

"Damage, Living Environment, and Reconstruction Under the Great East Japan Earthquake"

## The 4th Survey of Nuclear Disaster Evacuees from Futaba, Fukushima, Summary of Results 2017

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### 1—Basic Information

Surveys on the damage, living environment and reconstruction under the Great East Japan Earthquake have been conducted via a research project called the "International comparison of reconstruction of living infrastructure from disasters" (Yasuyuki Sawada, Professor, Graduate School of Economics, The University of Tokyo; Keiko Iwasaki, Researcher, NLI Research Institute) of the University of Tokyo since 2013. The surveys target all household heads of Futaba in Fukushima prefecture, where all residents were forced to evacuate due to the nuclear power plant accident caused by the Great East Japan Earthquake that occurred in 2011. Surveys were conducted in July 2013, December 2014, July 2016, December 2017 and July 2019. This paper reports the summary of results of the fourth survey conducted in December 2017.<sup>1</sup>

Table 1. Basic Information

Target	All household heads of Futaba, Fukushima
Number of questionnaires distributed	3,000
Distribution date of questionnaires	December 1, 2017
Collection period of questionnaires	December 1, 2017 - January 22, 2018
Number of responses	779
Response rate	About 26%

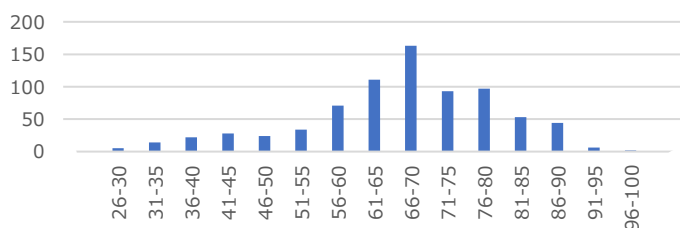
The survey includes questions about basic attributes such as age and gender, as well as questions related to connections with others (social capital) and health conditions (see the appendix at the end of this report for all the questions included in the survey). The questionnaires were distributed to all households of Futaba (about 3,000 households) that receive the regular town mail from Futaba. We also distributed a simplified version of the questionnaires excluding already available information gathered in previous rounds of the surveys to about 500 residents who had filled out their names and addresses in previous surveys. We received responses from 779 Futaba

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This study is approved by the Ethics Committee of the University of Tokyo (19 -73).

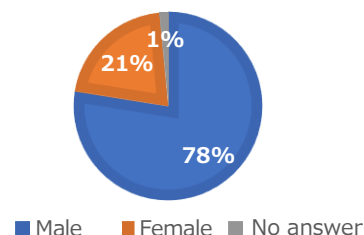
residents who had evacuated nationwide (499 responses from questionnaires included in the town mail, 280 responses from the simplified version of the questionnaires; the response rate was about 26%).

The survey targeted heads of households and Figures 1 and 2 show the distribution of age and gender of the respondents. As we can see from these figures, compared to the age and gender distribution reported in the national census, the age distribution of the respondents is left-skewed, with the majority of respondents in their 60s. The gender distribution shows that the majority of respondents are male. In addition, since the survey was conducted after the tremendous disaster, it is possible that the distributions of the respondents' characteristics are significantly different from those of general questionnaire surveys. Therefore, it should be noted that the results of this survey do not necessarily indicate the general trend of Futaba residents.

**Figure 1: Age Distribution of Respondents**



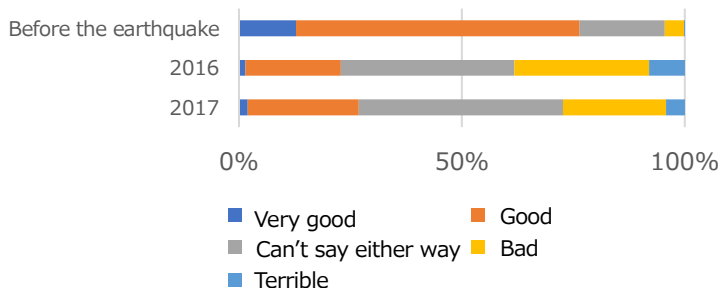
**Figure 2: Gender Distribution of Respondents**



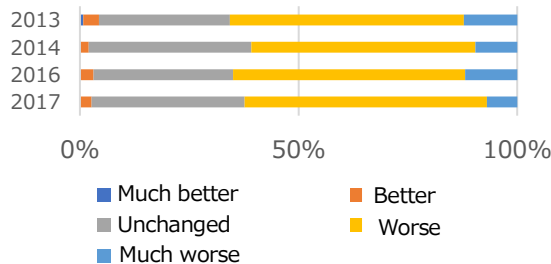
## 2 — Health Condition

Regarding the health condition of the respondents, as shown in Figure 3, many rated their own health condition before the earthquake as "good" or "very good," while many rated their health status after the disaster as "bad," "terrible" or "can't say either way." Compared to the 2016 survey results, the portion of respondents who rated their current health status as "good" increased in the 2017 survey, while the portion of respondents who rated their current health status as "bad" decreased slightly, indicating that the overall health status of Futaba residents has been gradually recovering. On the other hand, as shown in Figure 4, when asked about changes in health condition compared to pre-disaster status, many respondents rated their own health condition as worse than that of their pre-disaster status and the distribution has hardly changed since 2013.

