total response rate for “I am satisfied with the current efforts” and “I am generally satisfied with the current efforts” was 19.0%, which was the same as that for “I am slightly dissatisfied with the current efforts” and “I am dissatisfied with the current efforts.” The total response rate for “Neither satisfied nor dissatisfied” and “Don’t know” was 59.0%, suggesting that, like the residents, the J villa visitors have difficulty judging the current efforts.

Among the E villa visitors, the response rates for “I am satisfied with the current efforts” and “I am generally satisfied with the current efforts” totaled 50.9%, while those for “I am slightly dissatisfied with the current efforts” and “I am dissatisfied with the current efforts” totaled 21.8%; those for “Neither satisfied nor dissatisfied” and “Don’t know” totaled 27.3%. The total response rate for “Don’t know” and “Neither satisfied nor dissatisfied” was lower than the corresponding rate among the residents. Though the total response rate of the E villa visitors for “I am dissatisfied with the current efforts” and “I am slightly dissatisfied with the current efforts” was slightly higher than that among the residents, the total response rate for “I am satisfied with the current efforts” and “I am generally satisfied with the current efforts” was significantly higher, indicating that about a half of the E villa visitors are satisfied with the current efforts to improve the water quality of Lake Nojiri.

Q14 Effective policy to improve the water quality of Lake Nojiri (Figure 14)

Concerning the efforts to improve the water quality of Lake Nojiri, the residents selected “Increase the percentage connected to the sewage system” as the most effective policy with a response rate of 27.5%, which was followed by “Maintain lake vegetation” (16.3%) and “Sewage treatment facilities” (13.7%). Among the J villa visitors, the response rate was highest for “Sewage treatment facilities” at 38.9; the E villa visitors selected “Increase the percentage connected to the sewage system” at the very high rate of 61.8%, followed by “Sewage treatment facilities” at 21.8%.

Q15 Value of Lake Nojiri (Figure 15)

Respondents were asked to select an item from a given list which that most

closely resembled their perception of the “value” of Lake Nojiri. Among the residents, the response rate was highest for “Valuable for its scenery (the appearance of a lake)” (30%), followed by “Valuable for its businesses (tourist businesses, fishing businesses, etc.)” (21.8%), “Valuable as a water resource (water for agricultural use and rice growing, water reservoir, hydropower)” (20.0%), “Valuable as an ecosystem (as a place for plants and animals to live)” (15.7%), and “Valuable for culture and lifestyle (as a place for walking and everyday activities, for learning and training)” (9.7%). Among the J villa visitors, “Valuable for its scenery” and “Valuable as an ecosystem” had the highest response rates at 40.0% and 35.8%, respectively. Among the E villa visitors, both “Valuable as an ecosystem” and “Valuable for culture and lifestyle” had the same response rate of 36.4%. These results indicate that each surveyed group values Lake Nojiri differently.

Q16 The aspect of Lake Nojiri’s scenery that you wish to improve (Figure 16)

Respondents were asked about aspect of Lake Nojiri’s scenery that they would like to improve. The residents selected “A path could be maintained to walk along the lakeshore” at the highest rate at 28.5%, followed by “A park could be established at the lake side” (22.0%) and “The current situation is good” (20.8%). With regard to the J villa visitors, “A path could be maintained to walk along the lakeshore” had the highest response rate at 37.9%, followed by “The current situation is good” (25.3%) and “Birds near the lake can increase” (20.0%). Nearly half of the E villa visitors selected “The current situation is good” (49.1%). The item with the second highest response rate for the E villa visitors was “A path could be maintained to walk along the lakeshore” (18.2%).

Q17 Regeneration of Lake Nojiri’s aquatic plants (Figure 17)

Concerning the regeneration of aquatic plants at Lake Nojiri, the residents selected “I want the aquatic plants expanded a little bit” with the highest response rate at 34.2%, followed by “I only want aquatic plants round the lake edge” (20.7%) and “I want the aquatic plants expanded over a wide area” (18.2%). Among the J villa visitors, “I want the aquatic plants expanded a little bit” had a response rate of 26.3%, followed by “I want the aquatic plants expanded over a wide area” (23.2%) and “I only want aquatic plants round the lake edge” (21.1%).

The E villa visitors selected “I want the aquatic plants expanded over a wide area” (23.6%) and “I want the aquatic plants expanded a little bit” (21.8%) with the highest response rates. The E villa visitors’s response rates for “I want the aquatic plants expanded a little bit” and “I only want aquatic plants round the lake edge” (9.1%)

were lower than those of other respondents; conversely, they were relatively higher for “I think it is best not to have aquatic plants” (16.4%). It was also noted that while the E villa visitors tended to avoid choosing “Don’t know” in general, their response rate for “Don’t know” was a little higher for this question (23.6%) than those of the residents (17.2%) and the J villa visitors (17.9%).

Q18 Reason for favoring expansion of the lake’s aquatic plants (Figure 18)

Respondents who selected “I want the aquatic plants expanded over a wide area” or “I want the aquatic plants expanded a little bit” in Q17 (438 residents, 67 J villa visitors, and 30 E villa visitors) were asked to select an item from a given list that most closely resembled the reason for selecting their answer in Q17. The residents marked the highest response rate for “Because if there are more aquatic plants, water quality will improve” at 66.2%, followed by “Because the aquatic plants is part of the natural lake scenery” (13.5%). Likewise, the J villa visitors marked the highest rate for “Because if there are more aquatic plants, water quality will improve” at 56.7%, followed by “Because the aquatic plants is part of the natural lake scenery” (31.3%). It should be noted that, the rate for the latter was a little higher than that of the residents. The E villa visitors’s response rate for “Because if there are more aquatic plants, water quality will improve” was relatively higher at 80.0% than those marked by the residents and the J villa visitors.

Q19 Reason for disapproving of the lake’s aquatic plants

Respondents who selected “I think it is best not to have aquatic plants” in Q17 (12 residents, 5 J villa visitors, and 9 E villa visitors) were asked to select an item from a given list that most closely resembled the reason for selecting their answer in Q17. For this question, the number of relevant respondents was very low; therefore, the results were omitted.

In preparing the questionnaire items, the following survey results were used as a reference:

Cabinet Office, “A Survey on Measures against Global Warming,” July 2005; the number of samples 3,000; the number of effective collections 1,626; effective collection rate 54.2%.

Cabinet Office, “A Survey on Environmental Issues,” September 2005; the number of samples 3,000; the number of effective collections 1,896; effective collection rate 63.2%.

Cabinet Office, “A Survey on Measures against Global Warming,” August 2007; the number of samples 3,000; the number of effective collections 1,805; effective collection rate 60.2%.

Shiga Prefecture, “The 41st Survey on Shiga Prefectural Administration,” June 2008; the number of samples 3,000; the number of effective collections 1,786; effective collection rate 59.5%.

Cabinet Office, “A Survey on Environmental Issues,” June 2009; the number of samples 3,000, the number of effective collections 1,919; effective collection rate 64.0%.

