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**REPORT ON
COMMUNITY BASELINE SURVEY
INCORPORATING
KNOWLEDGE – ATTITUDE – PRACTICE
& CUSTOMER SATISFACTION
SOC TRANG CITY – SOC TRANG PROVINCE**

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Ministry of Construction – Hanoi

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Technical Assistance on behalf of GTZ by GFA Consulting Group & Associates

Your contact
with GFA Consulting Group GmbH

Gudrun Krause

Fax +49 (40) 6 03 06169

Email: gudrun.krause@gfa-group.de

Address

GFA Consulting Group GmbH

Eulenkrugstraße 82

D-22359 Hamburg

Germany

This report was prepared by

**Center for Social Work and Community Development
Research and Consultancy (SDRC)**

CONTENTS

CHAPTER I: INTRODUCTION	1
I. LOCATION OF THE SURVEY	1
II. BACKGROUND OF THE SURVEY.....	2
III. OBJECTIVES OF THE SURVEY	3
CHAPTER II: METHODOLOGY.....	5
I. SCOPE OF SURVEY.....	5
1. Survey Sites and Target Groups.....	5
2. Methods and Tools	5
3. Data Analysis	5
4. Survey Sampling.....	6
II. SURVEY TEAM.....	8
III. ADVANTAGES AND LIMITATIONS OF THE SURVEY	9
CHAPTER III: RESULTS OF THE SURVEY.....	10
I. SOCIO-ECONOMIC SITUATION OF THE SURVEYED SITES.....	10
II. GENERAL INFORMATION OF THE SURVEYED HOUSEHOLDS.....	11
1. Age and Gender of Interviewees	11
2. Ethnicity	12
3. Educational Level.....	12
4. Profession and Average Monthly Household Income in Last 12 Monhts.....	12
5. Number of Members in the Households	14
6. Means of Entertainment/Facilities.....	14
III. KNOWLEDGE – ATTITUDE – PRACTICE/BEHAVIOUR SURVEY RELATED TO WASTEWATER, SOLID WASTE, PUBLIC LIGHT SYSTEM, TREES AND PARKS. 14	
1. Sanitation/Household Toilet.....	15
2. Wastewater /Drainage	17
3. Solid Waste.....	21
4. Public Light System	23
5. Tress and Parks.....	24
IV. INFORMATION, EDUCATION AND COMMUNICATION PRACTICE.....	25
V. SATISFACTION ON PIPED WATER, WASTEWATER AND SOLID WASTE SERVICES.....	31
CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS	34
I. CONCLUSIONS	34
II. RECOMMENDATIONS	35
1. Wastewater	35
2. Solid Waste Collection Service	35
3. Public Light System	36
4. Green Trees and Parks.....	36
5. IEC Practice / Activity.....	36

6. Customer Service	38
7. Willingness to Pay.....	38

APPENDICES

APPENDIX 1: QUESTIONNAIRE	40
APPENDIX 2: IDI & FDG GUIDELINES	51
APPENDIX 3: DISTRIBUTION AND CONSTITUTION OF FDG IN THE SURVEYED WARDS.....	57
APPENDIX 4: THE LIST OF INTERVIEWERS.....	58

ABBREVIATIONS

BLS	Baseline Survey
CCU	Customer Care Unit
CPA	Community Participatory Approach
CPM	Community Participatory Management
CRM	Customer Relation Management
FGD	Focus Group Discussion
Hh	Household
IdI	In-depth Interview
IEC	Information - Education – Communication
KAP	Knowledge - Attitude – Practice
MO	Mass Organization
PAC	Public Awareness Campaign
SDRC	Center for Social Work and Community Development Research and Consultancy
STUPWC	Soc Trang Urban Public Works Company
VND	Vietnam Dong (currency)
WWC	Wastewater Management Companies
WWM	Waste Water and Solid Waste Management

LIST OF TABLES

Table 1: Detailed overview of survey target group	7
Table 2: Time frame of the survey	8
Table 3: Profession and average monthly income in last 12 months	13
Table 4: Type of drainage system households are connected to and connection date	18
Table 5: The use of solid waste collection service including frequency	21
Table 6: Improving the solid waste collection service	23
Table 7: Public lighting system	23
Table 8: Perception about the maintenance quality of trees and parks	24
Table 9: Frequency of receiving information	26
Table 10: Level of effective communication with households by the company	27
Table 11: Loudspeaker system in the surveyed wards	30
Table 12: Customer service satisfaction with wastewater, solid waste service, public lights, trees and parks maintenance	31
Table 13: Complaints about services supplied by STUPWC	31
Table 14: Courtesy of company's staff	32
Table 15: Effectiveness of complaint resolution	32
Table 16: Speed of resolution	33

LIST OF FIGURES

Figure 1: Set-up of German Development Cooperation for Wastewater and Solid Waste Management in Vietnam	2
Figure 2: Age and gender of interviewees (in percent).....	11
Figure 3: Ethnicity of interviewees (in percent).....	12
Figure 4: Education level (in percent).....	12
Figure 5: Number of members in surveyed households (in percent).....	14
Figure 6: Means for entertainment/facilities (in percent).....	14
Figure 7: Household toilets (in percent).....	15
Figure 8: Do empty tank (in percent)	16
Figure 9: Perceived environmental impact of discharging wastewater to the river.....	16
Figure 10: The sources of wastewater around the house (in percent)	17
Figure 11: Satisfaction with the current drainage situation around the homes	18
Figure 12: Reasons for being dissatisfied with the current drainage situation.....	19
Figure 13: Do you agree that wastewater should be treated before it returns to the river? (in percent).....	19
Figure 14: Amount customers are willing to pay for wastewater treatment per m3	20
Figure 15: Payment for solid waste collection service per m3 (in percent).....	21
Figure 16: Satisfaction with the solid waste collection service (in percent)	22
Figure 17: Satisfaction with Trees and Parks (in percent).....	24
Figure 18: Receiving information on piped water, wastewater, and sanitation during the last six months (in percent).....	25
Figure 19: Source of received information (in percent).....	26
Figure 20: IEC channels perceived as very effective/effective by interviewees	28
Figure 21: The most influential person for communication information (in percent)	29
Figure 22: Frequency of public meetings held in the ward (in percent)	29
Figure 23: UNICEF’s basic formula for the IEC strategic approach in Vietnam	37

EXECUTIVE SUMMARY

This baseline survey (BLS) was implemented in 4 wards of Soc Trang City in the scope of the German- funded Waste Water and Solid Waste Management Program (WWM), which is currently implemented in six provinces of Vietnam. The objective of the BLS was to determine the current knowledge, attitudes and practice of people regarding waste water and environmental sanitation services at the household and community level. The study aims to identify, among other things, the most effective means of informing, educating and communicating with the community in order to improve the quality of Soc Trang's Urban Public Urban Works Company (STUPWC).

The BLS used a participatory approach, involving 11 STUPWC staff, together with four staff of HCMC-based 'Center for Social Work, Community Development Research and Consultancy (SDRC)'. Survey tools were developed by a group of consultants from WWM and SDRC who then provided a four-day full-time training on how to conduct social surveys to the STUPWC- staff in March 2008. Data was collected in Soc Trang City in April 2008. Household interviews (quantitative questionnaire) were conducted with 350 households, focus group discussions (FGD) were facilitated with nine community groups, and in-depth interviews (IDI) were conducted with nine key informants at the city, district and ward levels. Analysis of quantitative data was done using the program SPSS (version 12.0), while qualitative data from FGD and IDI were clustered according to specific entries to illustrate and validate the quantitative data.

Consequently, the findings of the survey are presented in three main parts:

- I. KAP related to wastewater, sanitation, public light system, trees and parks;
- II. Information, education, communication practice;
- III. Customer service satisfaction on piped water, wastewater and solid waste service, public light system, green trees and parks.

In the following, key information of the survey are summarized.

KAP Related to Waste Water and Sanitation

Sanitation/ Household toilets

There is a very high distribution of household toilets - 94.6% of interviewees reported having one. Of those, the vast majority (93.7 %) reported having a septic tank toilet. Interviewees displayed a low knowledge regarding environmental sanitation; only roughly 51 % of interviewees understood the link between using the river for defecation and the danger for public as well as personal health. Moreover, only 8 % stated that they believed that using the river or field as a toilet was not harmful at all. Additionally, there are still a few people who used fishpond toilets and who were not aware of any harmful effects of this situation.

Wastewater/ Drainage

To date, the wastewater only flows from the households to the public drainage system along the main road. Most of households (64.6%) are connected with the drainage system. Of those connected households, the majority is connected to covered drains (70.8%); and most have been connected for more than three years (69.5 %). Problems such as; flooding and bad smells caused by small and blocked drains exist. Household connections to the drainage system for the wastewater from the households are limited, especially in the alleys of surveyed wards. One consequence is the increased incidence of stagnant water in the rainy season in which mosquitoes breed.

All those 71.4% of interviewees who agreed that wastewater should be treated (cleaned) before it flows to the river were also willing to pay for wastewater treatment. However, they

indicated that the cost of wastewater treatment should be calculated at a rate to suit the economic conditions of the households, most of all, it should be affordable.

Solid waste

93.7% of interviewees in the surveyed wards use the solid waste collection service. The vast majority of them, 92.9%, were satisfied with the service and the costs were considered reasonable by 85.1% of respondents. A daily collection service was considered appropriate. However, the solid waste collection service does reportedly not operate in the small alleys or more remote areas. Those households not using the solid waste service (6.3 %) and those people living in small alleys and remote areas, disposed their waste and garbage by burning, burying, throwing it into fields, ditches or in empty plots of land.

Public lighting system

92.9% interviewees stated to have public lighting in their. Most of them were satisfied with the distance of the lights (85.4%), the brightness of the lights (85.7%), and the replacement of broken lights (77.7%). However, public lighting is still inadequate or non-existent in the alleys. People in those places have to set up their own public light system.

Trees and Parks

Some areas in the surveyed wards are perceived to not have adequate trees and parks. Only 38% of interviewed households expressed their satisfaction with the amount of trees and parks in their areas. While there are trees in some areas but there only in the main streets, in some remote streets the STUPWC just recently has planted trees.

IEC Practice/ Activities

There is a serious lack of IEC activities which is manifested in the very low levels of interviewees reporting that they have been informed on water, wastewater and sanitation issues in the past six months: Roughly between 80 – 90 % (depending on the issue) report to not have received any information on aforementioned issues in the last six months.

In descending order, the most used channels in the sparse information campaigns that took place so far are “television”, “neighbors/ friends” and “respected people in the ward”. The channels perceived as most effective are “home visit”, “television”, “neighbourhood/ ward meeting”. This means there is close correlation between “most used” IEC communications channels and those perceived as “most effective”.

Satisfaction with Piped Water, Waste Water and Solid Waste Collection Service

The solid waste collection services recorded the highest satisfaction ratings among interviewees (66.3%)- when the water, wastewater and solid waste collection services are compared. A quite high percentage (38 %) rated the Wastewater service as unsatisfactory. However, it has to be noted, that only very few of those dissatisfied actually report their complaints to the company. In addition, people were not satisfied with the courtesy of company's staff when they handle people's complaints.

CHAPTER I: INTRODUCTION

I. LOCATION OF THE SURVEY

Sóc Trăng is a coastal province in the Mekong Delta region located in the South of Vietnam between the two large Rivers – the Hau Giang and the My Thanh bordering on the East Sea. In the North West and the North is Hau Giang province, in the South West is Bac Lieu province. In addition, in the North East is Tra vinh province. Soc Trang province is situated on National High Way No1, which connects with Can Tho City, Hau Giang, Bac Lieu, and Ca Mau province. On the National Road No.60, it connects with Tra Vinh and Ben Tre Province.

Soc Trang province has eight districts and one City including Ke Sach, Long Phu, Cu Lao Dung, Mỹ Tú, My Xuyen, Nga Nam, Thanh Tri, Vinh Chau, and Soc Trang City with a total natural area of over 3,310. 02 km² and the land of city is 18, 44%, the land of rural is 81, 56%. Soc Trang has a population of approximately 1,302,562 (year 2007), There is an average of 394 persons/km² – the lowest density in the Mekong Delta provinces (434 persons/km²): 65, 2% of the population in Soc Trang province with are Kinh; 28, 9% Khmer; and 5, 9% Chinese.

Soc Trang City



The provincial centre is Soc Trang City, situated on National Highway No 1, about 231 kilometers from Ho Chi Minh City and 60 kilometers from Can Tho City.

Physical features:

- Total area 7,615,22 ha with 10 wards (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10)
- The agricultural land is 6, 289, 051 ha.