**Figure 3: Current Health Status**



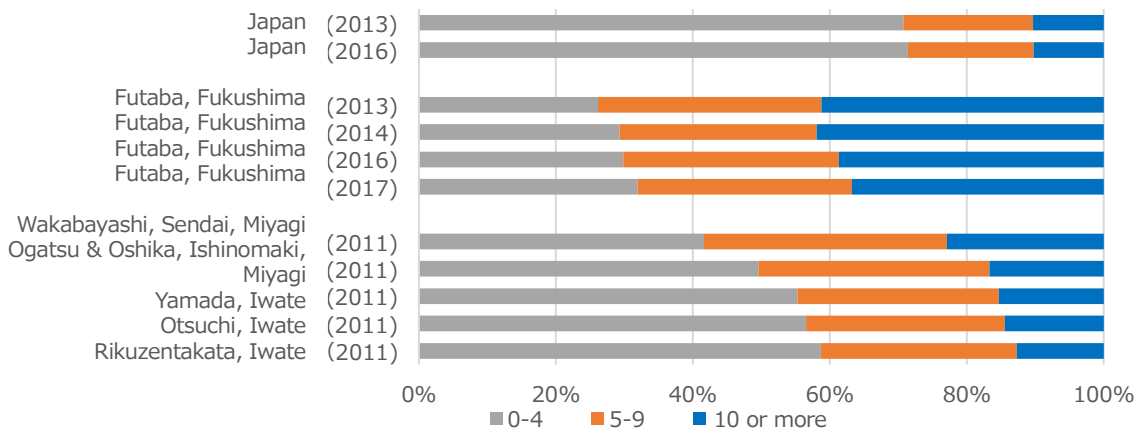
**Figure 4: Change in Subjective Health Status**



As for mental health, the distribution of K6 score, a clinically validated index for diagnosing the overall stress

state, of Futaba residents gradually improved from 2013 to 2017 (see Figure 5). However, the scores are still higher in Futaba compared to those for Japan or in the surveys conducted immediately after the disaster in the other disaster affected areas, indicating that the mental health recovery of Futaba may take a very long time. (K6 is an internationally used measurement for general mental health status that consists of six questions. The higher the total score, the more likely the respondent is stressed.)

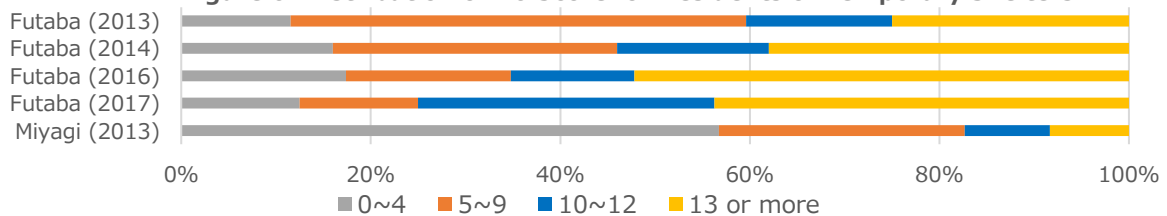
**Figure 5: Distribution of K6 Scores for Japan, Futaba, and Other Disaster Affected Areas**



(Note) K6 score indicates the level of psychological distress, and the higher the value, the higher the level of stress.  
 (Source) Futaba: Past research by the University of Tokyo's "International comparison of reconstruction of living infrastructure from disasters" project. Japan: Comprehensive Survey of Living Conditions (2013, 2016). Other regions: Survey on the Health of Great East Japan Earthquake Victims (Research Representative: Kenji Hayashi) 2012

In addition, comparing the K6 score of residents of temporary shelters from Futaba and Miyagi, K6 score of Futaba residents who live in temporary shelters tend to have a higher K6 score (see Figure 6). Furthermore, the K6 score of Futaba residents who live in temporary shelters had been increasing year by year. There are two possible reasons for this. First, the prolonged stay in temporary shelters could have put stress on the residents. Second, it could have been difficult for those under high stress to move out from the temporary shelters to other residences. In any case, this suggests the importance of continuous mental health support for those who live in temporary shelters for a long time.

**Figure 6: Distribution of K6 Score for Residents of Temporary Shelters**



(Note) indicates the degree of psychological stress, and the higher the value, the higher the degree of stress.  
 (Source) Futaba: Past research by the University of Tokyo's "International comparison of reconstruction of living infrastructure from disasters" project

However, the results of this survey do not necessarily apply to all residents of Futaba, and a high K6 score does not necessarily mean that one has a mental disorder. Please note that the purpose of our survey is to provide policy implications to the Government or other administrative agencies.