This questionnaire survey was conducted jointly by the Shinanomachi Town Office; Division of Science for Inland Water Environment, Institute of Mountain Science, Shinshu University; and Innovation Research and Support Center, Shinshu University. Sampling of the subject residents and posting of the questionnaires to them were carried out by the Shinanomachi Town Office, while the practical work was carried out by the Innovation Research and Support Center and the Division of Science for Inland Water Environment, Institute of Mountain Science, Shinshu University.

The questionnaire survey was conducted as a part of an education program development based on the “Green MOT (Technology Management) Education Program” promoted by Shinshu University. The “Green MOT (Technology Management) Education Program” was selected as one of the Ministry of Environment’s “Environmental Leader University Education Programs” for the fiscal year 2008–2010, and was formulated to nurture human resources capable of supporting sustainable development in Asia.

The contents of this report are solely representative of the author’s view .

Acknowledgments

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Questions and inquiries

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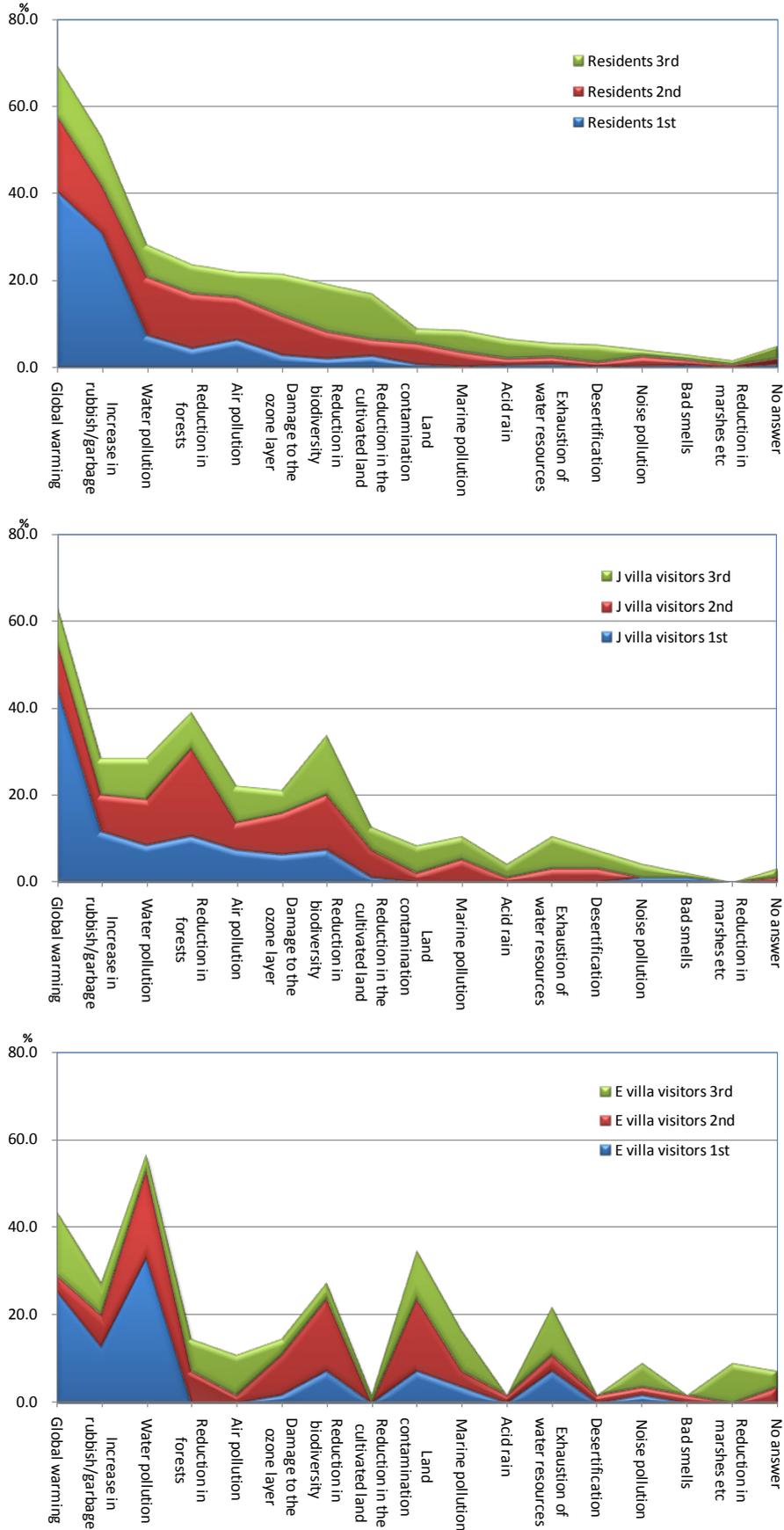


Fig. 1 Environmental issues considered to be most important (Q1) 1st-3rd (The residents, the J villa visitors and the E villa visitors)