Population: 125.522 people

- Kinh: 74,766 people (59.56%)
- Khmer: 30,544 people (24, 33%)
- Chinese: 20,145 people (16%)
- Others: 67 populations (0.11%)

Clean water: In 2007: 24, 688 households used clean water

Solid waste: In 2007: 1,510 households joined a solid waste collection service; the total of households who are using the solid waste collection service is 17,375 households.

Sewerage/drainage system:

- Covered drainage: 31, 786m
- Ditch: 19,770m
- Gas Holes 1,606

It is planned to rapidly develop Soc Trang province and Soc Trang City and raise the living standards of the people. Aside from the task of expanding economic and industrial development, Soc Trang City people face many environmental problems of which municipal solid waste management and wastewater treatment is perhaps the greatest.

At present, the Municipal Solid Waste Collection and Management in Soc Trang province, is primarily concerned with meeting increasing demand. Planning for wastewater treatment is not very effective. Much of the wastewater and part of rubbish that is collected flows or is thrown into canals/streams and solid waste is dumped at sites often without specific planning and concrete policies/guidelines. As a result, residents' health and environment are threatened.

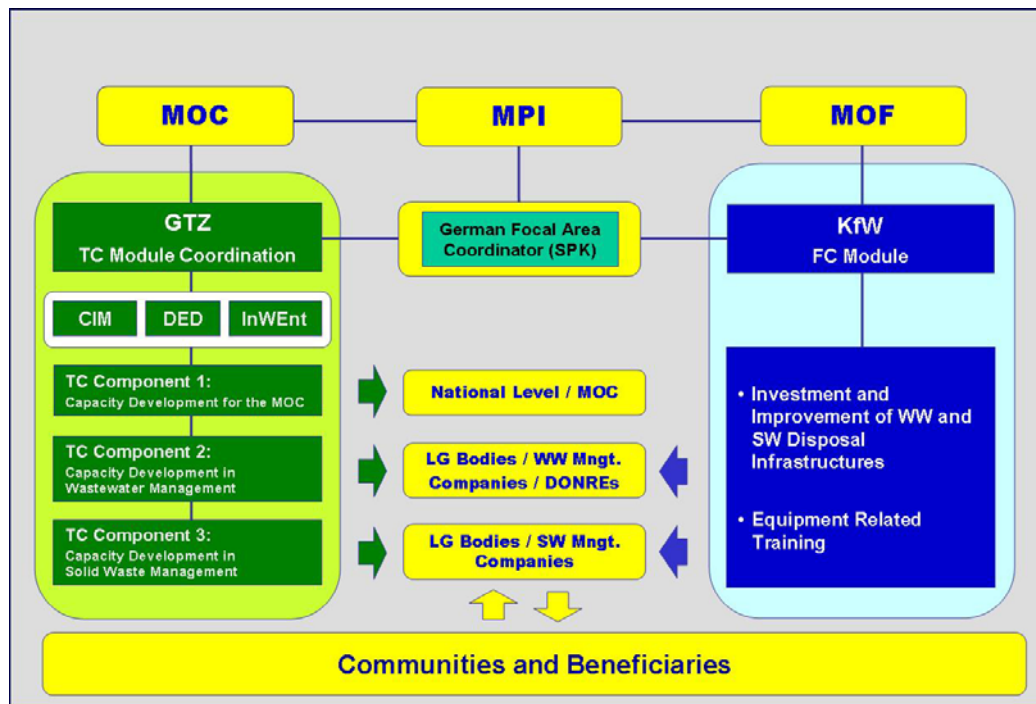
II. BACKGROUND OF THE SURVEY

“Wastewater and Solid Waste Management in Provincial Centers” is a program funded by the German government and jointly implemented by different institutions of the Government of Vietnam and several German Development Cooperation (GDC) agencies. The program consists of two complementary modules (Figure 1):

- a) the Financial Cooperation (FC) module, jointly financed by the German Development Bank (KfW) and the Government of Vietnam (GoV), and
- b) the Technical Cooperation (TC) module, implemented by the German Technical Cooperation (GTZ), the German Development Service (DED) and InWEnt with the Ministry of Construction (MOC) as the responsible line ministry.

The FC module focuses on the provision of new infrastructure facilities for wastewater and solid waste management in currently six provincial cities in Vietnam. The TC module consists of three components that provide “Capacity Development for the MOC” (TC Component 1), “Capacity Development in Wastewater Management” (TC Component 2) – also referred to as “WWM” – and “Capacity Development in Solid Waste Management” (TC Component 3) – also referred to as “SWM”.

Figure 1: Set-up of German Development Cooperation for Wastewater and Solid Waste Management in Vietnam



The overall objective of the cooperation program reads:

“Conditions for sustainable wastewater disposal and solid waste management are improved.”

The present study was conducted in the scope of TC Component 2 (WWM) that is implemented by GFA Consulting Group on behalf of German Technical Cooperation (GTZ) and commenced in February 2005. In August 2008, WWM launched its second phase that is scheduled to end in July 2011.

At this point, WWM is providing technical support to local governments, public wastewater companies (WWC) and Departments of Natural Resources and Environment (DONRE) in six provincial urban centers in Vietnam, including the cities of Bac Ninh, Hai Duong, Vinh, Can Tho, Soc Trang and Tra Vinh. Depending on the outcome of ongoing investment studies and the availability of sufficient funds, an extension of WWM to more cities is foreseen within the current phase. WWM focuses on creating favorable conditions for improved public wastewater services and raising awareness on wastewater related issues among the communities and beneficiaries. The overall objective of TC Component 2 is accordingly:

“Wastewater management in the supported provincial centers is improved.”

In order to achieve this objective, WWM applies a holistic approach and concentrates its activities on capacity building on the following seven areas:

- Local Government Level
 - Creating favorable local institutional framework conditions for wastewater management
- Wastewater Company Level
 - Institutional & organizational development
 - Financial management & tariff calculation
 - Asset management, operation & maintenance (O&M) and documentation
 - Customer relations management and community participation, and
 - Human resource management
- DONRE Level
 - Surface water and effluent discharge monitoring

The present Community Baseline Survey (BLS) is attributed to the support of the WWCs in the improvement of customer relations and community participation. The TC component commissioned two Vietnamese consulting companies to implement a total of six surveys. Necessary preparations were made in close collaboration with the Customer Care Units (CCUs) of the participating WWCs as well as WWM advisors. Preparations included, among other things, the finalization of data collection tools, training of interviewers, and interviewee selection. The surveys in the three northern provinces were conducted by the sub-contractor CEPAC, a Vietnamese company specialized in household surveys. SDRC, another Vietnamese survey institution, was commissioned to conduct this study in the three provinces in the Project Area South, Can Tho, **Soc Trang** and Tra Vinh.

III. OBJECTIVES OF THE SURVEY

The survey team conducted the interviews with representatives from local authority leaders and related mass organizations and branches at provincial and ward levels as well as

individual households living in the four (4) wards of the capital towns. Specific objectives of the survey are as follows,

- 1) To determine *the current practices of urban people* in the program sites regarding the management of water supply, wastewater, storm water and sanitation.
- 2) To determine *the current knowledge of people* in the program sites regarding the management of water supply, wastewater, storm water and sanitation.
- 3) To determine *the current attitudes of people* in the program sites towards the management of water supply, wastewater, storm water and sanitation.
- 4) To determine *the main influences on customers' attitudes* towards water supply, wastewater, storm water and sanitation.
- 5) To determine *the main constraints on customers* increasing their knowledge of water supply, wastewater, storm water and sanitation.
- 6) To provide *information* to the Water Supply and Sewage Companies and other stakeholders in order *to improve the effectiveness* of their CRM and CPM programs, including targeted Program Information Campaigns, Public Awareness Campaigns, the developing of IEC materials and selection of suitable Pilot Measures.
- 7) To provide *information on customer satisfaction and needs* to the Water Supply and Sewage Companies in order to improve the performance of Customer Care Units.
- 8) To identify the most effective means of informing, educating and communicating with the community on program-related issues.
- 9) To determine, the views of customers regarding the level of services provided by the company including as well as their attitudes concerning wastewater tariffs.
- 10) To provide on- the-job capacity building to officers of partner companies on the subjects of participatory research, basic skills and techniques for conducting base-line studies.

CHAPTER II: METHODOLOGY

I. SCOPE OF SURVEY

1. Survey Sites and Target Groups

The survey was conducted in the four wards participating in the WWM Program for Soc Trang City - wards 1, 3, and sub-urban 5 and 9. Details of the target groups surveyed follow:

- At the city level: Representatives of leaders from City, Ethnic Committee and Urban Management Officers. The monks of the two Khmer temples in the Program pilot area are also the target of survey
- At the ward level: Representatives of leaders from local authority (Vice-chairman of the wards), mass organizations and households in ward one, 3, 5, and 9.

2. Methods and Tools

The survey applied community participatory approach. Before the survey was conducted, the consultants of Center for Social Work and Community Development Research and Consultancy (SDRC) provided skills training for staff of Planning Department of Water Supply and Drainage Company in Tra Vinh province, Can Tho City and the Soc Trang Urban Work Company, through a formal training course in Tra Vinh Town. During the whole process of the survey in Soc Trang City, 10 staff of STUPWC had their skills enhanced/ and capacity improved through their application of acquired knowledge and skills in conducting the interviews and the participation and cooperation of four SDRC researchers.

Both qualitative and quantitative methods were used in this BLS, supporting a participatory approach. The quantitative methods were used to collection reliable and representative data; the qualitative methods such as focus group discussions (FGDs), and in-depth interviews (IDIs) were used to clarify and explain the quantitative results.

Tools used for data collection included; the six guideline questioning tools - four for in-depth interviews, one for FGDs and a detailed questionnaire for household interviews (used for four target groups: urban management officers, Ethnic Committee, Mass Organizations (MOs), hamlet leaders, and households) in combination with PRA tools. Details are as in the following,

- Secondary data collection of the four surveyed wards, and Soc Trang City,
- In-depth interview with representatives of city authority, local authorities, Urban Management Officer, ethnic committee leader, and two monks.
- Focus group discussion with representatives of MOs, hamlet leaders, and households.
- Primary, representative data collection from households via quantitative, standardized questionnaires.
- At-site observation and photo taking.

3. Data Analysis

Quantitative data from the questionnaires were treated with the use of frequency count and percentages. The figures and tabulations were done and the responses were sorted and counted to determine the number of interviewees that fall in each assigned category; after which, percentages were counted. Quantitative data was processed with the use of the SPSS software program (Version 12.0).

Qualitative data was analyzed by first organizing the data from transcribed audio-recorded interviews for IDIs; recorded on A0 paper, written on A4 paper for FGDs. The information obtained from IDIs and FGDs was then incorporated into presentations and reports.

4. Survey Sampling

Ward 1, 3, 5 and 9 were selected for participating in the baseline survey based on the socio-economic differences.

4.1 In-depth Interview with Local Leaders

In-depth interviews with leaders at the city level included one vice-chairperson of Soc Trang City, one head of Policy and Law department of Ethnic Committee, and one head of urban management office, two Khmer monks, and four local authority leaders at the ward level who were chairpersons or vice-chairpersons of wards 1, 3, 5, and 9.

4.2 Focus Group Discussion

The three wards, 1, 3 and 5 with 9 were selected for FGDs. In each ward, there were three focus group discussions including one group of MOs leaders (Women's Union, Youth Union and hamlet leaders), one male group and one female group.

4.3 Individual Houses Selected based on

Sample size¹ selected with confident level of 95% at a margin of error (confidence interval) of 5%. 350 Households were interviewed with the quantitative questionnaire in order to get representative results.

- The list provided by STUPWC
- Number of households and location of each ward
- Random households selected at an interval of 10 - 20 based on/calculated from the list and the agreed number of households for interview.
- Age of the interviewee ranged from 25-55 years of age
- Balance of number of female and male interviewees.

In total of number local leaders, officers, ethnic committee, monks, groups of MOs, hamlet leaders and the households interviewed in Soc Trang City are presented on the details in table 1.