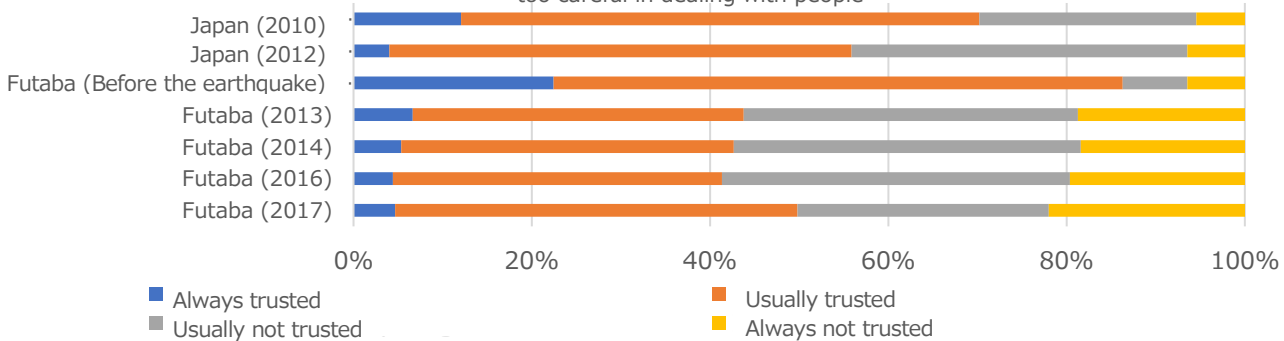
### 3—Change in Social Capital

Social capital refers to trusting relationships and networks, and is sometimes referred to as "kizuna" in Japanese. Social capital is getting attention as a key notion to achieve successful disaster recovery and has been one of the major focuses of our study. In previous studies, we showed social capital would play an important role in maintaining mental health after the disaster, while it might have been weakened by the disaster among Futaba residents.

There are several indicators that are commonly used to measure social capital, but we focused on three items. First, we checked the level of "generalized trust" using the GSS trust question, which is one of the most commonly used social capital measures. Generalized trust among Futaba residents had been decreasing from 2013 to 2016 (portion of those that think people can be trusted had been decreasing). However, in 2017, the portion of those that think people can be trusted has increased and the overall distribution can be considered to have shifted to the recovery trend (see Figure 7). On the other hand, the portion of those that think we should be always careful in dealing with people has been increasing and we need a continuous careful observation. In addition, the second indicator of social capital, "frequency of mutual assistance with neighbors" and the third indicator, "trust of neighbors" hardly shows recovery trend. It will take a very long time for social capital to recover, and we believe it is important to continue to monitor these changes over the long term.

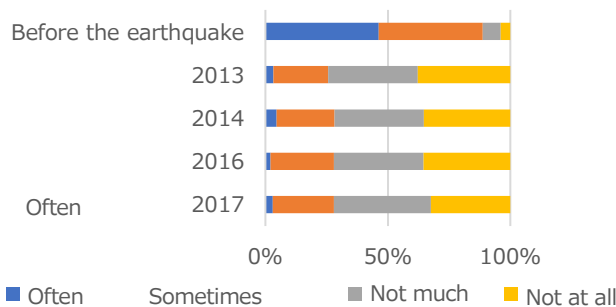
**Figure 7: Generalized Trust (GSS Trust)**

"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people"



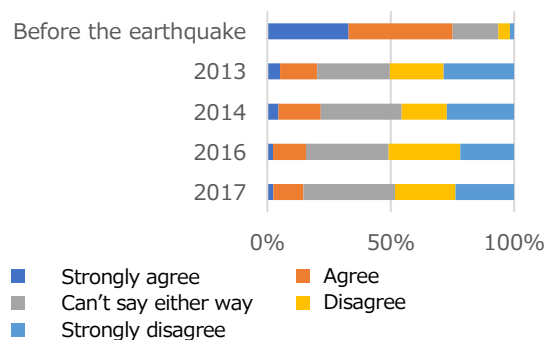
(Source) Japan: The Japanese General Social Surveys 2010, 2012, 2015, 2017; Futaba: Past research conducted by the University of Tokyo's "International comparison of reconstruction of living infrastructure from disasters" project

**Figure 8: Frequency of Mutual Assistance with Neighbors**



**Figure 9: Trust of Neighbors**

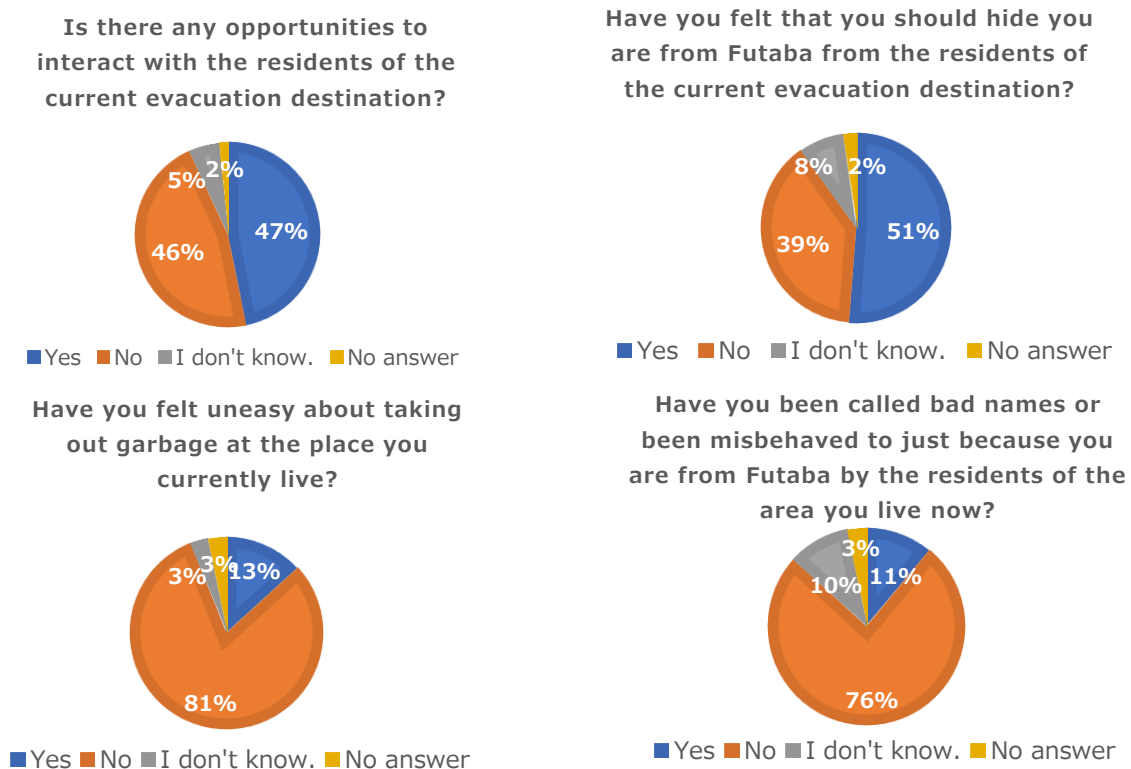
"My neighbors help me when I'm in trouble."