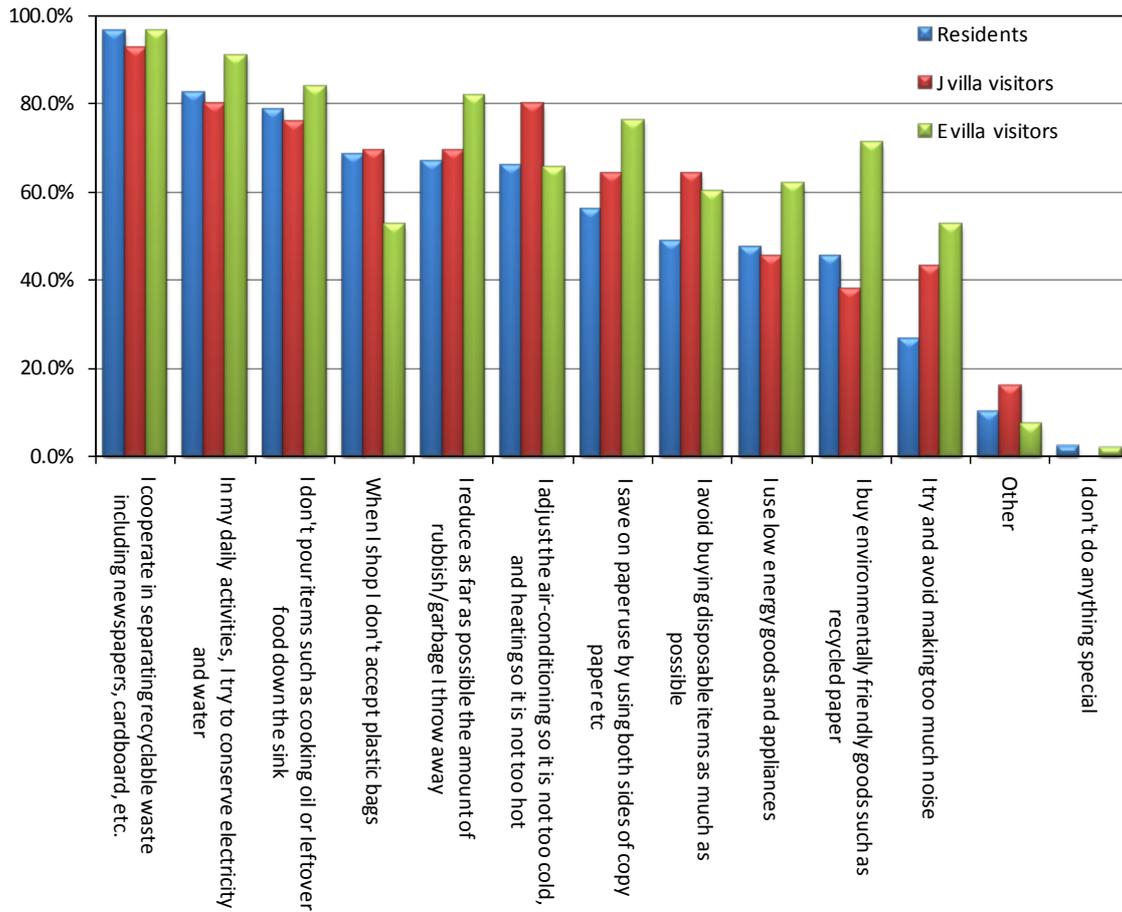


Fig. 2 Steps or efforts taken to help preserve the environment (Q2)
 (Multiple answers possible) 694.8% for the residents, 737.9% for the J villa visitors and 801.8% for the E villa visitors

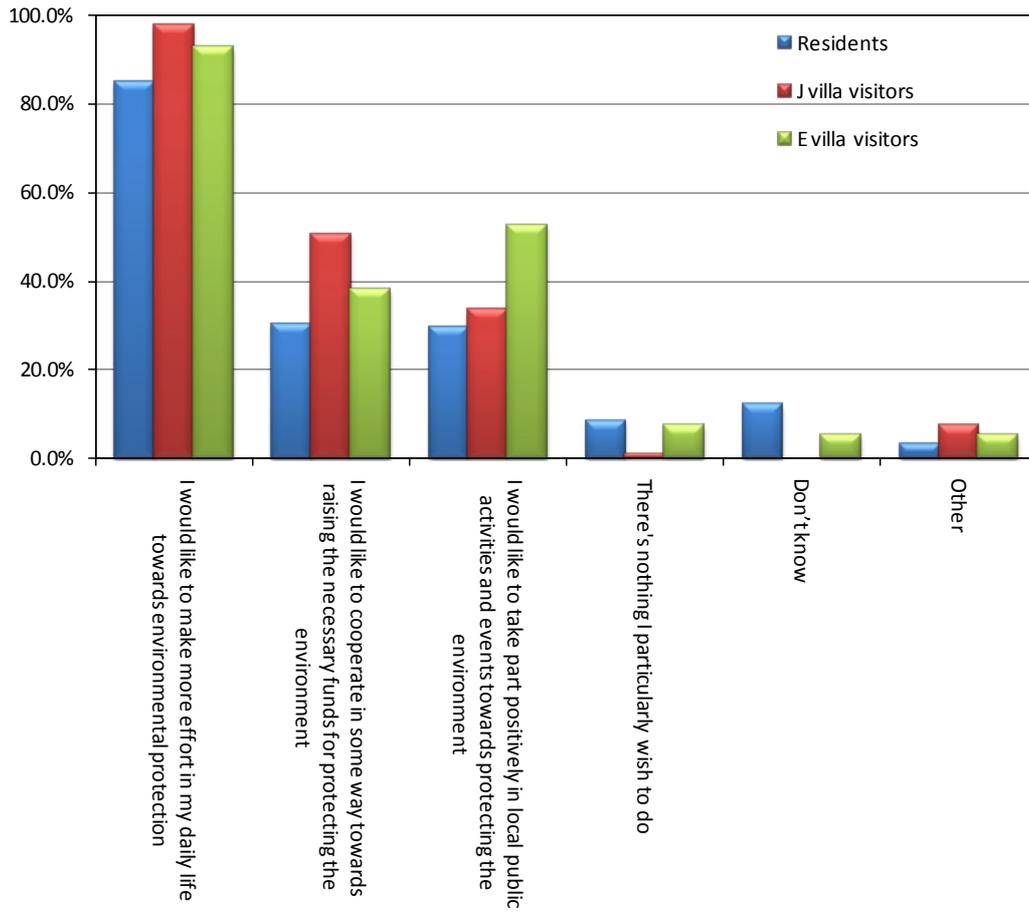


Fig. 3 Actions to be taken in the future to help protect the environment (Q3)
 (Multiple answers possible) 168.7% for the residents, 190.5% for the J villa visitors, and 201.8% for the E villa visitors

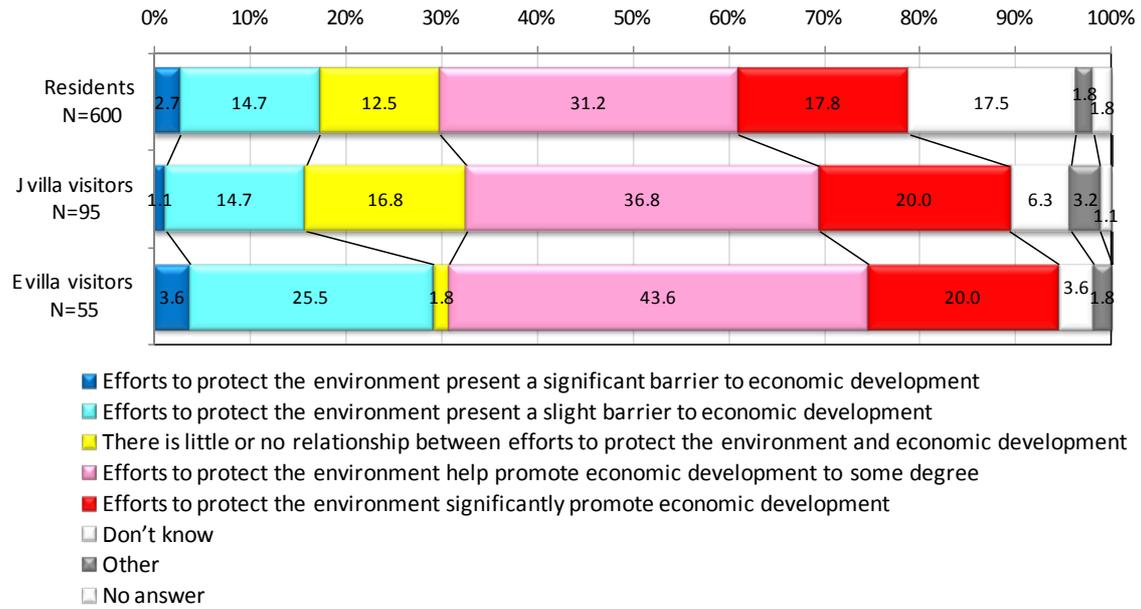


Fig. 4 Relationship between schemes to protect the environment and economic development (Q4)