¹ Sources: These results were obtained by using two independent online sample size calculator applications (www.surveysystem.com/sscalc.htm, www.raosoft.com/samplesize.html) and Methodology and Techniques used in social research – Nguyen Xuan Nghia, 2004, p.73)

Table 1: Detailed overview of survey target group

Position/ Location	In-Depth Interviews	Focus Group Discussions			Households Interviews
At Provincial level					
Vice-chairperson of City	1	-			-
Head of Policy and Law Committee (Ethnic Committee)	1	-			-
Vice Head of Urban Management Office	1	-			-
Monks	2	-			-
Total	5	-			-
At Ward level	Vice-Chairpersons	Group of Women's Union, Youth Union, and Hamlet leaders	Male Group	Female Group	Households
Ward 1	1	1	1	1	50
Ward 3	1	1	1	1	150
Ward 5	1	1	1	1	100
Ward 9	1	-	-	-	50
Total	4	3	3	3	350

4.4 Quality Management Measure

Several quality assurance/management measures were put in place by the research team in close consultation with the STUPWC and WWM staff to assure the reliability and validity of the data collected. Main measures included:

- Pre-testing questionnaires: Before the beginning of the main quantitative data collection, questionnaires were pre-tested during mocked interviews and also in the field with a small sample size. The rationale was to familiarize interviewers with the questionnaire and its structure. Additionally, at this stage potential pitfalls in structure and/or understanding of the questionnaire could be cleared.
- Supervising interviewers: Interviewers were grouped and each group was supervised by a staff member of SDRC. The supervisor was, on the one hand, the principal contact partner for interviewers during the data collection process. On the other hand, he/ she was responsible to oversee the data collection and to assure proper interview conduction and thus valid data.
- Checking questionnaires: Each day after interviews have been finished, the interviewers submitted their completed questionnaires to the SDRC staff. They then checked whether the questionnaires have been completed accurately and in accordance with the given standard. In case of inadequacies interviewees were asked to either solve the problem

immediately or if necessary to go back to the respective household in order to solve the objection.

- Validating interviews: WWM experts randomly checked 10% of scheduled interviewees by phone call or personal contact.
- Recording in-depth interviews: According to the latest standards in social research, in-depth interviews were electronically recorded – when allowed to - with a tape recorder. Subsequently, these interviews were transliterated and thus made available for proper categorization in accordance with the research interests.

4.5 Time Frame of the Survey

Table 2: Time frame of the survey

No	Tasks	Time
1.	Discussion between WWM Consultant and SDRC staff: <ul style="list-style-type: none"> - Preparation and Planning - Design of survey tools 	03-04/ 03/ 2008
2.	Discussion among related partners: WWM Consultant and SDRC staff and Directorate board of related official company of the three provinces: <ul style="list-style-type: none"> - Tra Vinh Water Supply and Drainage Company - Soc Trang Urban Public Work Company - Can Tho Water Supply and Drainage Company 	05-07/ 03/ 2008 05/ 03/ 2008 06/ 03/ 2008 07/ 03/ 2008
3.	Short training course for staff of the three provinces related companies of Tra Vinh, Soc Trang and Can Tho	19-22/ 03/ 2008
4.	Planning for the survey	17/ 04/ 2008
5.	Data collection in Soc Trang Province	18 – 25/ 04/ 2008
6.	Data entry, processing and analysis	26/4 – 02/ 05/ 2008
7.	Draft report Writing in English	03 - 25/ 05/ 2008
8.	Translation into Vietnamese	26/05 - 05/ 06/ 2008

II. SURVEY TEAM

- **SDRC Researchers:** Chau Hoang Man (Team leader), and Team Members; Phan Thi My Nhung, Vu Thi Kim Huong, Tran Thi Ngoc Hoa
- STUPWC **staff** -11 people (see respective appendix)
- **WWM staff:** Tran Tien Duc, Frank Schweizer, Nguyen Thi Nghiem.

III. ADVANTAGES AND LIMITATIONS OF THE SURVEY

Advantages

- Staff members of the STUPWC cooperated enthusiastically. They participated fully with the research team, conducted interviews in the four surveyed wards and facilitated FGDs and IDIs.
- The Location of the surveyed sites were within the city which helped with transportation and access.
- The survey was conducted in every ward and the survey was conducted one after another as planned by SDRC and staff of STUPWC. The survey team had the time to reconfirm the number of participating households and/or reorganize the FGDs in each ward as required.

Limitations

- Staff of Tra Vinh Water Supply and Drainage Company lacked experience in interviewing and note taking in the questionnaire samples.
- One month had passed from the training in Tra Vinh to the practice for the survey in Soc Trang so the interviewees had to spend time to adjust the questionnaires.
- The survey was carried out during the week/working days at the daytime so many households did not have people at home. Therefore, the nearby households selected instead and some of the interviewees are out of the agreed age for interview. Moreover, during the survey time, the City People Committee and Ward People Committee had the campaigns “cleaning environment”, and they were preparing the big events of Vietnamese holiday “Celebrating the April 30 and May 1.” So the Vice - Chairman and some staff in city and those wards were busy with those activities so they did not have enough time participating in IDI.
- Selection of households primarily based on the list of households, who are customers and whose houses located right at the front of the main road, provided by STUPWC. Therefore, the survey team randomly selected some other households for interview. In addition, there is only the address and name of customers on the list without indicating any specific number of residential areas so the numbers of selected households do not guarantee scatter cover the whole residential areas in each ward. The survey team selected to interview some more households in those residential areas that do not have selected households in the list.
- Moreover, the interviewees were interviewed by the company’s staff; they might therefore withhold their experiences or not disclose problems/concerns about the services from the STUPWC staff when they were face with them..

CHAPTER III: RESULTS OF THE SURVEY

This part presents the baseline survey results on the general information of the surveyed site in the research sample. The survey results and analysis are based on the sample household survey questionnaires and referenced to the objectives of the BLS i.e. to identify the KAP and IEC of the interviewees on the wastewater, solid waste, public lighting, trees and parks.

I. SOCIO-ECONOMIC SITUATION OF THE SURVEYED SITES

This part gives general information on the socio-economic situation as well as the existing waste water, environmental sanitation, public lights system, and trees and parks and IEC activities of the four surveyed wards collected from the in-depth interviews with local leaders and the report of social economic (annual report) in each ward on 2007.

Ward 1 is one of the wards located in the center of Soc Trang City with many households conducting business and small vendors. According to the report of the year 2007, “there are 1,467 households with a population of 8,772 of which 644 are ethnic Kinh households with a population of 3,946 (44.9%); 789 ethnic Chinese households with a population of 4,565 (52%); and 34 ethnic Khmer households with a population of 248 (3.1%).

The commercial service is the strong point of ward with 689 businesses and 96 service enterprises.” Thanks to its central location in the vicinity of to environmental sanitation services, the Vice – Chairman in an IDI said “the solid waste collection service as well as the inter-wards drainage system still operates very well”.

The wards divided into four areas (area 1, 2, 3, and 4) all those areas have a nearly complete infrastructure of drainage and solid waste collection. However, in the rainy season some streets like as Nguyen Hue, Phan Chu Trinh, and March 2 Street (3/2nd) still floods and water sometimes stagnates because the drainage system is small and old - it was built a long time ago”. On the public lighting, trees and parks, the vice –chairman said “ward 1 is the centre so there are enough public lights in every street and there is one big park in the ward (Giai Phong Park). Otherwise, this is the central business of city that’s why some areas such as 1, 2, and 3 do not have trees and the residents in those places do not to plant the trees in front of their houses because of businesses.”

With regard to ward 3, this is one of the largest wards in Soc Trang city with a population of 23,111. A majority of local people are Kinh (74.1%); Chinese make up 9.14% and Khmer 16%.

The ward has 9 areas with 713 households doing business; 172 households are producing food products; there are 760 ha for rice and farm produce; moreover, some households are raising livestock as pigs (2,350), cows (125) and fishponds (20). The biggest problem in environmental sanitation is the Co Bac Canal in hamlet 2; this is one of the most polluted canals of Soc Trang City (there is one Program “improving and raising the infrastructure of the city,” the Program in hamlet 2, is funded by European Donors. One of the goals of the Program is Information – Education – Communication for residents in this area to change the behavior in protecting environment. According to the vice-chairman of ward 3, 70%of households have joined the solid waste collection service. Households further away and in the alleys do not access the service; they throw the solid waste in the canal, burn or bury it. The drainage system only covers some main streets. It has not yet completed in the alleys. Residents in those alleys dig ponds or throw waste directly into the canals/ditches around their houses.

Due to the small size of drains, a lack of drainage altogether or low capacity; water stagnates, particular in the rainy season. Wastewater in some other places flows to old ditches or to canal Co Bac, and to the river without treatment. According to the vice chairperson the public lights cover areas in the main streets and are maintained and managed by the STUPWC. Ward 3 does not have any parks; there are only a few trees in the main streets which are also taken care of by the STUPWC.

In ward 5 the sub – urban area of Soc Trang City, 26% of local people are Kinh; Hoa make up 6.6%; and the Khmer at 68% are a majority. The ward has 5 areas (1, 2, 3, 4, and 5) with 2,169 ha, of which more than half (1,914ha) is farming land

The main employment in the ward is connected to agricultural products such as rice, and other farming products, raising livestock (pigs, cows, fish and poultry), and commercial services (small businesses). According to the vice-chairman of ward 5, there is only a drainage system in the Hung Vuong Street, but this street is under construction so the drainage system does not yet connect with the houses on both sides. The households in alleys and more distant areas use the ditches, ponds, and canals for wastewater.

Nowadays, only the households located in the main streets and the large alleys have the contracts with STUPWC for collecting solid waste. Those living in distant areas and small alleys treat the solid waste themselves by throwing it in the ditches, canals or burn, burying it. Regarding the Public lighting systems, trees and parks, the vice-chairman said: “Only Hung Vuong Street has public lighting, The residents located in the alleys and distance areas use their own lights for lighting up the streets. There are no trees which belong to STUPWC in the streets of ward 5.”

Ward 9 has a population of 8,430. The majority of local people are Kinh (56%); Chinese 26%; and Khmer 18%. The ward has 9 areas with 1,294 individual businesses, households do business and 45 households produce food products. There are 620 ha for rice and farm produce; moreover, some hamlets raise livestock such as pigs (394); cows (70) and poultry (740). Nowadays, there are 948/1,200 households that have joined the solid waste collection service. Flooding and water stagnation still occurs due to the drainage system which is too small and often blocked. Concerning the public lighting and trees and parks, the Vice – Chairman said,” there are only public lights in the main streets and the trees and parks are only in the main streets as well.”

Generally, the wastewater system is still incomplete, and some places (ward 3, 5) do not have drainage system. The drainage system is small and the size of sullage pits is inadequate - leading to flooding and water stagnation in some places in the 4 wards. The solid waste collection service does not cover some remote areas, and small alleys. Solid waste is still disposed of by the people themselves burning, burying, or throwing it into the river/ empty plots of land.

II. GENERAL INFORMATION OF THE SURVEYED HOUSEHOLDS

This part provides brief information on the socioeconomic status of the target groups in the survey sample.

1. Age and Gender of Interviewees

Figure 2: Age and gender of interviewees (in percent)

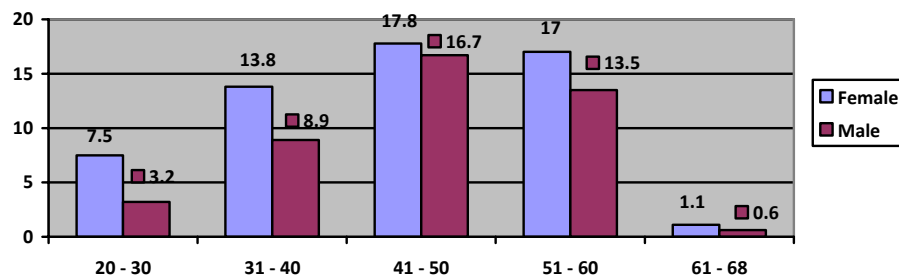
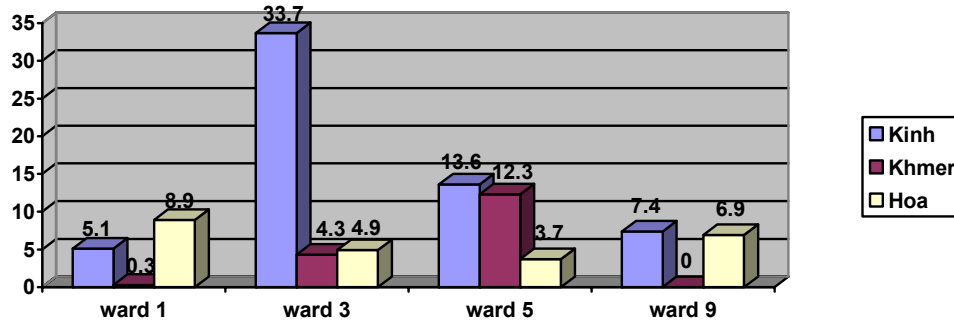


Figure 2 shows that, 149 (42.6%) interviewees are male; and 201 (57.4%) female; the age of males and females in this study ranges from 20 to 68 years old. The average age is 45 (mean is 44.64). In every age - group, the percentage of female is higher than male.