#### 4—Building Relationships with Residents at Evacuation Destinations

Some Futaba residents had told us that building a new social relationship with residents in evacuation destinations is a challenge that needs to be addressed in prolonged evacuation periods, in which the policies and understandings of residents of evacuation destinations vary widely. To capture this challenge, since the 2016 survey, the questions on relationships with residents of the evacuation destinations have been included. As shown in Figure 10, about 46% of the residents do not have any opportunities to interact with residents at the evacuation destinations, about 51% of the residents have felt that it is better to conceal that they are from Futaba, about 13% of the residents have felt uneasy about taking out the garbage, and about 11% of the residents have been called bad names or been misbehaved to because they are from Futaba. The distributions have remained almost same as the 2016 survey results.

**Figure 10: Relationships with Residents in Evacuation Destinations**



Furthermore, we found that those who do not have any opportunities to interact with the residents of the current evacuation destinations, those who have felt uneasy about taking out garbage, and those who have been called bad names or been misbehaved because they are from Futaba tend to have high K6 score (high stress). This implies the importance of the receptive attitudes of residents in the evacuation destinations and successful relationship buildings between evacuees and residents in the evacuation destinations to help mental health recovery of the evacuees. In addition, we have conducted an analysis comparing mental health status of evacuees who live in Fukushima and those who live outside of Fukushima, but have not found large difference so far.

## 5—Nakoso-Sakai Public Restoration Housing

As a hub complex housing for Futaba residents outside of the town of Futaba, Nakoso-Sakai public restoration housing is under construction. Since we received some opinions about the construction timing of the restoration housing from some of Futaba residents, we included questions asking if the residents know about this Nakoso-sakai public restoration housing and by when if the restoration housing had been constructed, they have planned to live in the restoration housings. As to the first question, about 60% of the residents answered that they know about the Nakoso-Sakai public restoration housing under construction. Also, 12% of the respondents (93 people) answered that they would have planned to live in the restoration housing if it had been built earlier. The distribution of the answer to the second question is shown in Table 2.

**Table 2. By when if the restoration housing had been constructed, would you have planned to live in the restoration housings?**

	Frequency	%
September, 2017	5	5.38
March, 2017	4	4.30
September, 2016	6	6.45
March, 2016	10	10.75
2015	11	11.83
2014	14	15.05
2013	8	8.80
2012	4	4.30
2011	4	4.30
No answer	27	29.03
Total	93	100.00

## 6—Summary of Findings from the Four Rounds of Surveys

- (1) Futaba residents could be under more serious psychological distress than those in other disaster affected areas. More than six years have passed since the Great East Japan Earthquake, and their mental health status has been gradually improving, but recovery may take much longer.
- (2) In particular, there was a possibility that the mental health of those who had lived in temporary shelters for a long time was in a serious condition.
- (3) As to changes in income, health status, and living space caused by the disaster, we find that the greater the extent of decrease or deterioration is, the greater the degree of decline in individual well-being tends to be.
- (4) The disaster has weakened the social capital of Futaba residents, and recovery may take a very long time.
- (5) Keeping in touch with friends from pre-disaster times as well as participating in hobbies and volunteer activities after the disaster may help people maintain good mental health.
- (6) The receptive attitudes of residents in the evacuation destinations and successful relationship buildings between the evacuees and residents in evacuation destinations can help to achieve mental health recovery of the evacuees.

These results have been presented at international and domestic academic conferences. In addition, these results have been published in international academic journals. We intend to continue our analysis and contribute to the improvement of disaster preparation/rehabilitation policies.

Our survey results are based on aggregates and analyses of responses from approximately 26% of the households of Futaba and do not represent all Futaba residents. Since the survey was conducted after a major disaster, the characteristics of respondents may be very different from general surveys and there is a possibility of an overestimation in our results due to the deterioration of physical and mental health conditions. Therefore, special caution is required in interpreting the results, and any definitive judgments based solely on these findings should be avoided.

## Appendix: Summary Tables

Who is filling out this questionnaire?

	Freq	%
Household head	576	73.94
Spouse	131	16.82
Other	24	3.08
No answer	48	6.16
Total	779	100.00

1. Please tell us about the household head.

(1) Basic information of the household head

A) Average age: 67 yrs Oldest: 96 yrs Youngest: 27 yrs

B) Gender distribution, Male: 77.5% Female: 21.1%

No response: 1.4%

C) Current prefecture

We received answers from all over Japan. Thank you.