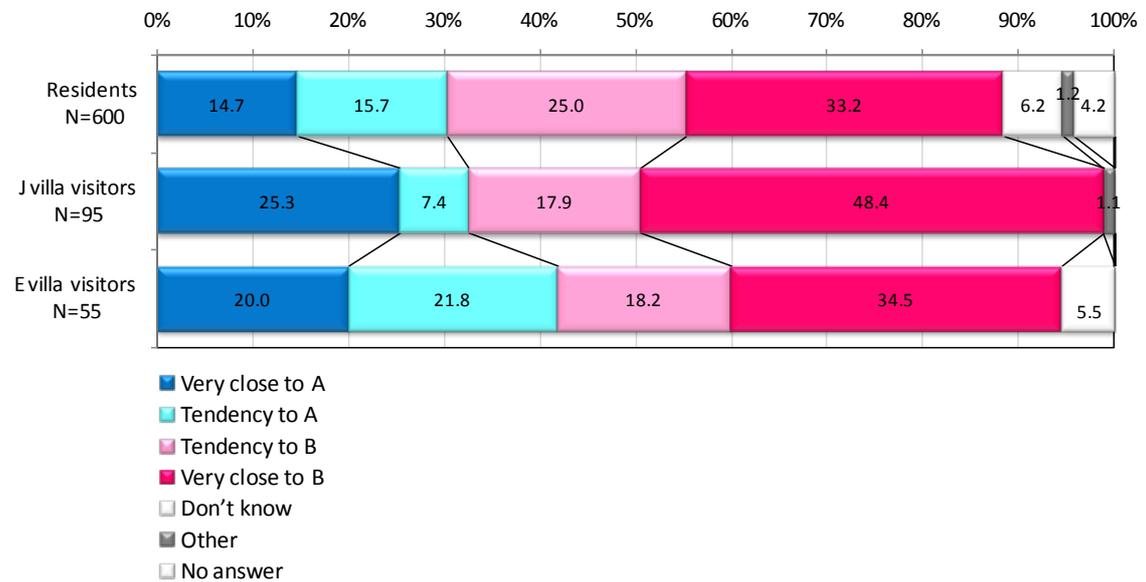


Fig. 5 Relationship between science/technology and environmental problems (Q5)
 A. Science and technology progress will solve environmental problems
 B. There are environmental problems which can't be solved even if there is science and technology progress

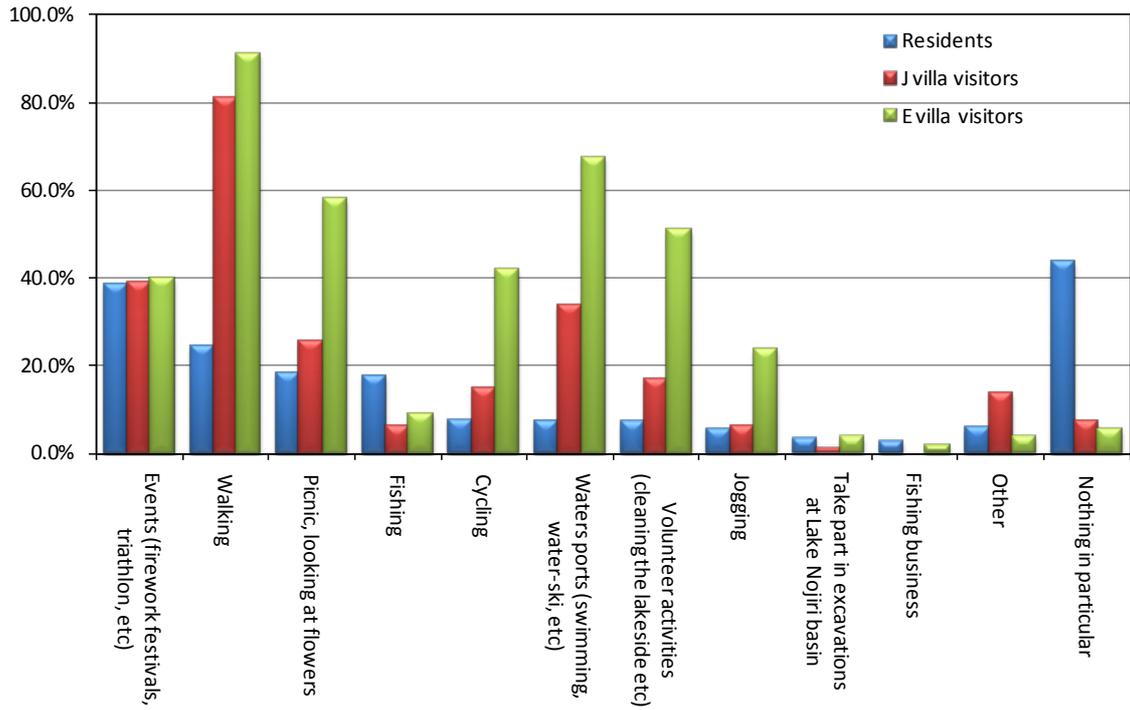


Fig. 6 Types of activities engaged in concerning Lake Nojiri (Q6)
 (Multiple answers possible) 181.7% for the residents, 245.3% for the J villa visitors, and 396.4% for the E villa visitors