2. Ethnicity

Figure 3: Ethnicity of interviewees (in percent)

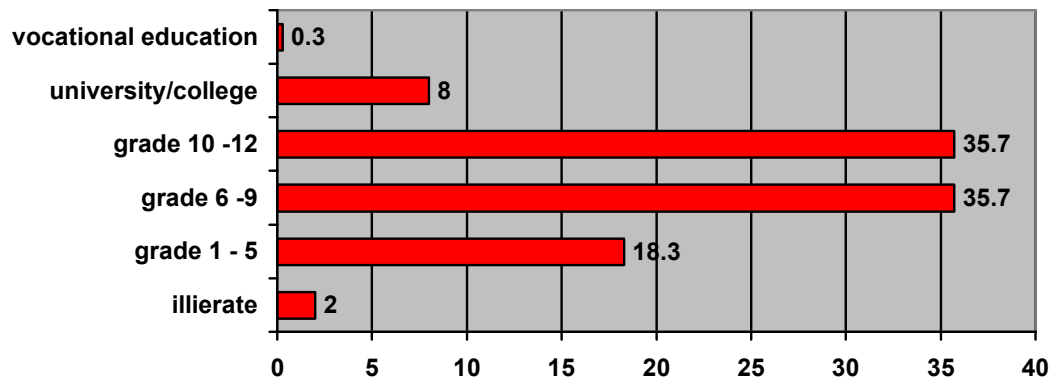


206 (58.3%) interviewees are ethnic Kinh; ethnic Khmer 59 (16.9%); and ethnic Chinese 85 (26.3%). The total number of ethnic Chinese is higher than ethnic Khmer because the survey was conducted in ward 1, 2, and 3 (three commercial areas) which have a lot of Chinese households; and only in ward 5, which is sub-urban, are many Khmer households living (Figure 3).

3. Educational Level

One of the important criteria to view the profile of the respondents is reviewing their level of education. There are 6 given levels: illiterate, grade 1 – 5, grade 6 -9, grade 10 – 12, University/college, vocational education.

Figure 4: Education level (in percent)



From Figure 4, the highest percentage of interviewees had attained education levels from grades 6 to 9 (35.7%) and 10 to 12 (35.7%). According to reports of the Peoples Committee of Soc Trang City – 2007 “the city was granted for 02 National standard 2006 for eliminating illiteracy with 96,292% (40,575/41,865 of people) able to read and write.”

4. Profession and Average Monthly Household Income in Last 12 Months

As mentioned earlier, the households interviewed are mainly located in commercial service places of Soc Trang City (wards 1, 3, and 9). Thus, the majority of interviewees earn their living by small-scale trading. However, some also stay at home and do housework; work as officials; or work as fee for service or hired labor such as tailors/ carpenter; farm laborers; wage earners; Honda/ motorcycle drivers etc. Only few of interviewees work in the formal sector such as retired official/wounded soldier; and interviewees are waiting for a job (unemployed) (Table 3).

Table 3: Profession and average monthly income in last 12 months

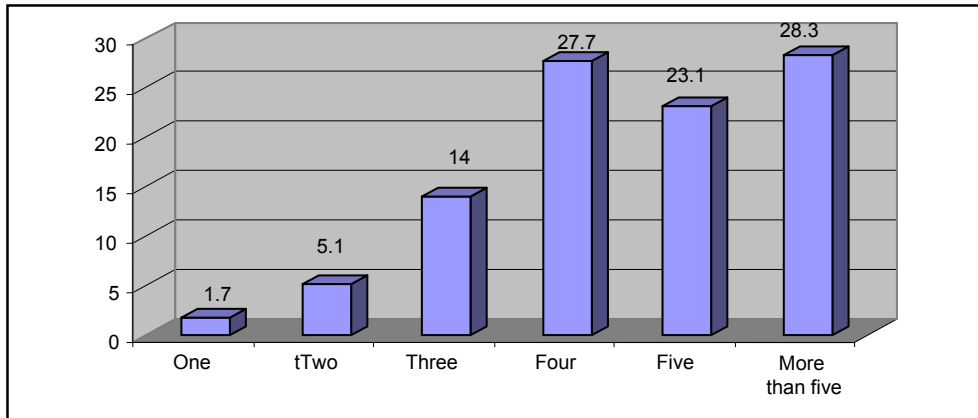
Profession	Income							Total %
	<500,000 VND	500,000 – under 1 million VND	1 – under 2 million VND	2 - under 3 million VND	3- under 5 million VND	5 million VND and over	Do not want to answer how much of the monthly household incomes	
Official	-	4 1.1%	13 3.7%	18 5.1%	13 3.7%	2 0.6%	-	50 14.3%
Worker	1 0.3%	3 0.9%	4 1.1%	5 1.4%	2 0.6%	-	1 0.3%	16 4.6%
Small-scale Trading	16 4.6%	35 10%	35 10%	27 7.7%	8 1.8%	7 1.5%	15 4.3%	143 40.9%
Farming	-	7 2%	3 0.9%	2 0.6%	1 0.3	1 0.3%	1 0.3%	15 4.3%
Private Business	-	-	-	2 0.5%	2 0.6%	2 0.6%	-	6 1.7%
Housework	11 3.1%	14 4%	18 5.1%	16 4.6%	9 2.1%	1 0.3%	5	74 21.1%
Wage Earners/ Labor	1 0.3%	6 1.8	3 0.9%	3 0.9%	-	-	-	13 3.7%
Honda/ motorcycle driver	1 0.3%	1 0.3	3 0.9%	1 0.3%	-	1 0.3%	-	7 2%
Tailors/ Carpenter	-	9 2.1	5 1.4	3 0.9%	-	1 0.3%	-	18 5.1%
Retired official/ Wounded soldier	3 0.3%	1 0.3%	1 0.3%	-	-	1 0.3%	-	6 1.7%
Awaiting jobs	-	-	-	-	-	-	2 0.6%	2 0.6%
Total %	33 9.4%	80 22.9%	85 24.3%	77 22%	35 10%	16 4.6%	24 6.9%	350 100%

The average income per month (2007) ranges from 500 ('000) VND – to less than 3 million VND - the majority with 242 (69.2%); the percentage of Small-scale Trading (profession and income) is higher than the rest because the survey was conducted in wards 1, 3, 9 which constitute the commercial centre of Soc Trang City. According to a report in 2007, ward 1

had 689 small – scale traders and 96 small producers. In ward 3 had 713 small – scale traders and 172 small producers; and ward 9 had 1,295 small – scale traders and 45 small producers. Even ward 5, the sub – urban ward, had 551 small – scale traders and 22 small producers. (The report of wards on 2007)

5. Number of Members in the Households

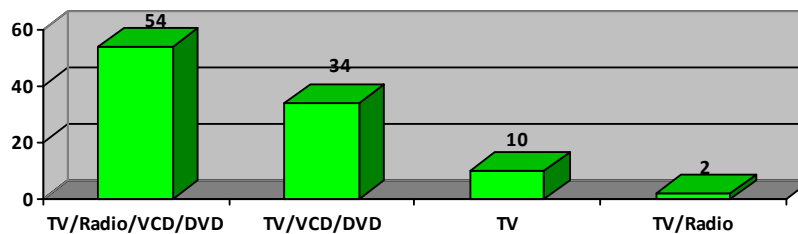
Figure 5: Number of members in surveyed households (in percent)



As can be seen in Figure 5, the majority of interviewed families contained four or more members.

6. Means of Entertainment/Facilities

Figure 6: Means for entertainment/facilities (in percent)



Based on the data from Figure 6, it can be seen that 100% interviewees have television. It can be stated that, now, television has become a common means of communication and entertainment in Soc Trang City. Televisions are not only very convenient entertainment for family members, but- in the ideal case- can also contribute to improving household knowledge/awareness.

III. KNOWLEDGE – ATTITUDE – PRACTICE/BEHAVIOUR SURVEY RELATED TO WASTEWATER, SOLID WASTE, PUBLIC LIGHT SYSTEM, TREES AND PARKS

This part provides information on KAP of people in the survey sample related to wastewater and sanitation. These facts will serve to provide a greater understanding on the current situation wastewater and sanitation in the surveyed site.

1. Sanitation/Household Toilet

The survey revealed that 96.3 % of the interviewed households possess a toilet - with an almost equal distribution between the wards (from 92 % in Ward 5 to 100 % in Ward 9).

Figure 7: Household toilets (in percent)

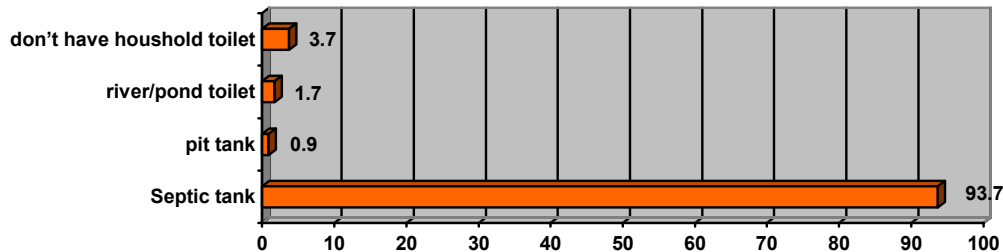
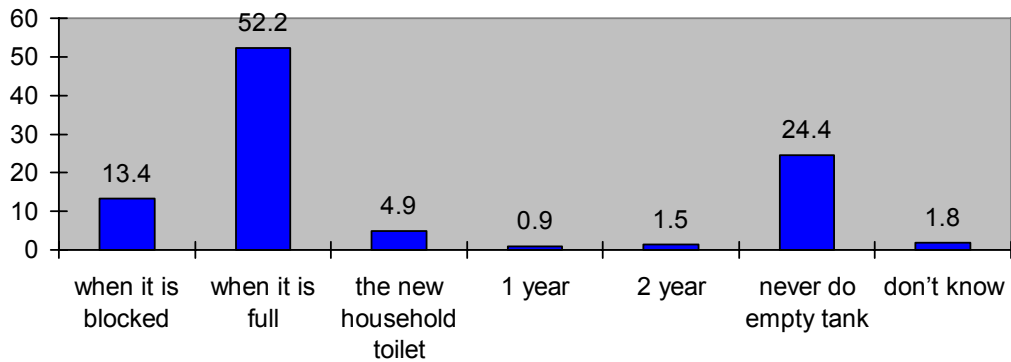


Figure 7 shows that those households using the septic tanks account for the highest percentage (93.7% or 328 households) only 3 (0.9%) households use a pit latrine; and 6 (1.7%) households used the river/fish pond toilet. In addition, 13 households (3.7%) do not have a household toilet. Among those 13 (3.7%) households that do not have toilets, seven (54%) use neighbor's latrines, the other six (46%) use fishpond toilets. In the FGD (female group) in ward 5, they said: *“some households located in small alleys or near the field and there is only a pond or canal in the backyard. So they make the fish pond toilet in there for them and their neighbors to use.”*

Of those 13 (3.7%) interviewees who did not have household toilets, 9 (69.2%) of them are ready to build a sanitary household toilet (in which only one (7.7%) interviewee is expecting to share a toilet in common with one of the neighbors). According to them, the main reason to build a household toilet is for environmental protection. *“Even if we are poor now, we also want to borrow money to have it hygienic. We want to have it clean, and improve our living environment without any environmental pollution, and bring good health to everybody”*, some others are willing if *“being the conditions for borrowing money are favorable”*, or *“it's more convenient to have a household toilet”*. Meanwhile, the other three (23.1%) interviewees who did not want to build a household toilet gave the same reason: *“we are poor, do not have money”*. According to vice – Chairman of ward 5: *“before the Ward People Committee invested the public toilets for people in some areas in ward, after few months it didn't work because no one took care of it, If possible we will build the private toilet for every household if they are needed.”* Others are sharing a toilet in common with the relatives; or they are using the fishpond toilet from the neighbors, they do not see any problem without the toilet.