(The aggregate result is omitted.)

D) Current job of the household head

	Freq	%
Company employee	131	16.82
Civil servant	33	4.24
Agriculture and Forestry	16	2.05
Fisheries	0	0.00
Free practice of medical practitioners, attorneys, etc.	1	0.13
Self-employed business	44	5.65
Part-time job	26	3.34
Housekeeper	34	4.36
Retired	262	33.63
Unemployed or on leave of absence	184	23.62
Other	29	3.72
No answer	19	2.44
Total	779	100.00

E) Job before the Great East Japan Earthquake.

	Freq	%
Company employee	198	39.68
Civil servant	46	9.22
Agriculture and Forestry	47	9.42
Fisheries	1	0.20
Free practice of medical practitioners, attorneys, etc.	1	0.20
Self-employed business	67	13.43
Part-time job	13	2.61
Housekeeper	15	3.01
Retired	41	8.22
Unemployed or on leave of absence	34	6.81
Other	25	5.01
No answer	11	2.20
Total	499	100.00

(2) Current and pre-disaster dwelling type

A) Current dwelling type

	Freq	%
Temporary shelter	19	78.76
Post disaster public-funded rental accommodation (deemed temporary shelter)	67	0.60
Public reconstruction housing	51	2.00
Rented	56	0.00
Owned house (different from the one before the earthquake)	492	2.81
Relative's house	26	3.81
Company housing	9	3.21
Other	38	1.60
No answer	21	6.61
Total	779	100.00

B) Size of the land and living space of your current residence

Land size (Residential)	Freq	%
0 ~ 100 square meters	49	6.29
100 ~ 200 square meters	88	11.30
200 ~ 300 square meters	129	16.56
300 square meters ~	219	28.11
No answer	294	37.74
Total	779	100.00

Land size (Other)	Freq	%
0 ~ 100 square meters	55	7.06
100 ~ 200 square meters	18	2.31
200 ~ 300 square meters	15	1.93
300 square meters ~	23	2.95
No answer	668	85.75
Total	779	100.00

Living space size	Freq	%
0 ~ 40 square meters	31	3.48
40 ~ 80 square meters	76	9.76
80 ~ 120 square meters	152	19.51
120 square meters ~	251	32.22
No answer	269	34.53
Total	779	100.00

C) Dwelling type before the Great East Japan Earthquake

	Freq	%
Owned house (detached house)	392	78.56
Owned house (condominium)	3	0.60
Rental (detached house)	13	2.61
Rental (condominium)	3	0.60
Rental (apartment)	18	3.61
Public housing	20	4.01
Company housing	15	3.01
Relatives' house	5	1.00
Other	10	2.00
No answer	20	4.01
Total	499	100.00



D) Size of the land and living space of your residence before the Great East Japan Earthquake

Land size (Residential)	Freq	%
0 ~ 100 square meters	14	2.81
100 ~ 200 square meters	32	6.41
200 ~ 300 square meters	32	6.41
300 square meters ~	269	53.91
No answer	152	30.46
Total	499	100.00

Land size (Other)	Freq	%
0 ~ 100 square meters	12	2.40
100 ~ 200 square meters	8	1.60
200 ~ 300 square meters	6	1.20
300 square meters ~	54	10.82
No answer	419	83.97
Total	499	100.00

Living space size	Freq	%
0 ~ 40 square meters	10	2.00
40 ~ 80 square meters	20	4.01
80 ~ 120 square meters	30	6.01
120 square meters ~	277	55.51
No answer	162	32.46
Total	499	100.00

E) Was your house before the earthquake hit by the tsunami?

	Freq	%
Yes	48	6.16
No	683	87.68
No answer	48	6.16
Total	779	100.00

F.) Damage to home in Futaba

	Freq	%
Completely destroyed	48	9.62
Partial collapse	133	26.65
Partial destruction	154	30.86
No major damage	124	24.85
Other	12	2.40
No answer	28	5.61
Total	499	100.00

(3) Total number of moves after the Great East Japan Earthquake

Earthquake	Freq	%
3 times or less	208	26.70
4 ~ 6 times	410	52.63
7 ~ 9 times	118	15.15
More than 9 times	19	2.44
No answer	24	3.08
Total	779	100.00

(4) Academic history of the household head

	Freq	%
Junior high school	33	6.61
High school	263	52.71
Vocational school	53	10.62
Junior college	11	2.20
University	71	14.23
Other	41	8.22
No answer	27	5.41
Total	499	100.00

(5) Family and relatives of the household head before and after the disaster.

A) Current family structure

① Are you married now?

	Freq	%
Yes	531	68.16
No	118	15.15
Bereaved	112	14.38
No answer	18	2.31
Total	779	100.00

② Do you have any children?

	Freq	%
Yes	641	82.28
No	108	13.86
No answer	30	3.85
Total	779	100.00

③ Do you have any grandchildren?

	Freq	%
Yes	425	54.56
No	297	38.13
No answer	57	7.32
Total	779	100.00

④ Do you have any pets?

	Freq	%
Yes	173	22.21
No	566	72.66
No answer	40	5.13
Total	779	100.00

⑤ How many family members does the household head live with including himself/herself ?

Average: 2.6, Max: 10, Min: 1

B) Family structure before the earthquake

① How many family members did the household head live with including himself/herself before the disaster ?

