

Supplementary Materials

Questionnaire

1. Where do you live?

_____ Province/City, _____ County/District, _____ Town/Street, _____ Village

2. Distance of your home from the Yanghe River and Yongding River and the Guanting Reservoir? _____ km

3. To what extent do you know about water-stressed conditions in Hebei and Beijing?

(1) Don't know at all. (2) Don't know much. (3) Neutral.

(4) Somewhat known. (5) Very well known.

4. To what extent do you know about the status quo of water resources in the Guanting Reservoir?

(1) Don't know at all. (2) Don't know much. (3) Neutral.

(4) Somewhat known. (5) Very well known.

5. Name of the nearest river or reservoir to your home?

(1) Yanghe River. (2) Sanggan River. (3) The Guanting Reservoir.

(4) Yongding River. (5) Other.

6. What is the flow condition of rivers or reservoirs near your home in the past five years?

(1) A large amount of water all year round.

(2) A large amount of water in seasons.

(3) A normal amount of water all year round.

(4) A normal amount of water in seasons.

(5) A small amount of water in seasons.

(6) Almost dried up.

7. How about the current water quality of rivers or reservoirs near your home?

(1) The water is clear and tasteless. (2) The water is relatively clear and tasteless.

(3) The water is a bit turbid and tasteless. (4) The water is very turbid and a bit odorous.

(5) The water is very turbid and smelly.

8. How do you think the local water quality has changed in the last five years?

(1) Improved. (2) A little bit improved. (3) No change. (4) Somewhat deteriorated. (5) Deteriorated. (6) Sometimes improved but sometimes deteriorated. (7) Not much attention.

9. Do you think it is necessary to control ecological damage and environmental pollution in the Yongding River–Yanghe River Basin?

(1) Not necessary at all. (2) Not urgent. (3) Neutral. (4) Urgent. (5) Very urgent.

10. To what extent do you pay attention to the water resources and ecological environment destruction in the Yongding River–Yanghe River Basin and the Guanting Reservoir?

(1) Pay no attention and don't know at all. (2) Pay little attention.

(3) Pay attention occasionally. (4) Pay more attention and know important environmental protection events. (5) Pay more attention and know very well.

11. Do you think the change in the ecological environment of Yongding River–Yanghe River and the Guanting Reservoir, whether getting worse or better, is related to you personally?

(1) No, it doesn't matter.

(2) Yes, it feels like it will affect life, but it won't affect too much.

(3) Yes, it will affect life because of environmental degradation, but it will not bring any benefits.

(4) Yes, the changes in the ecological environment are very related to life.

12. Compared with economic development, how important do you think it is to protect the water quality and improve the watershed environment in the Yongding River Watershed?

(1) Less important than economic development.

(2) Equally important.

(3) Superior to economic development.

13. Do you agree that the Yongding River–Yanghe River Basin can use its water resources arbitrarily to develop the economy?

(1) Yes. (2) No.

14. Do you agree that industries can discharge pollutants into Yongding River–Yanghe River Basin to develop the economy?

(1) Yes. (2) No.

15. Do you know that the upper reaches of the Yongding River have restricted local economic development to protect water resources and the environment?

(1) Yes. (2) No.

16. Do you know the Guanting Reservoir Water Protection Zone at the junction of Huailai County in Hebei Province and Yanqing District in Beijing?

(1) Yes. (2) No.

17. What do you think are the most serious ecological and environmental issues of the Yongding River–Guanting Reservoir?

(1) The water volume becomes smaller or even dried up.

(2) The water quality is poor and the pollution is serious.

(3) The aquatic plants and animals and the ecosystems of the flora and fauna are damaged.

(4) The ecological environment of both banks of the river and around the reservoir encounters damage, and water and soil loss is serious.

(5) The digging of the sand and aggregate on the riverbed and river course.

18. How important is environmental protection in the Guanting Reservoir and its upstream generating influence on the downstream watershed and the water quality and quantity of Beijing?

(1) Not important at all. (2) Not important. (3) Neutral.

(4) Relatively important. (5) Very important.

19. How important is investing in the construction of water conservancy, river rehabilitation, head-water forest construction and management, sewage treatment construction, etc., for environmental protection of the Guanting Reservoir and its upstream watershed?

(1) Not important at all. (2) Not important. (3) Neutral.

(4) Relatively important. (5) Very important.

20. Do you know the environmental protection measures made by the government for the Guanting Reservoir and its upper reaches as water sources?

- (1) River regulation and ecological restoration projects.
- (2) New construction and upgrading of sewage treatment plants and discharge pipe network infrastructure.
- (3) Prohibiting the construction of new sewage discharge enterprises, closing high-risk enterprises, and supervising the remaining enterprises.
- (4) New rural reconstruction, clean energy use, toilet renovation, and construction of agricultural domestic sewage treatment facilities.
- (5) Agricultural non-point-source pollution control, drip irrigation, directive fertilization, the prohibition of highly toxic and highly residual pesticides, and garbage disposal.
- (6) Returning farmland to forests, strictly prohibiting deforestation, maintaining water and soil, and conserving water resources.
- (7) Strictly forbidden to dig sand in the river and quarry near the riverbank.
- (8) Set up a surface water protection zone for the first- and second-level protection areas of the reservoir within 1 km of both sides of the river.
- (9) Construction of two lines of “ecological restoration and management” to build small clean watersheds for water sources in mountainous areas.

21. What changes have you seen in the surrounding environment since the implementation of these measures?

- (1) It is getting worse. (2) No change. (3) It is getting better.

22. Who do you think has the responsibility and obligation to protect the water resources and environment of the Yongding River, the Yanghe River, and the Guanting Reservoir?

- a. Upstream area: (1) Enterprises. (2) Residents. (3) Local government. (4) Central government. (5) All of the above.
- b. Downstream area: (1) Enterprises. (2) Residents. (3) Local government. (4) Central government. (5) All of the above.

c. The entire basin: (1) Enterprises. (2) Residents. (3) Local government. (4) Central government. (5) All of the above.

d. Do not know.

23. What do you think are the main benefits of Yongding River and the Guanting Reservoir? (multiple choices, up to 3 items)

(1) Flood control benefits (avoiding flood disasters in the downstream areas).

(2) Water supply benefits (agricultural irrigation in Beijing–Tianjin–Hebei).

(3) Water supply benefits (industrial use, urban groundwater, and domestic water).

(4) Power benefits (providing a large amount of electrical energy).

(5) Economic benefits (aquaculture, tourism, and food service industries).

(6) Landscape ecological benefits (e.g., wetland park construction).

(7) Humanistic resource benefits (famous mountain culture, ancient city/ancient village, religious culture).

24. What do you think are the main environmental problems for meeting the requirements for the Winter Olympic Games venue?

(1) Water supply (not enough water for drinking and irrigation).

(2) Poor water quality (smelly and turbid).

(3) Serious soil erosion (poor soil and water conservation capacity).

(4) Low forest cover and indiscriminate logging.

(5) Pesticide and fertilizer use (non-point pollution).

(6) Residential household waste disposal.

(7) Agricultural farming (pigs, sheep, cattle, etc.).

(8) Environmental impact caused by mining (coal, stone, sand).

(9) Pollution discharges from industrial enterprises.

25. If you live downstream and are a beneficiary of environmental improvement, would you like to contribute to protecting the upstream environment?

(1) Yes. (2) No.

26. How much would you like to contribute? CNY ____.