52.1% of households with septic tank toilets, empty the tank whenever it is full; 3.4% of households empty the tank whenever it is blocked. 22.9% interviewees said that they never do empty the tank; only 3 (0.9%) interviewees empty the tank every year; 1.4% of interviewees do empty the tank every 2 years; 5.5% interviewees said that they are just building the new houses; and 1.7% of interviewees said that they do not know (see Figure 8):

Figure 8: Do empty tank (in percent)



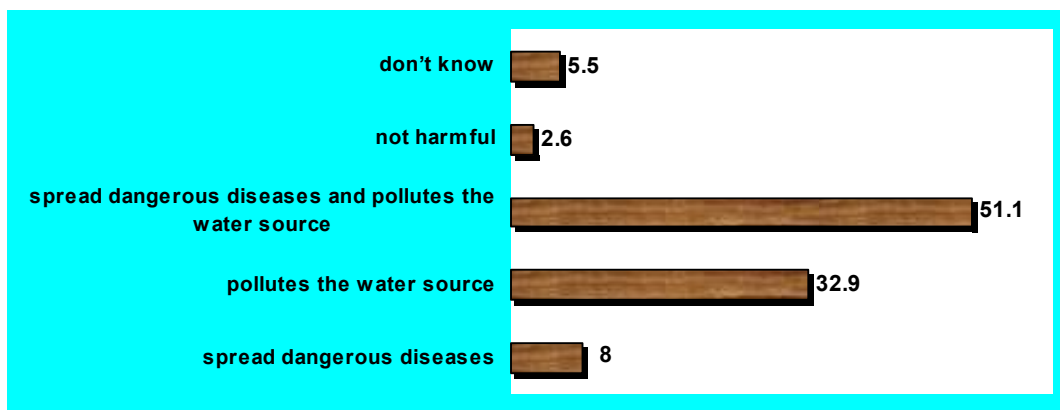
Based on above Figure we can see that the lower percentages of interviewees empty their specific tank regularly (every one-year or two years). Instead, they tend to just empty the tank as necessary - when it is full and/or when it is blocked.



The wastewater flows from the Co Bac canal to the river

Figure 9 clearly shows that only 51% of interviewees are aware of the harmful effects of using the river as a toilet; harmful effects such as spreading dangerous diseases and polluting the water source. Moreover, the number of those who thought it does not cause any harm at all is with 2.6% way too high. Additionally; those 5.5 % who do not know whether there is any impact of discharging wastewater to the river put themselves and their community potentially in danger due to their expected misbehavior based on their lack of understanding of the link between polluted water and the incidence of diseases.

Figure 9: Perceived environmental impact of discharging wastewater to the river (in percent)



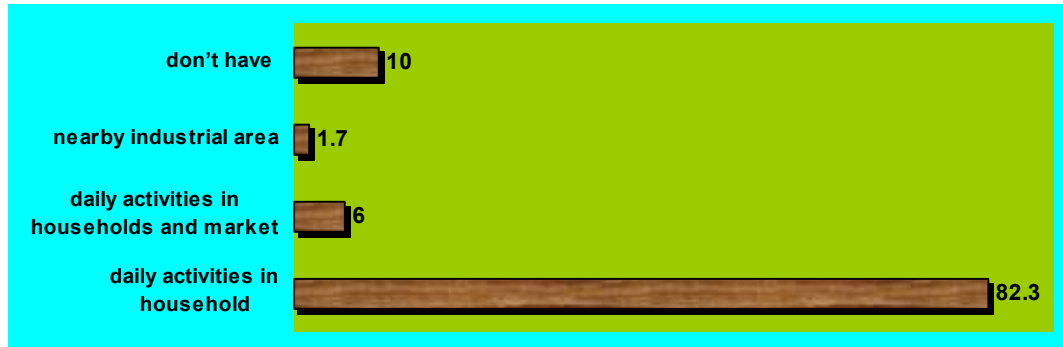
Note: Multiple answers possible

According to the statistical data of the Vietnamese Ministry of Construction (2007), currently, country-wide 92% of the urban population and 51% of the rural population are equipped with environmental sanitation infrastructure (such as household toilets, drainage system), but only

3% of the wastewater is treated properly. It means for the near future, we will have a serious lack of household toilets in rural areas and wastewater treatment in urban areas, which can lead to serious pollution in urban and rural areas.

2. Wastewater /Drainage

Figure 10: The sources of wastewater around the house (in percent)



The wastewater from daily activities

As can be seen from Figure 10, is the main source of wastewater around the surveyed sites from daily activities (82.3%); According to the Vice Head of Urban Management Office in IDI: *“relating to waste water/drainage: 80 – 90% of the sewage/drainage system is old, the system does not connect properly. Generally, it is still working, but when it rains heavily there are some areas that flood.”*



The open drain in an alley

In IDI with the Vice - Chairman in ward 1: *“wastewater is not good because the sewage/drainage system is small; sometime it is blocked, and floods when it rains. Moreover, some sea food factories eliminate the waste water directly to the river/canals without treatment; that is one of the reason which made the water in river was polluted; it is affects the health of people.”*



The covered drain in the main street

Relating to the public sewerage/drainage system around the house; 261 (74.6%) of interviewees have access to drainage; and 89 (25.1%) do not. However, of the 74.6% of interviewees who have sewerage, 226 (64.6%) are connected to the public drainage system..

Type of drainage system connected by the households and the time to connect.

The survey revealed that, 226 (64.6%) interviewees were connected to the drainage system; and 124 (35.4%) interviewees were not connected. For the type of drainage system and the length of time Hh were connected to the drainage system (see Table 4)

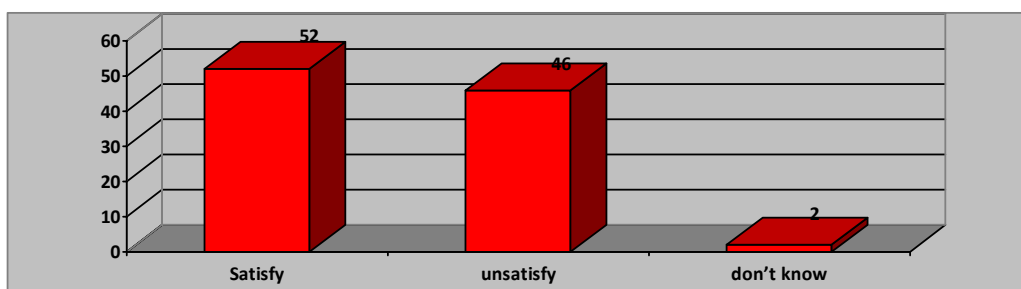
Table 4: Type of drainage system households are connected to and connection date

Type of drainage	How long have you been connected				Total %.
	< 1 year	1 to 3 years	> 3 years	don't know	
Open drain	1 0.4%	4 1.8%	31 13.7%	3 1.3%	39 17.3%
Covered drain	17 7.5%	25 11.1%	104 46%	14 6.2%	160 70.8%
Drain leading to pond/river/canal/garden	0 0%	5 2.2%	22 9.7%	0 0%	27 11.9%
Total	18	34	157	17	226
%.	8%	15%	69.5%	7.5%	100%

Out of those 64.6% of interviewees that were connected to the drainage system, the majority of these households was connected to covered drains (70.8%); and had been connected for more than three years (69.5 %).

Satisfaction with the current drainage situation around the home

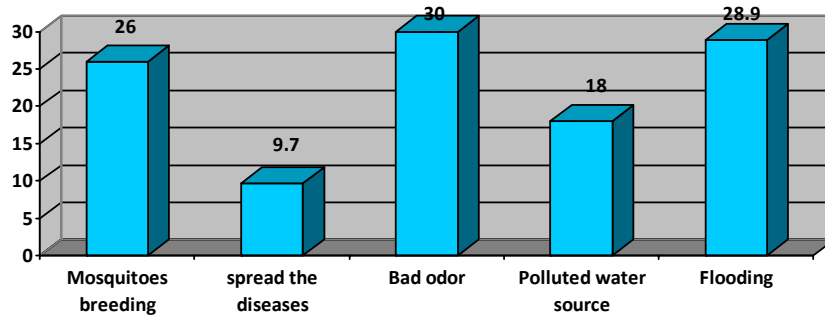
Figure 11: Satisfaction with the current drainage situation around the homes (in percent)



As can be seen from Figure 11, a slight majority is satisfied with the current drainage situation around their homes. Those interviewees satisfied with the drainage situation gave the following opinions: the street has been completed so it is clean and water does not stagnate, there is no flooding, there is no pollution, the environmental sanitation is good, and it is normal / all right, not dirty. Everyone is aware of maintaining it hygienically. We are satisfied but drainage needs to be improved, there is nothing bad happening; every household helps keep it clean.

Dissatisfied respondents identified issues with the drainage around their homes (see Figure 12).

Figure 12: Reasons for being dissatisfied with the current drainage situation (in percent)



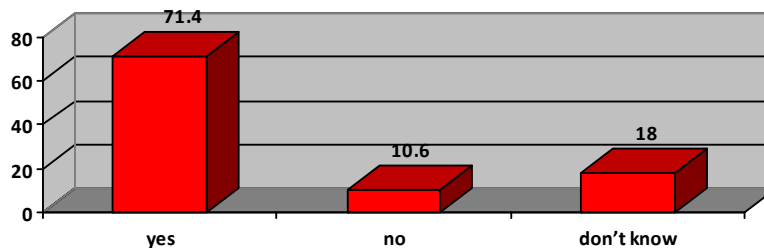
Note: Multiple answers possible



Moreover, in FGD in ward 5, the female group said about the drainage system: *“This area does not have a complete drainage system. There is only one canal for sewerage in the whole area and all kinds of waste water from households flows into this canal directly to the river and even solid waste is thrown into it.”*

Agreement on the treatment of wastewater

Figure 13: Do you agree that wastewater should be treated before it returns to the river? (in percent)



The majority of interviewees (71.4%) agree that wastewater should be treated before it returns to the river (Figure 13). According to those agreements on waste water treatment, they advocate/ agree or found that it was good/ very good/ clean if waste water being treated/ should be treated for not polluted afterwards as well as for a secure environmental sanitation. *“It should be treated for clean, avoiding bad smell, mosquitoes, and polluted environment affecting those people living near the river”, “It required a sullage pit to the main road and should have a system for waste water treatment”.*

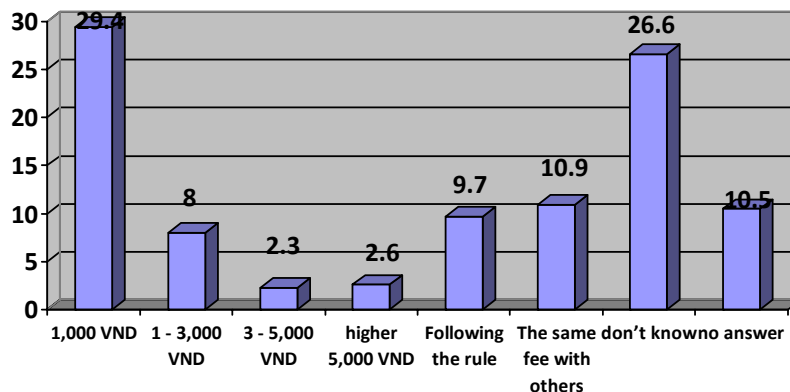
Those interviewees (10.6%) disagreements on wastewater treatment are due to some reasons, which are mainly based on a lack of knowledge and awareness. The following is a summary of opinions mentioned in this regard: *“It is not polluted because the waste water is only from daily activities in the house; it is not from hospital or industrial areas.” “Let the waste water flow freely and be absorbed naturally into the ground”, “Such things are alright,*

there is no place for treatment”, “It is required for sure but there is no condition for treatment and the household water contains only wastes from daily household activities”.

Willingness to pay for wastewater treatment

Of those 250 (71.4%) interviewees who agreed that wastewater should be treated (cleaned) before returning to the river all were willing to pay for wastewater treatment. According to them, they are willing because the environment will be protected and not be polluted or contaminated: it will be a green and clean, hygienic, unpolluted environment/ source of water use as well as providing for a better health/ life for everybody. People are willing to pay because they see the benefits for themselves and acknowledge their responsibility in this regard: *“Willing if it is beneficial”, “People have to pay/ everybody has to contribute due to common/ public responsibility to the environment for a clean and better environment and community health”.* However, some people’s opinions, revealed their worry about the cost of payment for wastewater treatment *“Willing to pay due to the really bad quality of current situation but paying in accordance with our capacity”.* *“We do not know how much to pay for it”, “the price must be reasonable and within our capacity”.* Some people said it is “up to majority to decide”, *“the same fee as others (neighbors), make a decision according to majority, paying if everybody pays, if paying a little because not being afford to pay too much”.* Some others depend on the decision of the government, *“If the government requires/ fix the price to pay”, “According to the regulation/ rule of the government but the price must be reasonable to the people”.*

Figure 14: Amount customers are willing to pay for wastewater treatment per m3 (in percent)



People are clearly willing to pay. The next important issue is how much the people are actually willing to pay. Figure 14 shows that there are mainly two poles: One the one hand, those interviewees who are willing to pay 1 000 VND per m³. On the other hand, are those who simply do not know what would be an accurate price and thus have to be informed accordingly.