Average: 3.4, Max: 9, Min: 1

(6) How is the current health of the head of the household?

	Freq	%
Very good	15	1.93
Good	190	24.39
Can't say either way	349	44.80
Bad	176	22.59
Terrible	32	4.11
No answer	17	2.18
Total	779	100.00

(7) How is the current health of the household head compared to the condition before the disaster?

	Freq	%
Much better	0	0.00
Better	20	2.57
Remains unchanged	263	33.76
Worse	416	53.40
Much worse	52	6.68
No answer	28	3.59
Total	779	100.00

(8) The following questions ask about how you have been feeling during the past 30 days. For each question, please circle the number that best describes how often you had this feeling.

During the past 30 days, about how often did you feel ... (Point criteria)	None of the time	A little of the time	Some of the time	Most of the time	All of the time
...nervous?	0	1	2	3	4
...hopeless?	0	1	2	3	4
...restless or fidgety?	0	1	2	3	4
...so depressed that nothing could cheer you up?	0	1	2	3	4
...that everything was an effort?	0	1	2	3	4
...worthless?	0	1	2	3	4

Total points (K6 score) distribution:

	Freq	%
0 ~ 4 points	232	29.78
5 ~ 8 points	189	24.26
9 ~ 12 points	157	20.15
13 ~ 16 points	72	9.24
17 points or more	76	9.76
No answer	53	6.80
Total	779	100.00

(9) When did you (household head) do your summer homework when you were in junior high school?

	Freq	%
In the beginning of summer vacation	59	8.35
Rather toward the beginning	155	21.92
Almost equally every day	87	12.31
Rather toward the end	227	32.11
At the end	113	15.98
Didn't do it	10	1.41
Didn't have any summer homework	12	1.70
No answer	44	6.22
Total	707	100.00

(10) Due to the environment change, it has become difficult to cook at home for many evacuees, and there are concerns about health hazards for them. Please tell us the frequency of eating out before and after the disaster.

Before the earthquake: average 0.7 times/week

Currently: average 1.4 times/week

(11) Has your weight changed after the disaster?

	Freq	%
Increased	159	20.41
Slightly increased	200	25.67
Remains unchanged	199	25.55
Slightly decreased	140	17.97
Decreased	67	8.60
No answer	14	1.80
Total	779	100.00

(12) Health concerns have been raised for the limitation of activities of disaster victims due to the inconvenience of transportation.

A) The number of cars owned by your family members living together before and after the earthquake

Average before the earthquake: 2.3, Current average: 1.8

B) Did you buy a car after the disaster?

	Freq	%
Yes	586	75.22
No	157	20.15
No answer	36	4.62
Total	779	100.00

(13) (In recent years, research on "happiness" has been progressing and we ask you a question based on such existing research. However, the answer is optional. ) How happy are you (household head) now? If we set "Very happy" at 10 and "miserable" at 0, what do you think would be your score?

	Freq	%
0 (Miserable)	21	2.70
1	30	3.85
2	39	5.01
3	100	12.84
4	71	9.11
5	223	28.63
6	75	9.63
7	75	9.63
8	75	9.63
9	18	2.31
10 (Very happy)	12	1.54
No answer	40	5.13
Total	779	100.00

(14) What do you think about your life expectancy before and after the earthquake?

	Freq	%
Life span is shortened	288	36.97
Life span is unchanged	410	52.63
Life span is lengthened	24	3.08
No answer	57	7.32
Total	779	100.00

## 2. Relationship with neighbors

(1) Which area of Futaba did the household head live before the disaster?

			Recently			Before the disaster		
	Freq	%		Freq	%		Freq	%
Ishiguma	8	1.60	Konokusa	20	4.01			
Yamada	34	6.81	Hosoya	8	1.60			
Matsuzako	1	0.20	Shimohadori	10	2.00			
Mizusawa	7	1.40	Nakata	2	0.40			
Mesaku	5	1.00	Nagatsuka	143	28.66			
Koriyama	24	4.81	Morotake	6	1.20			
Kamihaatori	6	1.20	Nakahama	12	2.40			
Niiyama	95	19.04	Nakano	9	1.80			
Terasukura	2	0.40	Maeda	59	11.82			
Terasawa	8	1.60	No answer	34	6.81			
Shibukawa	6	1.20	Total	499	100.00			

(2) How often do you help or receive help from your neighbors before and after the disaster?

	Recently		Before the disaster	
	Freq	%	Freq	%
Quite often	23	2.95	181	36.27
Moderately	191	24.52	238	47.70
Not much	303	38.90	43	8.62
None	248	31.84	29	5.81
No answer	14	1.80	8	1.60
Total	779	100.0	499	100.0

(3) My neighbors help me when I'm in trouble.

	Recently		Before the disaster	
	Freq	%	Freq	%
Strongly agree	18	2.31	140	28.06
Agree	92	11.81	213	42.69
Can't say either	279	35.82	98	19.64
Don't agree	185	23.75	13	2.61
Not at all	179	22.98	19	3.81
No answer	26	3.34	16	3.21
Total	779	100.0	499	100.0

(4) Life style before and after the disaster

I often go out and leave the door unlocked.

	Recently		Before the disaster	
	Freq	%	Freq	%
Yes	98	12.58	240	48.10
No	654	83.95	245	49.10
Don't know	13	1.67	3	0.60
No answer	14	1.80	11	2.20
Total	779	100.0	499	100.0

I often lend money or goods to friends.

