

Please participate in the survey about Otsuchi's water environment

The Research Institute for Humanity and Nature has been conducting research regarding natural springs and the three-spined stickleback in Otsuchi since 2008. We have found some clues that suggest positive impacts of submarine springs on fish production in Otsuchi Bay. In this survey, we inquire about everyday water use. Please participate by answering the questions below.

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Section 1: Please answer questions about your daily water use.

(1) Where do you live?

Own house

In temporary housing

Other ()

(2) Do you have access to natural water (e.g., spring water, groundwater, well) in your residence?

Yes

No

(3) What water sources did you use for the following usage before the earthquake disaster?

Please circle major sources.

1) Drinking and cooking

Tap water	Spring, well (groundwater)	River water (upstream water))
Purchased water	Other ()		

2) Laundry

Tap water	Spring, well (groundwater)	River water (upstream water))
Purchased water	Other ()		

3) Bathing

Tap water	Spring, well (groundwater)	River water (upstream water))
Purchased water	Other ()		

4) Gardening and car washing

Tap water	Spring, well (groundwater)	River water (upstream water))
Purchased water	Other ()		

(4) How much do you pay for obtaining water?

- Tap water _____thousand yen per month
- Purchased water _____hundred yen per month
- Groundwater (electricity bill and maintenance fee)
_____thousand yen per month

(5) Did you stay in Otsuchi in the two months immediately after the 2011 earthquake?

- () Yes [please go to Section 2]
- () No

(6) What was your main residence until recovery of the tap water system in May 2011?

- () Evacuation shelter
- () Own house
- () House of relatives or friends
- () Other ()

(7) What were your main water sources for the following uses in the week immediately after the earthquake? Please circle major sources.

1) Water for drinking

- Spring, well (groundwater) River water, upstream water Emergency water
- Water or beverage distributed at shelters Water sold or distributed at shops
- Other ()

2) Cooking

- Spring, well (groundwater) River water, upstream water Emergency water
- Water distributed at shelters Water sold or distributed at shops
- I did not cook during this period.
- Other ()

3) Laundry

- Spring, well (groundwater) River water, upstream water Emergency water
- Water distributed at shelters Water sold or distributed at shops
- I did not wash clothes during this period.
- Other ()

Section 3:

Many towns have shared wells of groundwater or upstream water. Some of these wells attract many tourists. The picture on the right is an example of such a well in Gujyo-Hachiman, Gifu. This well is properly maintained by the community members.

Otsuchi is losing many of its wells owing to the construction of embankments to mitigate the effect of tsunamis. We are seeking a way to preserve wells by organizing the community to maintain and clean them.



Suppose a shared well of pristine groundwater or upstream water is built in your area of residence. The residents of the neighborhood are expected to maintain the well. Note that the well water is available for drinking to everyone and during both everyday life and natural disasters. For each of the following questions, please choose the best option.

(1) Please choose your most preferred alternative.

Alternative 1: The well is located 10m from your house. There is no annual maintenance fee, and your household is required to participate in a weekly cleaning rotation.

Alternative 2: The well is located 50m from your house. The annual maintenance fee is 1,000 yen per household, and your household is required to participate in a monthly cleaning rotation.

Alternative 3: There is no need for a well.

My most preferred alternative is ().

(2) Please choose your most preferred alternative.

Alternative 1: The well is located 50m from your house. The annual maintenance fee is 500 yen per household, and your household is required to participate in a monthly cleaning rotation.

Alternative 2: The well is located 100m from your house. The annual maintenance fee is 100 yen per household, and there is no need for cleaning work.

Alternative 3: There is no need for a well.

My most preferred alternative is ().