Results from FGDs also showed that majority of participants thought payment for wastewater treatment was a necessary thing to do so that it helps the local people to have a better and more developed life and health. However, according to them, there should be a common agreement on the price of payment, which is up to the decision-making of the ward leaders based on the incomes, and contribution capacity of each household and it needs to have a good consciousness of everybody. *“Everybody will also contribute if the price for waste water treatment is not too high compared to the price of water use and such price should be based on the real volume of water used of each household”.* The male group in ward 1: *“nowadays, everyone has clean water already, but for better living more than that if there is factories for waste water treatment which will help everyone prevent themselves from some diseases and also make a better environment. So they will contribute/ participate and be willing to pay for it. However, it is only that we hope the price will be reasonable to the people living in the poor*

area. In addition, the way for collecting the money can do the same way in electricity bill and clean water bill.”

Moreover, in IDI, the vice – head of Urban Management Office “in my personal opinion, I agree with payment for wastewater treatment. But for other people, when we ask them pay for wastewater treatment we have to also explain their rights and responsibilities, for example when they pay for solid waste collection service they also saw what is the benefit. Otherwise when we make the fee for payment we have to consult the ideas of people.”

3. Solid Waste

Use of solid waste collection service

The solid collection service is operated all over Soc Trang City. In the surveyed ward 93.7% of interviewees use the service (Table 5).

Table 5: The use of solid waste collection service including frequency of solid waste collection

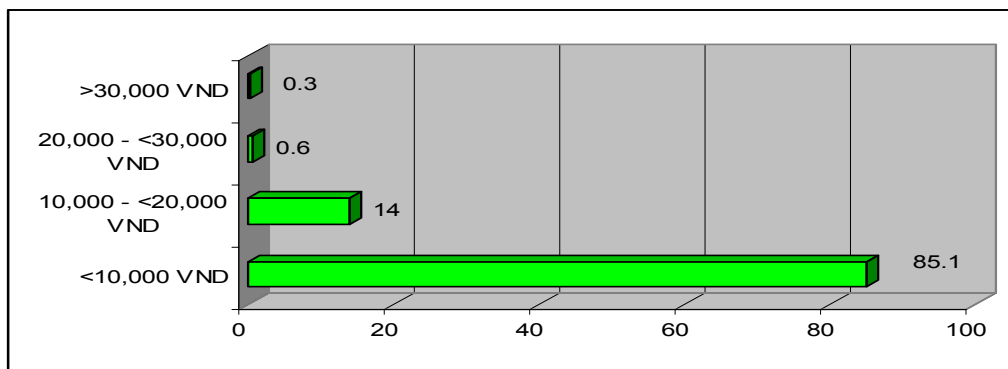
Solid waste collection service	Frequency of solid waste collection by the service		Total %.
	Daily	2 – 3 times/week	
Yes	324 92.6%	4 1.1%	328 93.7%
No	-	-	22 6,3%

“There are 70% of households in ward 5 participating in the solid water collection, some did not join the solid waste collection service because they are living in the small alleys, and in the remote areas, which are inconvenient for going to collect the solid waste. People in those areas have to burn or bury the solid waste or throw it into the pond/canal.” The Vice - Chairman of ward 5 in IDI. According to the Vice - Chairman of ward 3: “some households still have the habit of immediately throwing their solid waste into the streets/canal/ponds when they are done cooking or cleaning in their houses. Of course they also do not join the solid waste collection service.”

Table 5 also reveals that 92.6% of households report that their solid waste is collected daily. 4 (1.1%) reports a collection frequency of 2-3 times per week.

Payment for solid waste collection service (per month)

Figure 15: Payment for solid waste collection service per m3 (in percent)



For those who joined the solid waste collection service, there are 85.1% interviewees paying less than 10,000 VND/month. The percentages of households paying more than 10,000 VND are lower (14.9%) in the total of sample from surveyed wards (Figure 15).

Garbage disposal from those households not using the solid waste collection service

Regarding those 22 (6.3%) households not using the solid waste collection service, the most popular way of garbage disposal is burning 15 (68.2%) The rest of them dispose the garbage by burying 5 (23%), throwing it into the ditch, lake, or river 2 (8.8%)

Methods of garbage disposal during the rainy season or flooding



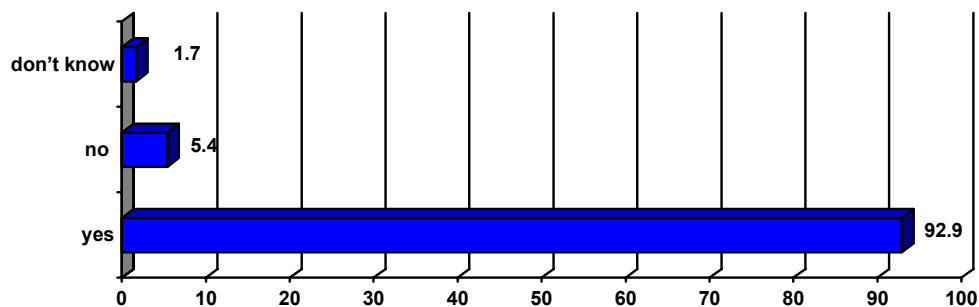
The solid waste in canal

Of the 22 interviewees not using the solid waste collection service, only 27% interviewees indicated that they changed their garbage disposal methods during the rainy season. The most popular method that changed was the dry season method of digging a pit/hole to throw the waste and then covering it. In the wet season, they bury it or throw it in the river/lake/ditch. The remaining 73% of households did not change their method of solid waste disposal in the wet or dry seasons.

“Many households in ward 5 still do have the solid waste collection service because they are located in small alleys or remote areas, they do dispose solid waste by burning or burying it based on the rainy or sunny season”, FGD with MOs in ward 5.

Satisfaction with the solid waste collection service

Figure 16: Satisfaction with the solid waste collection service (in percent)



Obviously, most people are satisfied with the solid waste collection service (Figure 16) because in the surveyed wards most of interviewees joined the solid waste collection service and considered both the payment/fee for the service and daily collection service to be reasonable.

In FGDs with female, male, and MOs groups, most of them said “no problem with solid waste collection service in every ward because the fee is cheap and the company collects the garbage everyday.”

However, they also suggested ideas for improving the solid waste collection service (Table 6)

Table 6: Improving the solid waste collection service

Improvement	No of Interviewees	Percentage
Hygiene problems	8	2.3%
Frequency of collection	1	0.3%
cost of collection should be reduced	1	0.3%
Block the drains	3	0.9%
water pollution	5	1.4%
smell/odor	8	2.3%
No answer	326	92.5
Total	350	100

Moreover, the interviewees also suggest the ideas for the improvement of the existing solid waste management problems: there also should have more solid waste collectors in the small alleys; more public rubbish bins in alleys; treat the gathered solid waste properly; and as the local people lack awareness on sanitation they should raise awareness on solid waste/ garbage management and public hygiene including how to dispose of garbage in the right/ suitable place. Solid waste disposed by/ in the area of the hospital should be managed properly due to its impacts on nearby people.

4. Public Light System

Table 7: Public lighting system

The public light system	Satisfied				Total %.
	Yes	No	Normal	Don't know	
The public light system around the home	325 92.9%	25 7.1	-	-	350 100%
The lights are turn off/on	310 88.6%	15 4.3%	-	-	325 92.9%
Distance between the lights	299 85.4%	25 7.1%		1 0.3%	325 92.9%
The brightness of the lights	300 85.7%	23 6.6%	2 0.6%	-	325 92.9%
The replacement of broken lights	272 77.7%	43 12.3%	3 0.9%	7 2%	325 92.9%
Willing to pay when the lights are broken without company replacement on time	209 59.7%	47 13.4%	-	69 19.7%	325 92.9%

Table 7 shows that 92.9% of interviewees have public lights in their area, 7.1% do not.. Otherwise, in this survey, most of the households, along the main streets, have adequate public lighting.

Moreover, in 325 (92.9%) of interviewees have the public light system, most of them satisfied with the distance of the lights (85.4%), the brightness of the lights (85.7%), the replacement

of broken lights (77.7%), and willing to pay when the lights are broken in case the company does not have the budget or supply materials on time (59.7%).

5. Tress and Parks

Figure 17: Satisfaction with Trees and Parks (in percent)

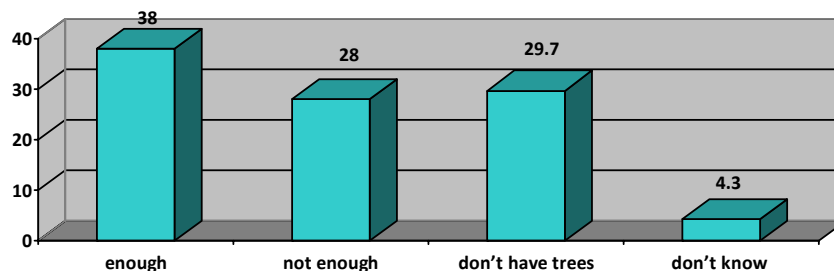


Figure 17 shows that, 38% of households have enough trees and parks in their areas; but the total of interviewees who either do not have *enough* trees (28%) or don't have trees at all (29.7%) are higher.



Giài Phóng Park

According to FGD in ward 1 (male group) “ *in this ward there is only 1 park - Giai Phong park, and this area is the commercial service, so some parts of this area cannot plant because if we plant, there will be in front of households which do business - they said they cannot do businesses if trees are planted.*” According to the Vice - Chairman of ward 5 in IDI “*in this ward we do not have even one small park, and along the main streets, we also do not have green trees belonging to the STUPWC; most of the trees in these areas are belong to households' gardens.*” The vice - Chairman of ward 3 in IDI: “*in some main streets in ward 3, the STUPWC had recently planted and they are still growing, but in the small streets we lack green trees.*”

Many interviewees did not mention there views about the maintenance of public trees and parks (Table 7 below).

Table 8: Perception about the maintenance quality of trees and parks

Maintenance of trees and parks	Satisfied				Total
	Good	Average	Bad	Don't know	
How often do you perceive the maintenance of trees and parks of people	20 5.7%	65 18.6%	137 39.1%	128 36.6%	350 100%
What do you think about the maintenance of trees and parks of people	37 10.6%	88 25%	99 28.3%	126 36%	350 100%

Obviously, the percentage of interviewees who said: “there are not enough green trees” and “do not have green trees” is higher than those indicate that they have enough (see Figure

17). It is for that reason why most of interviewees are either not satisfied with the maintenance of trees and parks or they do know no the situation regarding the maintenance of public trees and parks.

IV. INFORMATION, EDUCATION AND COMMUNICATION PRACTICE

This part reveals information on the existing information-education-communication activities (IEC activities) related to piped water, wastewater and sanitation in the surveyed site. Then the findings on the most effective means for carrying out the IEC practice within the community.

Received information regarding piped water, waste water and sanitation

Figure 18: Receiving information on piped water, wastewater, and sanitation during the last six months (in percent)

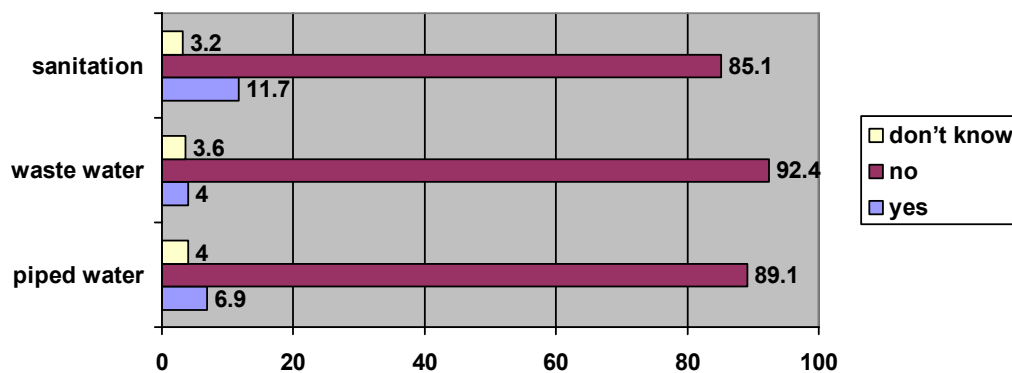


Figure 18 shows that most interviewees did not receive any information about piped water, waster water, and sanitation during the last six months. A deeper analysis also revealed that there is no correlation between the level of information received and ward, gender or ethnicity.