	Recently		Before the disaster	
	Freq	%	Freq	%
Yes	105	13.48	163	32.67
No	566	72.66	252	50.50
Don't know	89	11.42	66	13.23
No answer	19	2.44	18	3.61
Total	779	100.0	499	100.0

I think most people try to be fair.

	Recently		Before the disaster	
	Freq	%	Freq	%
Yes	225	28.88	189	37.88
No	257	32.99	290	58.08
Don't know	269	34.53	101	20.24
No answer	28	3.59	19	3.81
Total	779	100.00	499	100.00

I think that I am trusted by others.

	Recently		Before the disaster	
	Freq	%	Freq	%
Yes	168	21.57	209	41.88
No	78	10.01	50	10.02
Don't know	512	65.73	219	43.89
No answer	21	2.70	21	4.21
Total	779	100.0	499	100.00

(5) Participation in volunteer and hobby gatherings

• I sometimes participate in volunteer activities.

	Freq	%
Yes	140	17.97
No	622	79.85
No answer	17	2.18
Total	779	100.00

• I sometimes participate in hobby activities.

	Freq	%
Yes	249	31.96
No	500	64.18
No answer	30	3.85
Total	779	100.00

• Average number of non-family members to exchange greetings in a day

	Freq	%
0	97	12.45
1~3	341	43.77
3~6	137	17.59
6~10	87	11.17
More than 10	65	8.34
無回答	52	6.68
合計	779	100.00

(6) Generally speaking, would you say that most people can be trusted or you can't be too careful in dealing with people?

	Recently		Before the disaster	
	Freq	%	Freq	%
Always trusted	34	4.36	57	11.42
Usually trusted	328	42.11	314	62.93
Usually not trusted	205	26.32	56	11.22
Always not trusted	160	20.54	34	6.81
No answer	52	6.68	38	7.62
Total	779	100.0	499	100.0

(7) The national government is trustable.

	Recently		Before the disaster	
	Freq	%	Freq	%
Strongly agree	11	1.41	24	3.08
Agree	186	23.88	312	40.05
Don't agree	331	42.49	322	41.34
Not at all	225	28.88	76	9.76
No answer	26	3.34	45	5.78
Total	779	100.00	779	100.00

(8) Fukushima prefectural government is trustable.

	Recently		Before the disaster	
	Freq	%	Freq	%
Strongly agree	26	3.34	43	5.52
Agree	352	45.19	424	54.43
Don't agree	272	34.92	229	29.40
Not at all	95	12.20	41	5.26
No answer	34	4.36	42	5.39
Total	779	100.00	779	100.00

(9) Neighbors are trustable.

	Recently		Before the disaster	
	Freq	%	Freq	%
Strongly agree	24	3.08	129	16.56
Agree	382	49.04	465	59.69
Don't agree	269	34.53	126	16.17
Not at all	70	8.99	22	2.82
No answer	34	4.36	37	4.75
Total	779	100.0	779	100.00

(10) Do you have any opportunities to interact with the residents of your current evacuation destination?

	Freq	%
Yes	365	46.85
No	361	46.34
Don't know	41	5.26
No ans.	12	1.54
Total	779	100.00

(11) Do you attend any events or meetings (Festivals, cleaning activities, etc.) held in the area where you currently live?

	Freq	%
Yes	386	49.42
No	359	46.08
Don't know.	20	2.57
No answer	15	1.93
Total	779	100.00

(12) Have you felt that you should hide you are a Futaba resident from residents in the current evacuation destination?

	Freq	%
Yes	399	51.22
No	303	38.90
Don't know.	60	7.70
No answer	17	2.18
Total	779	100.00

→ If Yes: Do you still feel that?

	Freq	%
Yes	340	85.21
No	31	7.77
Don't know.	17	4.26
No answer	11	2.76
Total	399	100.00

(13) Do residents of the evacuation destination know that you are a Futaba resident?

	Freq	%
Yes	467	59.95
No	121	15.53
Don't know.	175	22.46
No answer	16	2.05
Total	779	100.00

(14) Have you ever felt uneasy about taking out garbage at the place where you currently live?

	Freq	%
Yes	103	13.22
No	629	80.74
Don't know.	23	2.95
No answer	24	3.08
Total	779	100.00

→ If Yes: Do you still feel that?

	Freq	%
Yes	70	67.96
No	13	12.62
Don't know.	5	4.85
No answer	15	14.56
Total	103	100.00

(15) Have you been called bad names or misbehaved to by the residents of the area you live in now because you are a Futaba resident?

	Freq	%
Yes	86	11.04
No	590	75.74
Don't know	79	10.14
No answer	24	3.08
Total	779	100.00

→ If Yes: Do you still feel that?

	Freq	%
Yes	21	24.42
No	42	48.84
Don't know	15	17.44
No answer	8	9.30
Total	86	100.00

(16) Do you have any neighbors whom you have known since the pre-disaster period?

	Freq	%
Yes	286	36.71
No	432	55.46
Don't know	31	3.98
No answer	30	3.85
Total	779	100.00

(17) Do you have any friends from Futaba whom you became friends with after the disaster?

	Freq	%
Yes	234	30.04
No	485	62.26
Don't know	33	4.24
No answer	27	3.47
Total	779	100.00

(18) Do you have any friends that evacuated from other places than Futaba whom you became friends with after the disaster?