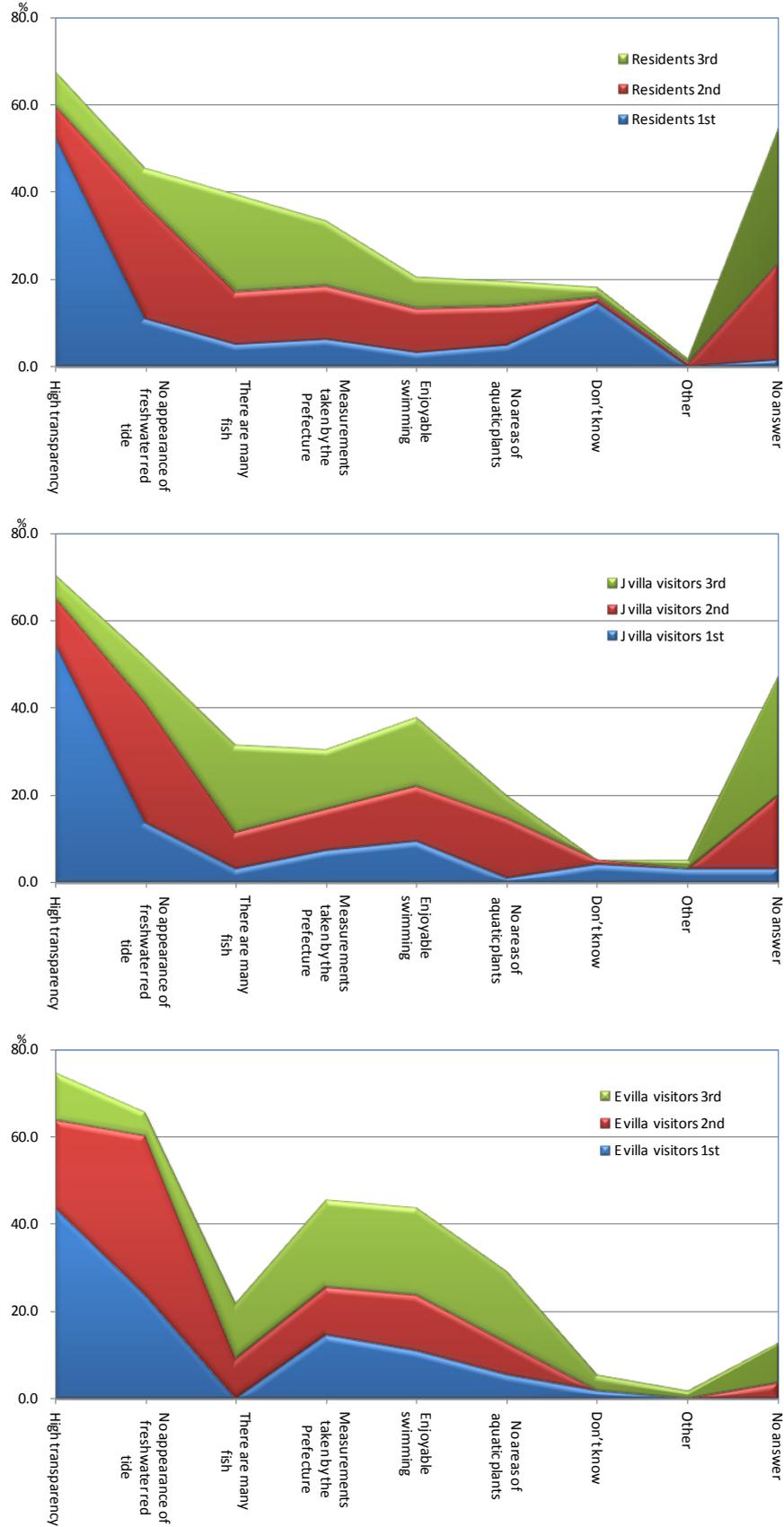


Fig. 7 Criteria used to assess the water quality of Lake Nojiri (Q7) 1st-3rd (The residents, the J villa visitors and the E villa visitors)

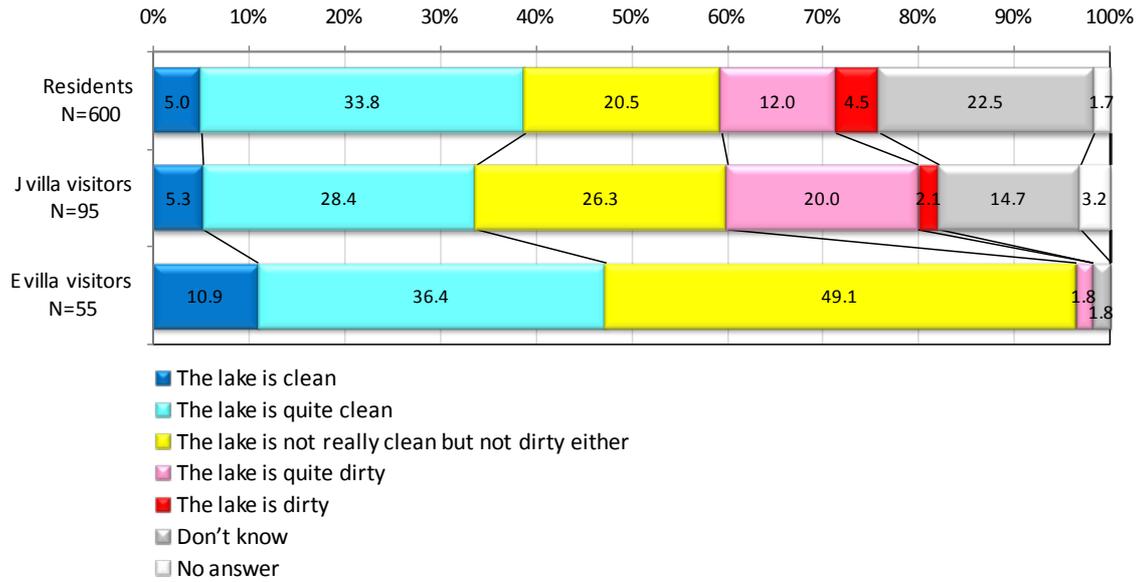


Fig. 8 Assessment of the current water quality of Lake Nojiri (Q8)

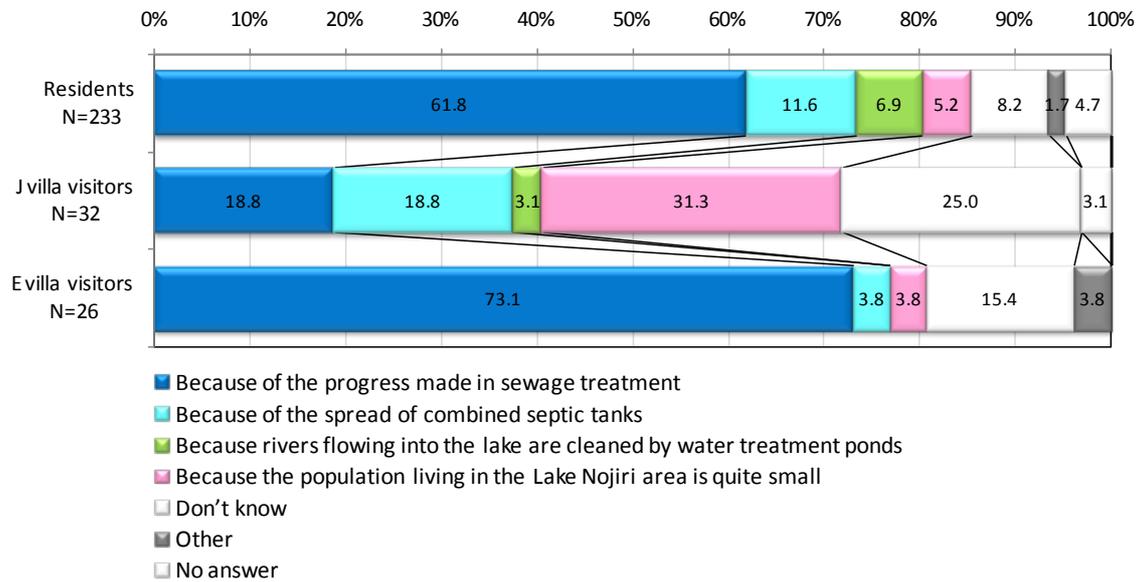


Fig. 9 Reason for assessing Lake Nojiri as clean/quite clean (Q9)
(Respondents: 233 residents, 32 J villa visitors and 26 E villa visitors)