According to Vice - Chairman of ward 3 in IDI, IEC on environmental sanctions in general is still facing some difficulties: *“even where there is an IEC section, In the ward the IEC staff mainly work without any information. IEC collaborators (MOs) still do other do unpaid jobs, and their performance is still rather limited.. Therefore, IEC sessions on various topics (animal husbandry, health, micro credit...) often are integrated into meetings, with 50 or sometimes up to 200 participants.”*

Regarding the kind of information received on piped water; 6 interviewees reported information on increasing the fees for using clean water; and 4 interviewees reported information on the payment of fees for environment protection. . On waste water: 4 interviewees reported receiving information on rights with regard to waste water disposal; 3 of interviewees reported receiving information on duties with regard to waste water disposal; 1 interviewee reported receiving information on both rights and duties with regard to waste water disposal; 2 interviewees reported receiving information on cleaning the drains. On sanitation: 5 of interviewees reported receiving information on environment protection; 4 interviewees reported receiving information environmental sanitation for preventing the petechial/hemorrhagic fever; 3 interviewees reported receiving information on cleaning around the hamlets.

Frequency of receiving information

Only 79 (22.6%) of interviewees received information frequently during the previous six months (Table 9).

Table 9: Frequency of receiving information

Information	How often receiving information in the last 6 months					Total %
	1 time	2 - 3 times	4 - 5 times	> 5 times	Don't know	
Piped water	17 21.5%	5 6.3%	-	1 1.3%	1 1.3%	24 30.5
Waste water	6 7.6%	5 6.3	1 1.3%	1 1.3%	1 1.3%	14 17.5
Sanitation	20 25.3%	9 11.3	3 3.8%	5 6.3%	4 5.1	41 51.9
Total	43	19	4	7	6	79
%	54.4%	24	5.1	8.9	7.5	100

The majority of those who received IEC on piped water, wastewater and sanitation received information only once during the past six months (54.4%). The number receiving information on sanitation was higher than that for other types of information.

Sources of received information

Figure 19: Source of received information (in percent)

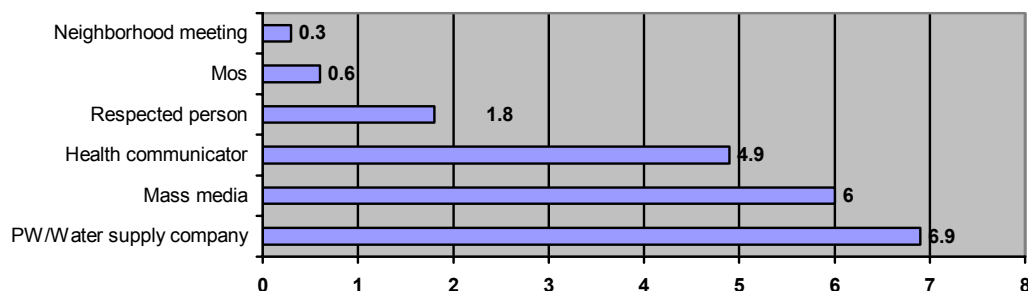


Figure 19 shows that of those who received information (on average 7.5 %), the most frequently used sources of information in the last six months were; employees of the Public Works Company and Water Supply Company (6.9%); Television/Radio/Newspaper/Loudspeaker (6%); followed by Health Communicator/Volunteers (4.9%).

In FGDs (male group in ward 3 and ward 1) “the officers from STUPWC/Water Supply Company usually come to the households to provide information about the solid waste collection service. Staff of the Water Supply Company also visited households to inform them about the fees of using clean water. Otherwise, there are health workers in every area of each ward so they are the one who bring the information to household particular information from health protection, and environmental sanitation.” Especially, women sometime watch television and read newspapers, “if there is some kind of strange diseases, we have a look at it, we do pay attention a little bit to it, and also we forget it after few days watching.” (Woman FGD in ward 5)

According to male group in ward 1 “nowadays, many people like to watch and listen to information on environmental sanitation on television, and radio. However, the frequency and duration of watching/listening to these programs (environmental sanitation) are still limited.”

Ranking the effective channel of communication to the households provided by the Company

Table 10: Level of effective communication with households by the company

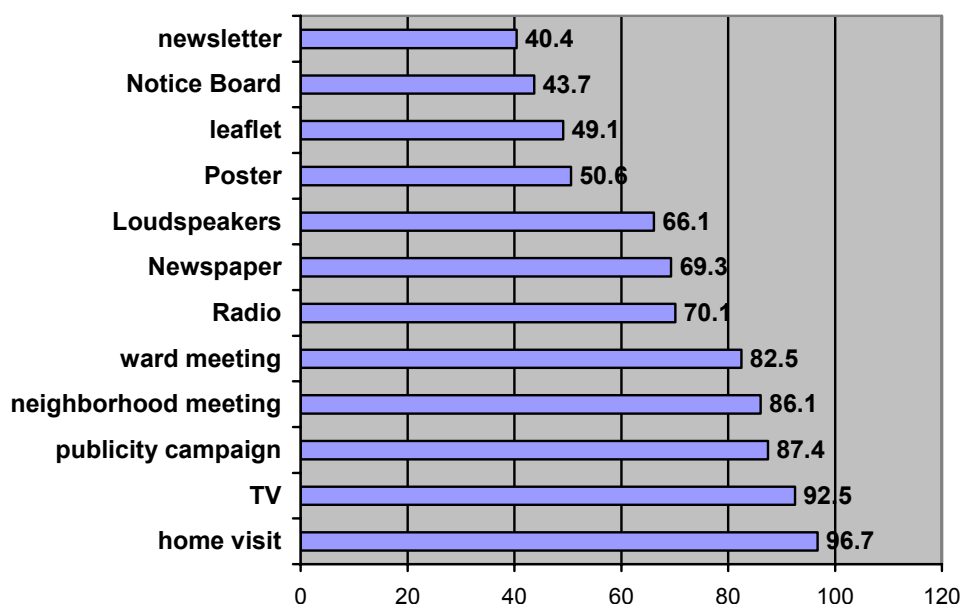
Communication channel	Ranking the effective channel of communication to the households provided by the Company				Total %
	Ineffective	Moderately effective	Very effective	Do not answer	
Home visit	11 3.1%	95 27.1%	232 66.3%	12 3.4%	350 100%
Neighborhood meeting	46 13.1%	164 46.9%	122 34.9%	18 5.1%	332 94.9%
Ward meeting	52 14.9%	150 42.9%	96 27.4%	52 14.9%	298 85.1%
Loudspeakers	107 30.6%	124 35.4%	84 24.4%	35 10%	315 90%
Posters	130 37.1%	114 32.6%	19 5.4%	87 24.9%	263 75.1%
Leaflet	136 38.9%	107 30.6%	24 6.9%	83 23.7	267 76.3%
Newsletter	148 42.3%	82 23.4%	18 6.9%	102	248 70.9%
Radio	84 24%	139 39.7%	58 16.6%	29.1	281 80.3%
Television	24 6.9%	123 35.1%	175 50%	28 8%	322 92%
Newspaper	85 24.3%	123 35.1%	69 19.7%	123 20.9%	277 79.1%
Notice Board	151 43.1%	78 22.3%	39 11.1%	87 23.4%	268 76.6%
Public campaign	35 10%	106 30.3%	137 39.1%	72 28.6%	278 79.4%

The most popular and effective channels for the company to communicate with the interviewees are; home visits (66.3%), television (50%) and neighborhood meetings in wards (34.9%). Currently, existing communication channels at ward level are neighbor meetings ward meetings, television (almost the interviewees have the television), loudspeaker, radio, and particularly home visit ...mainly organized by head of wards and MOs. Interviewees often received IEC through meetings.

According to FGDs with I female, male and MOs group “each neighborhood meetings should be organized from 6 – 7 pm, when people finish their meal. Cadres from STUPWC, the leader wards, and MOs should organize and integrate meetings with various issues such as sanitation, clean water, health...” Moreover, in IDI with the Monk in Som Rong temple “if the company or Ward People Committee want to combine with temple in propaganda, we should organize at the events (Khmer’s festival) because at those events, there are many people come to the temple, but the time for propaganda should be limited around 30 minutes.”

The channels of information perceived by interviewees as most effective by interviewees Figure 18 correlate to the channels actually used to inform the people. The question now is what channels are perceived as most effective by the interviewees themselves. While home visits, TV and public campaigns are widely perceived as very effective/ effective, newsletter and notice board announcements are rather perceived as an ineffective way to communicate with households (Figure 20). When categorized in groups of IEC-channels that can be clearly seen.

Figure 20: IEC channels perceived as very effective/effective by interviewees (in percent)



Note: Multiple answers possible

The most influential person to communicate information regarding water, wastewater, sanitation

As we have seen the face-to-face component is a very effective means of communication with the households. Of interest is now, who is the most influential person that can transfer information towards households.

Figure 21: The most influential person for communication information (in percent)

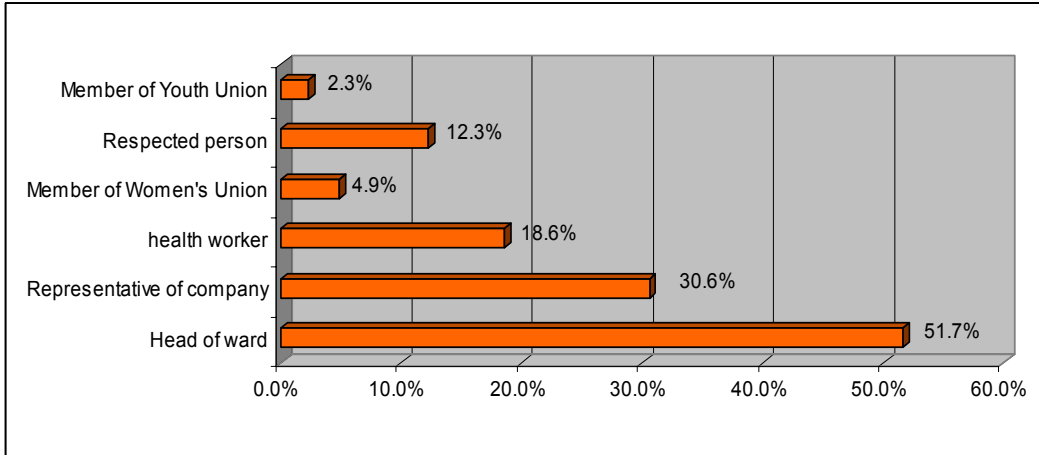


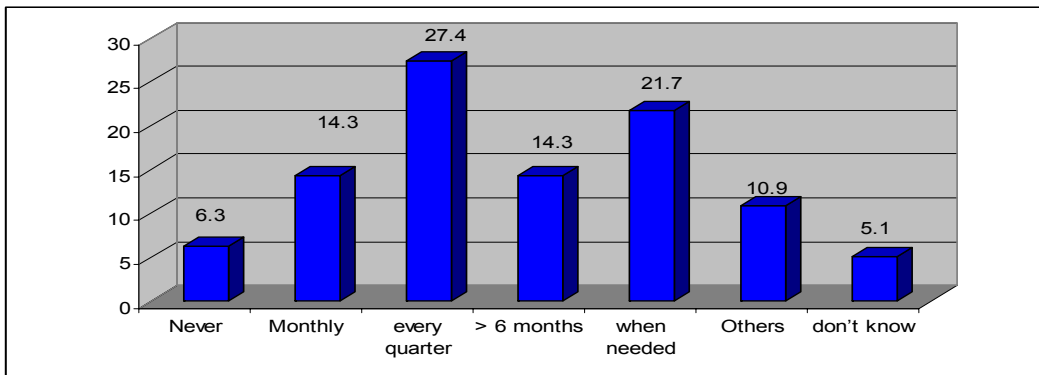
Figure 21 shows that 181 (51.7%) of the interviewees identified heads of wards as preferred agents of influence in communicating messages, followed by the representatives of the responsible companies at 107 (30.6%). The interviewees identified Health workers 65 (18.6%); Respected persons 43 (12.3%). however in the eyes of interviewees, the WU played only a marginal role in information dissemination.

Participants of FGDs (Woman group in ward 3, 5) supported the above quantitative data: people identified heads of wards, and representative of companies as most influential for communicating messages, *“representatives of companies are the ones who often disseminate information through groups as they are more knowledgeable than other agents in ward or neighborhood meetings”*

Moreover, in IDI with the Head of the Ethnic Committee: *“the Monks in Khmer temples are very powerful influences with Khmer people, although, they always support the Ethnic committee in doing propaganda about the policies government, we can ask them to help us in IEC for Khmer people about the environmental sanitation in general.”*

Frequency of the public meetings held in the ward

Figure 22: Frequency of public meetings held in the ward (in percent)



From the Figure 22, it can be noted that (27.4%) of interviewees said public meetings were held every quarter; 21.7% of interviewees said the public meetings were held when needed i.e. when there are celebrations, New Year, or the campaign of environmental sanitation the wards, or information regarding some kind of fees. 38 (10.9%) of interviewees said

sometimes, they attended public meetings, when they saw an urgent need for information, or when they were “forced” to attend public meetings by the heads of hamlets.