	Freq	%
Yes	216	27.73
No	401	51.48
Don't know	132	16.94
No answer	30	3.85
Total	779	100.00

(19) Do you have any new friends from your current living site whom you became friends with after the disaster at your current evacuation site?

	Freq	%
Yes	247	31.71
No	427	54.81
Don't know	64	8.22
No answer	41	5.26
Total	779	100.00

(20) Did you participate in the Futaba respect for the aged gatherings in 2017?

	Freq	%
Attended	82	10.53
Did not attend	675	86.65
No answer	22	2.82
Total	779	100.00

(21) Did you participate in the Futaba respect for the aged gatherings in 2016?

	Freq	%
Attended	88	11.30
Did not attend	661	84.85
No answer	30	3.85
Total	779	100.00

(22) Did you participate in the Futaba respect for the aged gatherings in 2010?

	Freq	%
Attended	146	18.74
Did not attend	579	74.33
No answer	54	6.93
Total	779	100.00

(23) After the Great East Japan Earthquake, have you attended the gatherings of each residential area in Futaba?

	Freq	%
Yes	360	46.21
No	405	51.99
No answer	14	1.80
Total	779	100.00

(24) Have you ever attended a gathering of Futaba residents in your current residential area?

	Freq	%
Yes	305	39.15
No	461	59.18
No answer	13	1.67
Total	779	100.00

(25) I would like to ask you about New Year's cards.

① How many New Year's cards did you (household head) send out this year (2017)?

	Freq	%
0	218	27.98
1 ~ 10	134	17.20
11 ~ 50	245	31.45
51 ~ 100	68	8.73
Over 100	35	4.49
No answer	79	10.14
Total	779	100.00

\*Among 0, 111 are in mourning.

② For those that sent out New Year's cards this year (2017), when did you post your first New Year's cards?

Average: Around December 23

③ How many New Year's cards did you send out for New Year's Day before the Great East Japan Earthquake (2011)?

	Freq	%
0	160	20.54
1 ~ 10	52	6.68
11 ~ 50	277	35.56
51 ~ 100	146	18.74
Over 100	121	15.53
No answer	23	14.12
Total	779	100.00

\*Among 0, 110 are in mourning.

④ For those who sent out New Year's cards for New Year's Day in 2011, when did you post your first New Year's cards?

Average: Around December 22 in 2010

### 3. Future plans

(1) Does the household head plan to return to Futaba in the future?

	Freq	%
Yes	65	8.34
Haven't decided	173	22.21
No/Cannot	518	66.50
No answer	23	2.95
Total	779	100.00

(2) Have you decided where you are going to live for the long term going forward?

	Freq	%
Decided	377	48.40
Haven't decided/ Don't know	194	24.90
No answer	208	26.70
Total	779	100.00

(3) How many years did you live in Futaba before the disaster?

	Freq	%
1-9 yrs	78	10.01
10-19 yrs	63	8.09
20-29 yrs	96	12.32
30-39 yrs	88	11.30
40-49 yrs	106	13.61
50 or more	327	41.98
No answer	21	2.70
Total	779	100.00

(4) Before the disaster, were you planning to live outside Futaba in the future?

	Freq	%
Yes	81	10.40
No	664	85.24
No answer	34	4.36
Total	779	100.00

### 4. Income

(1) Current household income

Average: 3.35 million JPY

(2) Household income before the disaster:

Average: 5.26 million JPY

(3) Did you do job hunting after the disaster?

	Freq	%
Yes	185	23.75
No	507	65.08
No answer	87	11.17
Total	779	100.00

### 5. Public restoration housings

(1) What is your current situation about the public restoration housings.

	Freq	%
Currently living in it	46	5.91
Decided to live in it	31	3.98
Applied to live in it, and waiting for the result	10	1.28
Planning to live in it	8	1.03
Not living in it and have no plan to apply to live in it in the future neither	458	58.79
Other	40	5.13
No answer	186	23.88
Total	779	100.00

(2) For those who currently live in, decided to live in, or already applied to live in the public restoration housings, which public restoration housing are you currently living/planning to live?

(The aggregate result is omitted.)

(3) For those who have no plan to apply to live in the public restoration housings,

① Why you are not applying for the public restoration housings?

	Freq	%
Already bought a house	46	5.91
Other	31	3.98
No answer	186	23.88
Total	779	100.00

1) Currently, Nakoso-Sakai public restoration housings are under construction which have about 200 houses and a restaurant especially for Futaba residents.

Do you know about this public restoration housings?

	Freq	%
Yes	325	41.72
No	259	33.25
No answer	195	25.03
Total	779	100.00

② Do you think you have applied to live in the Nakoso–Sakai public restoration housing if it was built earlier?

	Freq	%
Yes	93	11.94
No	468	60.08
No answer	218	27.98
Total	779	100.00

⇒ For those who chose yes, by when if the restoration housing had been constructed, would you have planned to live in the restoration housings?

	Freq	%
September, 2017	5	5.38
March, 2017	4	4.30
September, 2016	6	6.45
March, 2016	10	10.75
2015	11	11.83
2014	14	15.05
2013	8	8.80
2012	4	4.30
2011	4	4.30
No answer	27	29.03
Total	93	100.00

6. Please feel free to write about any challenges you face, what you have noticed and what you feel.

We received many valuable opinions.

Thank you very much.