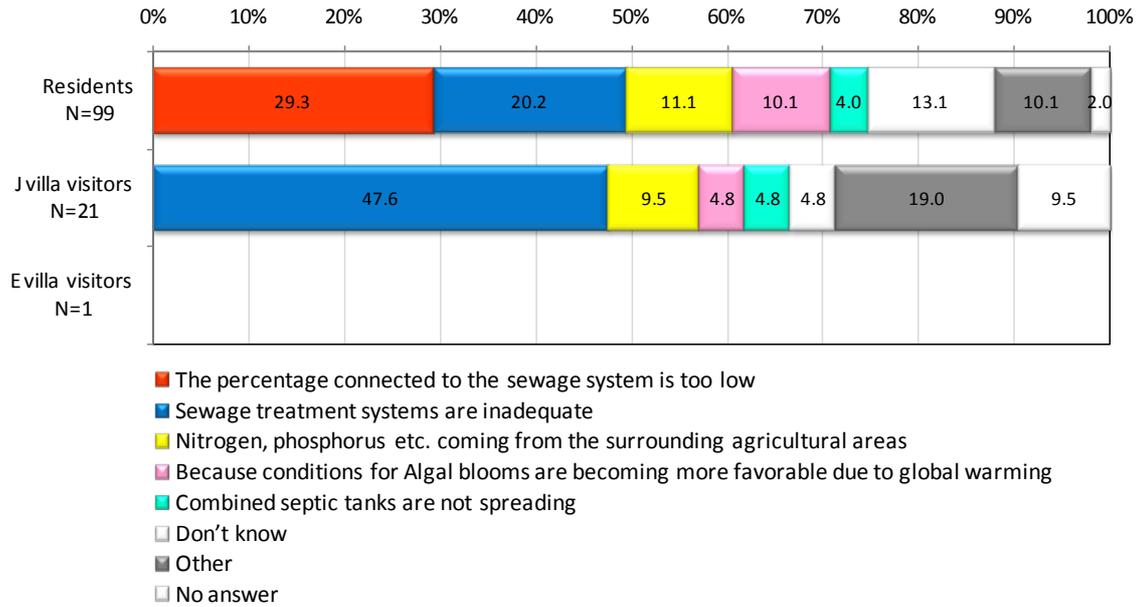


Fig. 10 Reason for assessing Lake Nojiri as quite dirty/dirty (Q10)
 (Respondents: 99 residents, 21 J villa visitors and 1 E villa visitor)
 Result of the E villa visitor is excluded from Fig. 10.

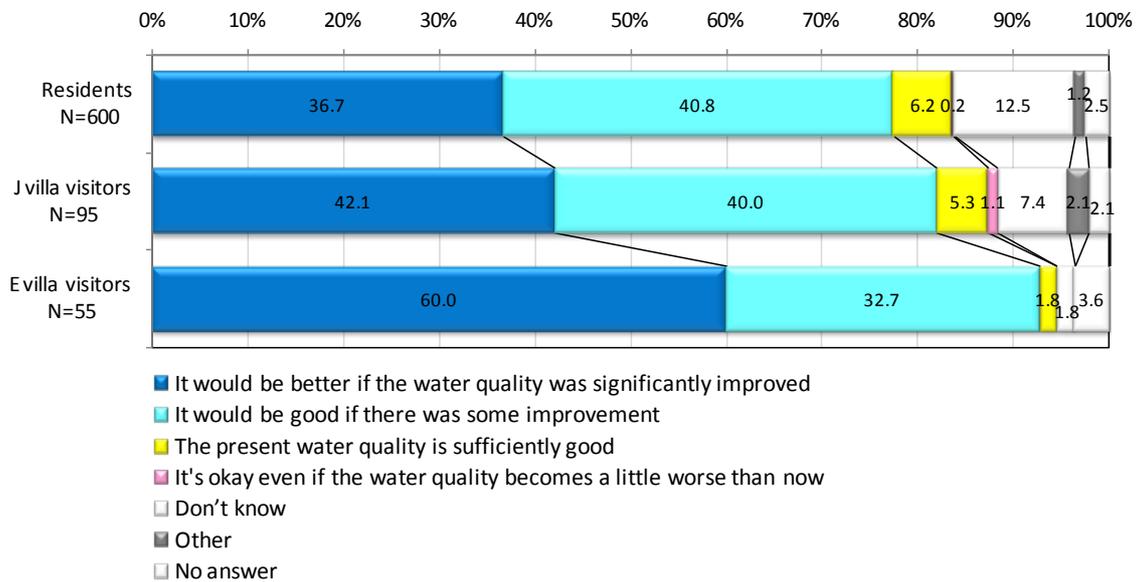


Fig. 11 Ideas about Lake Nojiri's future water quality (Q11)

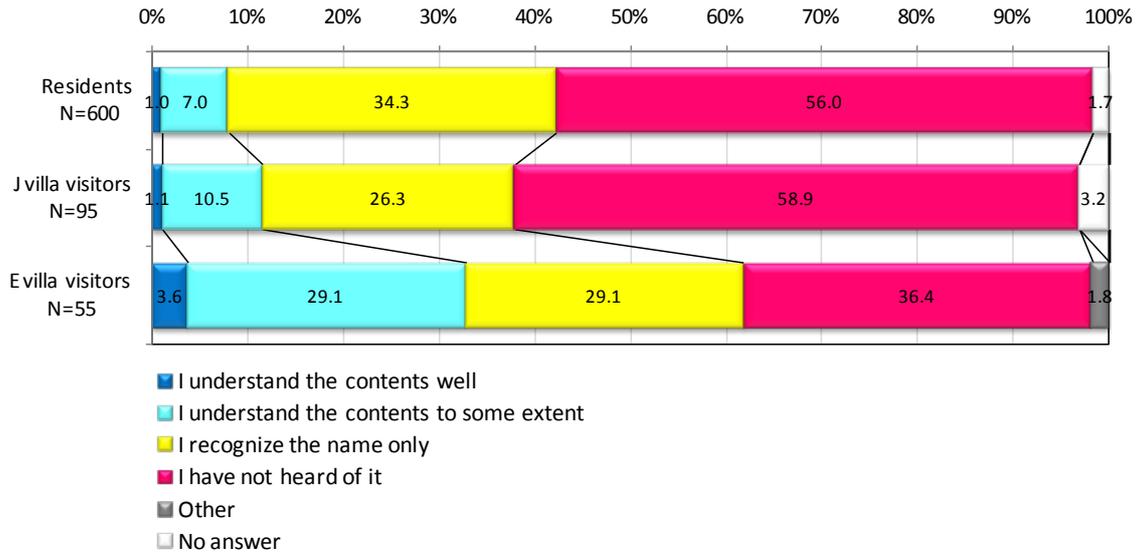


Fig. 12 Awareness of the “4th Lake Nojiri Water Quality Protection Plan” (Q12)

