

Survey Questionnaire on Socioeconomic and community awareness of Wastewater treatment using nature-based solutions

*This survey is made to you to undertake as part of a research project for the partial fulfilment of the research on **Assessment of the efficiency of urban wastewater treatment by a nature-based solution**. I would like to know about Wastewater quality, Socioeconomic and Community awareness of existing treatment plants and the efficiency of urban wastewater treatment by green roof in Ho Chi Minh city/ constructed floated wetlands in Can Tho city. The survey will take approximately 30 minutes and details of respondents and interviews will be processed privately and securely. Please answer the questions honestly and as truthfully as you can.*

Thank you so much for your enthusiastic participation and filling out this survey!

A. General information

DATE: /...../2022

No:.....

District: _____ Ward _____ Block _____ Unit _____

Street:

B. Household details

1. Is there the head of the household?

2. Members of the Household

No	Pseudonym names	Education	Age	Male/Female	Income
1					
2					
3					
4					
5					

C. Water Source and Supply

3. What is the source of your water supply? Please tick the appropriate answer.

Ponds Wells Lakes Rivers Piped water supply ,
Private water supply self-Pump/Motor (tank) Other (*specify*).....

4. What do you use piped water for? Please tick indicated responses.

Washing Bathing Drinking Watering garden

General cleaning and household purposes Other (*specify*)........

5. If you use piped water, what is your family's average water usage each month?

M³:/ Month OR Litres:/ Month

D. Wastewater Management

6. Is a drainage system available in your area?

Yes No (if Yes cont. to Q10)

7. What kind of drainage system is it?

Temporary drainage Cement and bricks drainage Open
Underground Covered with steel Other (specify).....

8. In your opinion, who maintains the drainage system?

Municipal Committee Self-maintained Community Others(specify).....
.....

9. Frequency of flooding

1 2 3 4 5
Never Sometimes Normal Regular Very often

You can tell me why if there's flooding:
.....

10. After the construction of the cement embankments in this area is still flooded?

1 2 3 4 5
Unaware More flooding Still as flooded as Less flooding No more
before than before flooding

11. So far, has any plants/works treated water sources in canals?

1 2 3 4 5
Not paying Without Yes, but very little Many There's a lot
attention

If so, what is the water treatment system in the channel:.....
.....

12. If any, the quality/effectiveness of the wastewater treatment system

- | | | | | |
|-----------|------|------------|------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very less | Less | Acceptable | Good | Very good |

E. Quality of water environment

Please circle the selected answer

13. How do you feel about the water quality of Tham Tuong/Black canal today?

- | | | | | |
|-----------|------|------------|------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very less | Less | Acceptable | Good | Very good |

If it's bad or very bad, please give me a reason:

14. Would you like to indicate the level of satisfaction with the surrounding water quality?

- | | | | | |
|-----------|------|------------|------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very less | Less | Acceptable | Good | Very good |

15. Trends in water quality changes before and after construction of the nature-based solution?

- | | | | | |
|-----------|------|------------|------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very less | Less | Acceptable | Good | Very good |

16. How do you feel about the water source of Tham Tuong/Black canals?

On color:

- | | | | | |
|-------|------------|--------|--------------|------|
| 1 | 2 | 3 | 4 | 5 |
| Black | Gray/brown | Yellow | Opaque white | Blue |

About the smell:

- | | | | | |
|-----------|------|------------|------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very less | Less | Acceptable | Good | Very good |

17. Assess the extent of the impact of pollution of surface water resource in the canals (smell, color, dirty blackwater)

Mark X in the selected answer

Influence	No influential	Little influential	Influence	Quite influential	Very influential
Life/Daily activity					
Health					
Business/trading					
Aesthetics					

F. Social issues

18. According to you, the difficulties/obstacles in treating polluted water in canals here?

	No	Little	Average	Many	There's a lot
Not personal land (Most households rent land for business)					
Low awareness of the people in this area					
Low awareness of people walking/past by on the road/along the canals					
Management/sanctioning measures are not strict					
Lack of polluted water treatment works					
Lack of public trash cans					
The collection company's garbage collection frequency is low					
Other					

19. What solutions to propose to improve water quality in canals?

	Ureasonable	less reasonable	Average	Reasonable	Very reasonable
The propaganda work to raise the awareness of environmental protection of the people here					
Construction of appropriate/effective wastewater treatment works					
Take measures to manage/sanction discharge acts					
Do not dump waste into the canal					

24. How much your income increase after the construction of the nature-based works?

- 1 2 3 4 5
0-20% 20%-40% 40%-60% 60%-80% More than 80%

G. Health

25. To what extent do you agree with the following statement? Water pollution is the main cause which affects local people's health?

Strongly disagree Disagree Neither disagree nor agree Agree Strongly agree

Has anyone in your household suffered from any of the listed diseases during the last three months? (If yes, please select the diseases listed below)

- | | | | | | | | |
|----------|--------------------------|-----------|--------------------------|--------------|--------------------------|--------------------------|--------------------------|
| Diarrhea | <input type="checkbox"/> | Dysentery | <input type="checkbox"/> | Dengue | <input type="checkbox"/> | Typhoid | <input type="checkbox"/> |
| Ringworm | <input type="checkbox"/> | Scabies | <input type="checkbox"/> | Cholera | <input type="checkbox"/> | Malaria | <input type="checkbox"/> |
| Cough | <input type="checkbox"/> | Asthma | <input type="checkbox"/> | Skin disease | <input type="checkbox"/> | Other (<i>specify</i>) | |

.....

26. How much is the average medical expense of your household per year in Million Vietnamese dong (mil VND)? Please tick on the appropriate cost.

- 0 – 1mil 1-3mil 3 – 5mil 5 – 7mil > 7mil

H. Willingness to pay (WTP) for better sanitation and Wastewater management

27. Have you paid a wastewater services environmental fee monthly?

- Yes No

28. How much does your household currently pay in VND..... per month as tariff for sanitation and wastewater management?

29. If you would receive proper sanitation within the locality with its proper wastewater treatment. Given that you are required to pay for this service per year.

How much would you be willing to pay in VND?

- 2,500,000 VND/year/household (base) (under 5 m³ of wastewater/day)
- 3,000,000 VND/year/household (base) (5-10 m³ of wastewater/day)
- 4,000,000 VND/year/household (base) (10-20 m³ wastewater/day)
- Other.....

30. What is your satisfaction with the existing wastewater treatment service?

- Very satisfied Satisfied Neither satisfied nor dissatisfied
Dissatisfied Very dissatisfied

Thank you very much for your *Time* and your *Valuable contributions!*

Interviewer

Interviewee

.....

.....