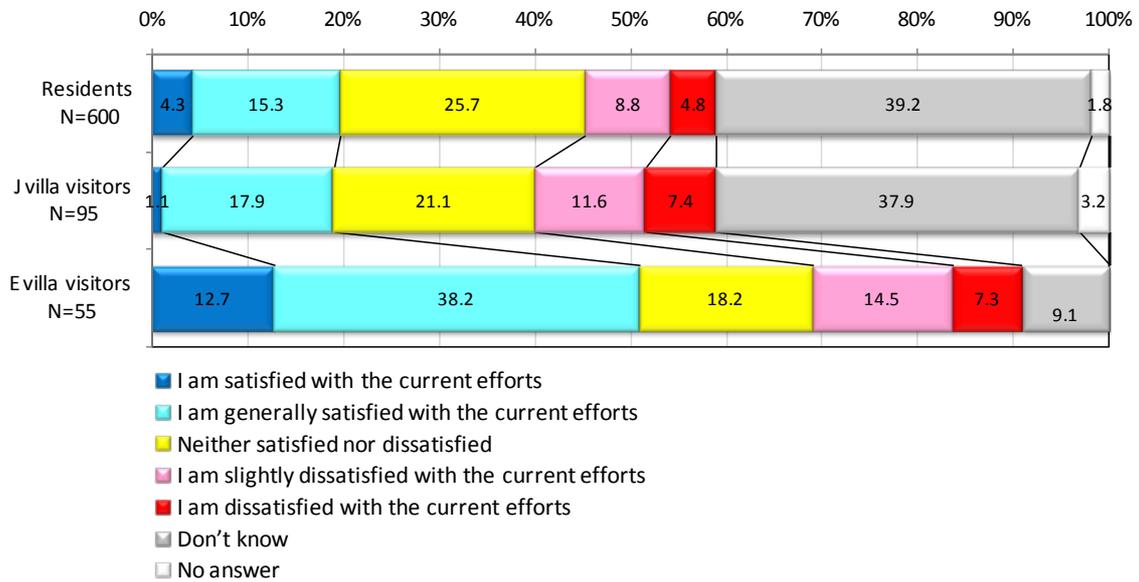


Fig. 13 Assessment of the efforts to improve the water quality of Lake Nojiri (Q13)

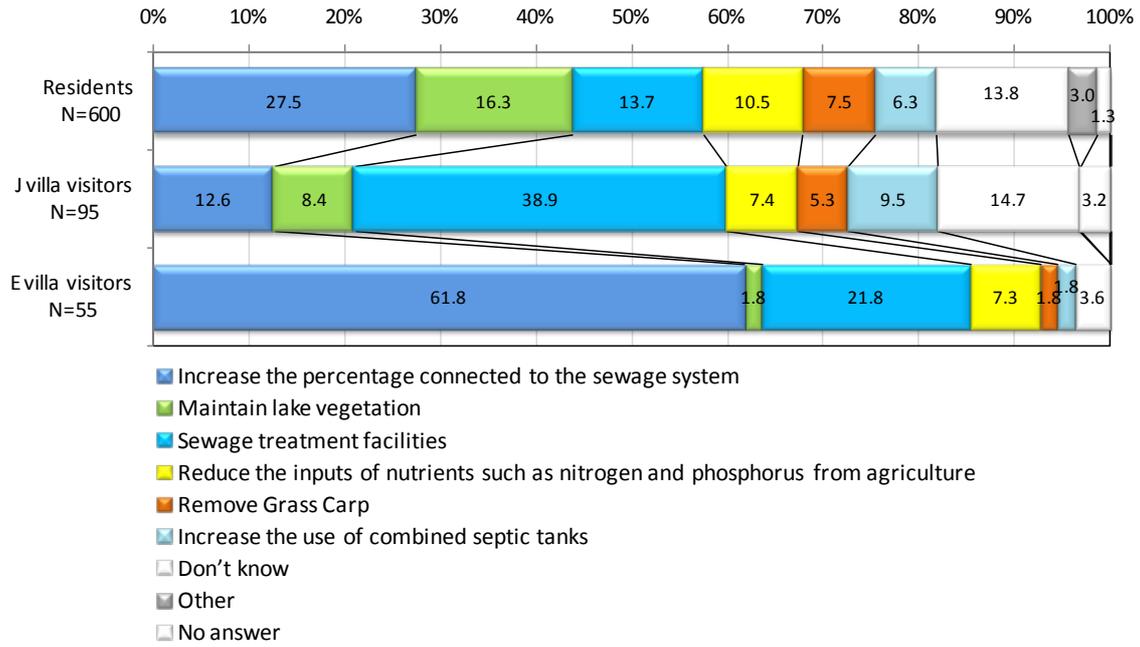


Fig. 14 Effective policy to improve the water quality of Lake Nojiri (Q14)

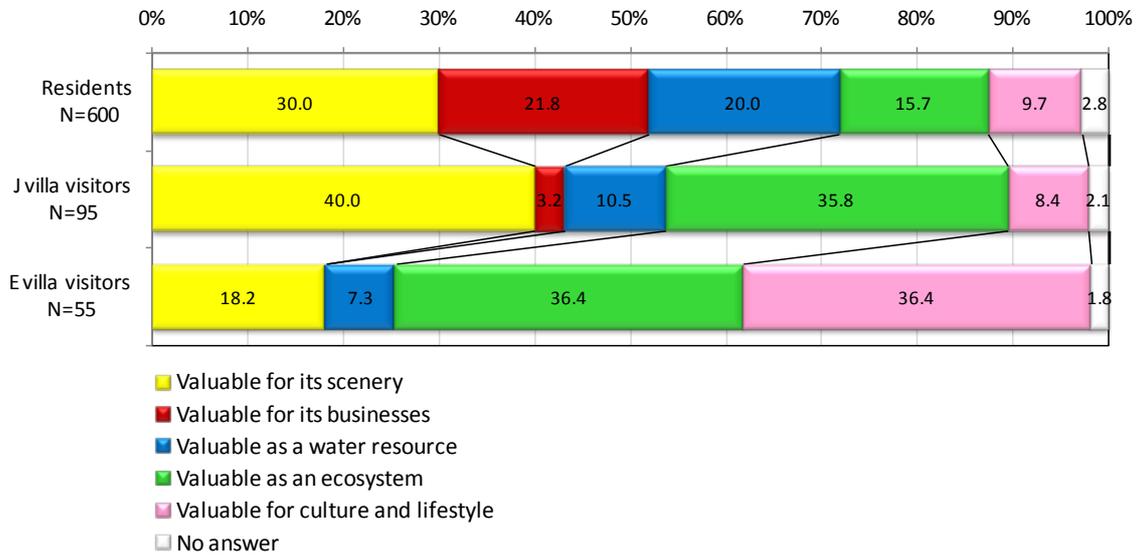


Fig. 15 Value of Lake Nojiri (Q15)

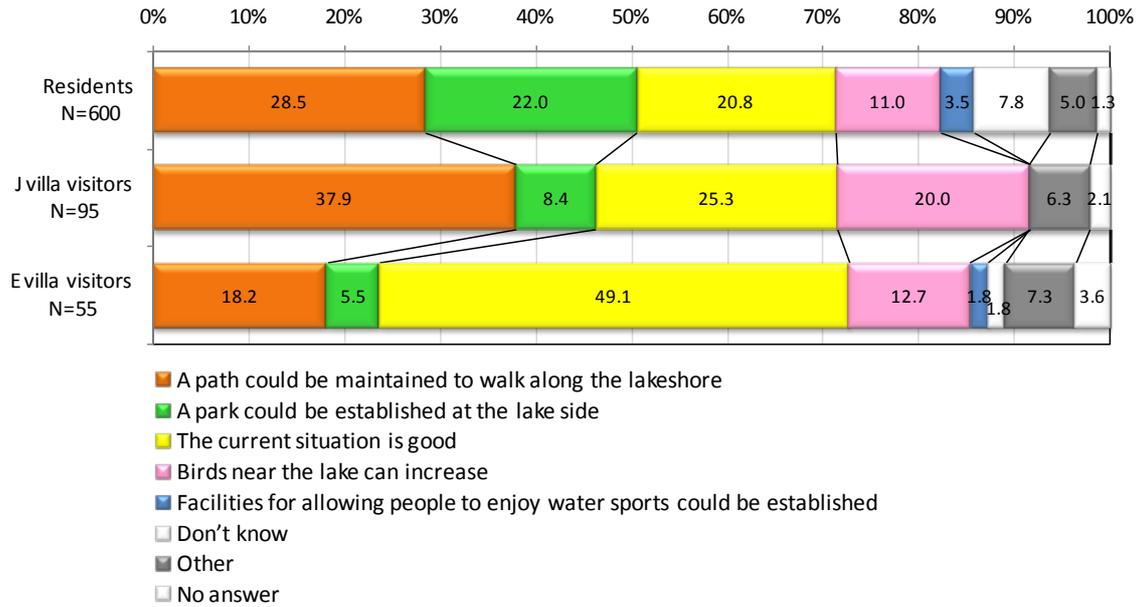


Fig. 16 The aspect of Lake Nojiri's scenery that you wish to improve (Q16)

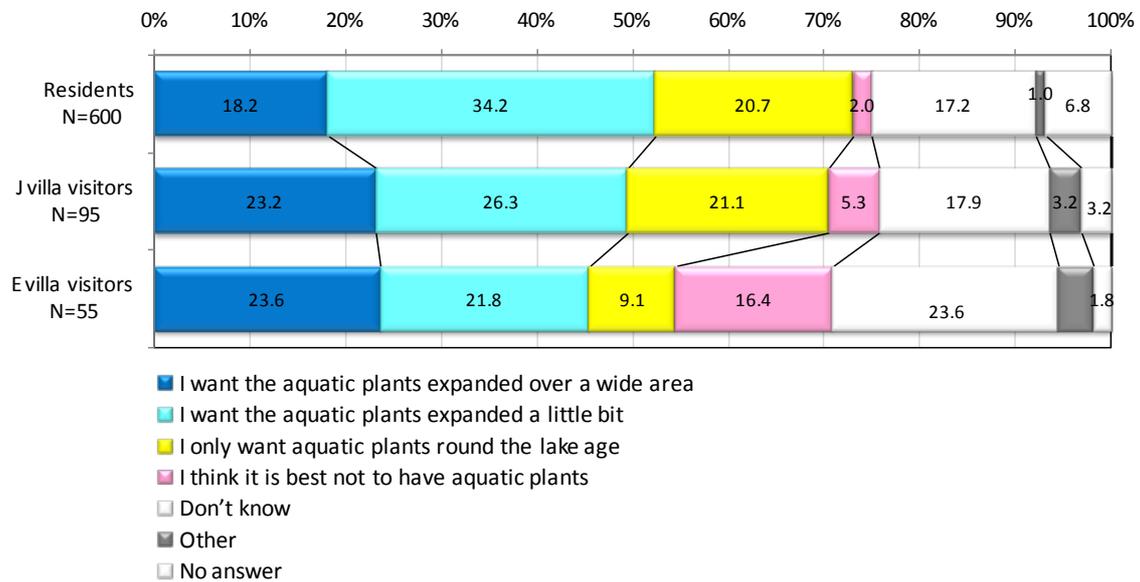


Fig. 17 Regeneration of Lake Nojiri's aquatic plants (Q17)

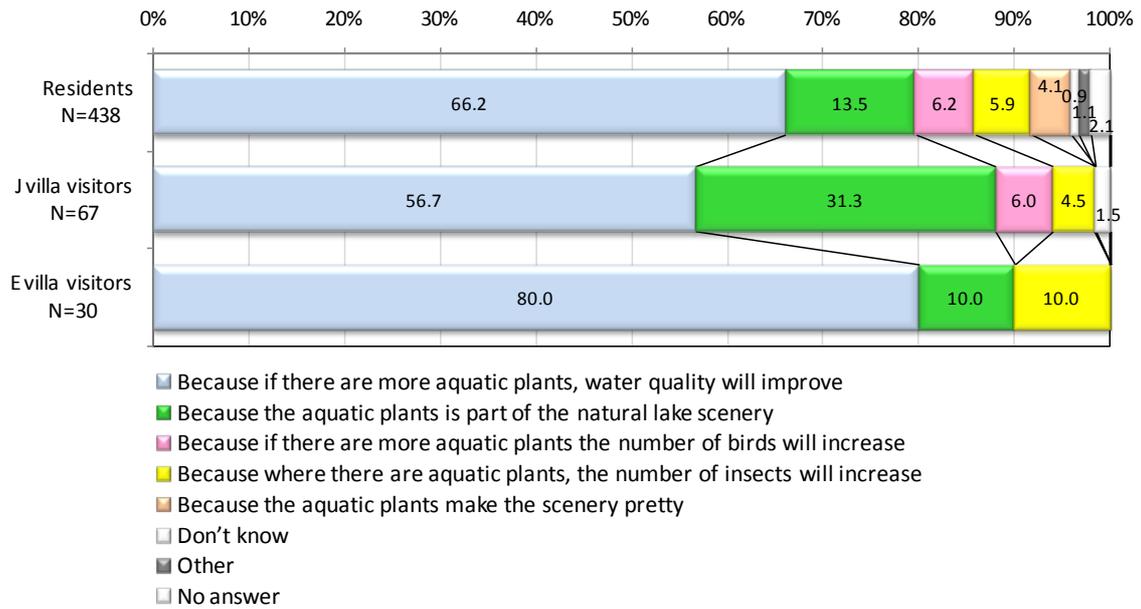


Fig. 18 Reason for favoring expansion of the lake's aquatic plants (Q18)
 (Respondents: 438 residents, 67 J villa visitors and 30 E villa visitors)