The information collected from the female and male FGDs in ward 3 and ward 5 seemed to be similar: *“We were often asked to attend meetings in the ward to receive IEC. These meetings were co-organized by different organizations so that we received various types of information at the same time, for instance, on health issues and animal husbandry issues.”*

Loudspeaker system in the ward

As we have seen in Figure 20, loudspeakers are also perceived by interviewees as an effective means of communication. The clear advantage of this mass-medium - especially in Vietnam - is its wide distribution: 64% of interviewees said that there is a loudspeaker system around their places. However, attention has to be placed on the time that messages are distributed: Those interviewees who said they listened to loudspeaker announcements, also said they preferred to listen in the early mornings and evenings (Table 10).

Table 11: Loudspeaker system in the surveyed wards

Loudspeaker system in the ward	Suitable time for listening to broadcasts				Total %
	Early morning	Afternoon	Evening	Morning/Noon/Evening	
Yes	108 30.9%	20 5.7%	79 22.6%	17 4.9%	224 64%
No	-	-	-	-	126 36%
Total	-	-	-	-	350 100%

According to FGD in ward 1, (female – male groups) every morning around 5 – 6 am, the loudspeaker is affected to them, people listened many information from environmental sanitation, the diseases, to the news... *“They are not in –depth, the information just sounds like a commercial advertisement, we listen and forget it after few days.”* In IDI with the monk in Som Rong temple, he adds more: *“sometime, in the loudspeaker also has the news on environmental sanitation, and Khmer people also understand the contents. But the time to broadcast is early so that sometime people do not concentrate on the news they have just heard it.”*



According to the reports of wards (2007) in the surveyed site: *“the information on loud speakers concentrates propaganda on the policies and guidelines of Government and the Communist Party; and reflect the social economic development situation in wards. Besides that, the loudspeakers also communicate to everyone the meanings of the big events of the country; the prevention of HIV, other diseases, and environmental sanitation in general.”*

The loudspeaker around the houses

V. SATISFACTION ON PIPED WATER, WASTEWATER AND SOLID WASTE SERVICES

This part investigated the level of satisfaction on wastewater, solid waste collection services, the public lighting system, and green trees, and public parks.

Table 12: Customer service satisfaction with wastewater, solid waste service, public lights, trees and parks maintenance

Services	Customer service satisfaction				Total
	Dissatisfied	Relatively satisfied	Very satisfied	don't know	
Waste water	133 38%	116 33.1%	90 25.7%	11 3.1%	350 100%
Solid waste collection	10 2.9%	102 29.1%	232 66.3%	6 1.7%	350 100%
Public lights system	40 11.4%	116 33.1%	185 52.9%	9 2.6%	350 100%
Green trees and parks	65 18.6%	103 29.4%	104 29.7%	78 22.3%	350 100%

The data of Table 12 shows a rather scattered picture as regards customers' satisfaction with the company's services: While the highest satisfaction rate is achieved by the solid waste collection services, wastewater service was rated by a quite high percentage (38 %) as "unsatisfied". In FGDs with male and female groups in ward 3, *"Everyone eagerly expects the factories will be quickly constructed to treat the waste water. During the time they are waiting for factory to be built, the STUPWC and the Ward People Committee needs to have propaganda to mobilize people so that they become aware of the need to protect the environmental sanitation. Right now, too much solid waste pollutes the river water especially waste water from the seafood companies around the city."*

Complaints about services supplied by STUPWC

91 interviewees complained about the services which were supplied by STUPWC (see Table 13 below).

Table 13: Complaints about services supplied by STUPWC

STUPWC- related service	Frequency	Percentage
Poor drainage	7	7.7%
Blocked pipes	3	3.3%
Flooding	15	16.5%
Bad odor	14	14.4%
Flooding/bad odor	6	6.6%
Frequency of solid waste collection	4	4.4%
Bad odor (solid waste)	1	1.1%
The time lights are turn off/off	9	9.9%
Repair of damaged lights	14	14.4%
Poor maintenance	6	6.6%
Not enough trees	4	4.4%
The distance between the trees	8	8.8%
Total	91	100%

While some interviewees expressed their dissatisfaction with the STUPWC, only a small percentage actually reported their complaints.

Based on Table 13 the percentage of complainants about all the services that provided by the STUPWC is low with total 91 of interviewees having complained about the service. According to interviewees, they are only complained these issues when they attended the meeting in the neighborhood meetings or in the ward meeting. They rarely sent complaint letters to the company or other concerned offices. On the other hand, based on the annual report from the Urban Management Office (2007) there were no cases where complaint letters were sent to the office: “within year 2007, there were 18 complaint letter, most of the complain letter which concerned about the land conflict, boundary building, and roadside encroaching.”

Courtesy of company’s staff

In total, only 33 interviewees gave their opinions relating to the courtesy of company’s staff with most of them seem to be rather dissatisfied in this respect (see Table 14 below).

Table 14: Courtesy of company's staff

Service complaint	Courtesy of company’s staff				Total %
	Very poor	Poor	Fair	Good	
Waste water/drainage	3 9.1%	13 39.3%	5 1.4%	1 3%	22 66.7%
Solid waste /collection management	-	-	1 3%	-	1 3%
Public light system	1 3%	2 6%	3 9%	1 3%	7 21%
Condition of trees and parks	-	-	3 9%	-	3 9%
Total %	4 12.1%	15 45.4%	12 36.5%	2 6%	33 100%

Table 14 additionally shows that especially as regards interviewees’ complaints about wastewater/ drainage services, the courtesy of company’s staff is rather negatively perceived.

Effectiveness of complaint resolution

Table 15: Effectiveness of complaint resolution

Service complaint	Effectively resolve complain			Total
	Not Resolved	Partly Resolved	Resolved	
Water supply	2 16.7%	-	-	2 16.7%
Waste water/drainage	2 16.7%	5 41.7%	2 16.7%	9 75.1%
Solid waste collection/ management	-	-	1 8.3%	1 8.3%
Public lighting	-	-	-	-

Service complaint	Effectively resolve complain			Total
	Not Resolved	Partly Resolved	Resolved	
Trees and parks	-	-	-	-
Total	4 33.3%	5 41.7%	3 25%	12 100%

Speed of resolution

Table 16: Speed of resolution

Service complaint	How long for the company resolve					Total %
	1 day	2 – 3 days	4 – 7 days	8 – 14 days	> 14 days	
Water supply	-	1 9.1%	-	1 9.1%	-	2 18.2%
Waste water/drainage	-	1 9.1%	4 36.3%	-	1 9.1%	6 54.5%
Solid waste collection/management	-	1 9.1%	-	-	-	1 9.1%
Public lighting	-	2 18.2%	-	-	-	2 18.2%
Trees and parks	-	-	-	-	-	-
Total %		5 45.5%	4 36.3%	1 9.1%	1 9.1%	11 100%

From Tables 15 and 16, it can be observed that even though the percentage of interviewees who complained about the services of STUPWC is low, when they give the comments about courtesy, resolve, and speed of resolution of the staff, most of them unsatisfied on the courtesy, and their failure to effectively resolve complaints about the services

In IDI with the Vice – Chairman of surveyed wards: *“Currently, the staff of company wants to bring the services or kinds of fee to people, they only contact with the Ward People Committee and asking for inform to people in the ward. They do not contact direct to people. In generally, the company should orient in market structure or join stock style, it will appropriate with the tendency and the police of government, and otherwise it will improve the services of the company to everyone.”*

CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS

Chapter IV presents the conclusions and recommendations related to the KAP for waste water, solid waste, public lighting, trees and parks; the IEC on practice, and the customer service satisfaction on piped water, waste water and solid waste service which were derived from the results of the survey sample.

I. CONCLUSIONS

Sanitation/ Household toilets

Currently, the households are using septic tanks for sanitation, but emptying the tank it is still base on the situation of the tank. Some households really do not have their own toilet because they lack a budget for constructing the household toilets. Moreover, people displayed a clear lack of understanding of the impacts on the environment when using the river or the field as toilets (causes the spread of dangerous diseases and pollution of the water source).

Wastewater/ Drainage

Most of households are connected with the drainage system but some problems related to the small drainages, and poor connections. However, the connections are limited to connection for the wastewater from the households to the drainage system in the alleys of surveyed wards leading the flooding and mosquitoes breeding in the raining season.

Currently, the wastewater eliminate directly from households to river/ponds/lakes without treatment before flowing to the river/canals. Therefore, there is the polluted water source, bad odor in the river.

Most households support the need for the construction of a wastewater treatment plant because the households have found that treatment of wastewater contributes to environmental sanitation - health; and protect environmental sanitation in general. The payment affordability of the households for wastewater treatment is highly appreciated but interviews also want to have reasonable fees applying.

Solid waste

Regarding solid waste collection service, most of interviewees joined the solid waste collection service; they believe the cost is reasonable; and importantly the solid waste is collected everyday. Consequently most of them are satisfied with the collection service. However, some households have not joined the collection service; they are treating the solid waste by, burning, burying or throwing it into the river/canal. Nevertheless, the number of those households is not high.

Public lighting system

Regarding the situation of public lighting, the majority of interviewees are satisfied with public lighting around the home; the distance between the lights, the brightness of the lights; the replacement of broken lights, and they are willing to pay for replacement lights when they are broken and the company doesn't replace them on time. However, there is still lacking of the public light system in the alleys. People in those places have to set up their own "public" light system.

Green trees and parks

There are not enough trees and parks some areas in the surveyed wards do not have any. In some areas there are green trees but only in the main streets. In other streets the STUPWC have recently planted trees. That explains why people either don't know or they are not satisfied with the maintenance (perceiving and thinking of maintenance) of trees and parks

IEC Practice/ Activities

Very few respondents have received information on piped water, waste water and sanitation and the contents of information mentioned the protection for environmental sanitation; health issues, the fee for clean water or fee for other services. In the last six months, the majority of respondents received information infrequently i.e. from one to three times. .

The interviewees, who received information, reported that the public work company/water Supply Company, Television/Radio/Newspaper/loudspeaker, and Health Communicator / Volunteer, were most influential agents in IEC; and the best way to communicate information for those who received information at public meetings in the wards. The public meetings were organized every quarter and when needed. Moreover, the loudspeaker system is also one communication channel recalled by interviewees as being moderately effective over the last six months.

It is noted that many respondents identified the key channels of influence in communication of messages as: face to face like as home visits; neighborhood meetings, and public campaigns. However, all of the interviewees already have the television so it is also an influential channel to communicate to respondents.

Satisfaction Waste Water and Solid Waste Collection Service

The interviewees are either relatively satisfied and/or very satisfied with services from the STUPWC such as solid waste collection, public light system, and green trees and parks except for the wastewater or drainage system.

It is noted that, few cases complain about the services of company; the wastewater is most significant issue about which they complained. In addition, people were not satisfied with the courtesy of the company's staff when they handled complainants..

II. RECOMMENDATIONS

Based on the findings of the survey and suggestions of the interviewees, below are some of the recommendations aimed to improve both infrastructure and IEC activities related to waste water solid waste collection, public lighting, green trees and parks in the Program site.

1. Wastewater

The goal of wastewater treatment is to remove as much of the floating and biodegradable pollutants and disease-causing agents in wastewater as possible in order to minimize the risks to public health and impacts on the environment.

Effective treatment systems should connect all drains from the public drainage to every household including the households in the alleys and remove it for treatment. In addition, the solids are allowed to settle or separated from the rest of the stream in a septic tank. In all systems, the sludge accumulates and eventually needs to be removed, treated, and disposed.

Enhancement of the people's awareness of the relationship between wastewater source flow and health, environmental sanitation, is important. It is an aspect that should be integrated in the WWM Program. Moreover, households should reduce their wastewater! It is a good idea for a number of reasons: not only would it lower monthly water bills, but it also can reduce the money that homeowners and communities spend for wastewater treatment.

The cost of wastewater treatment should be calculated to suit economic conditions of the households.

2. Solid Waste Collection Service

While the existing solid waste collection service is functioning well, some recommendations can be made as follows.

- The solid collection service should be focused on improving the facilities and expanding participation of the households in the small alleys and remote areas.
- Solid waste disposed by/ in the area of the hospital should be carefully managed due to the toxic nature of the waste and its impacts on nearby people.

3. Public Light System

The STUPWC should provide the lights in the alleys where still now do not have the public light system.

It is not only necessary to install lights but to maintain them and replace the broken lights in the streets in a timely manner.

4. Green Trees and Parks

The maintenance of trees and parks are a concern therefore, the STUPWC should plant trees and enhance people's awareness encourage their involvement in taking care of them.

5. IEC Practice / Activity

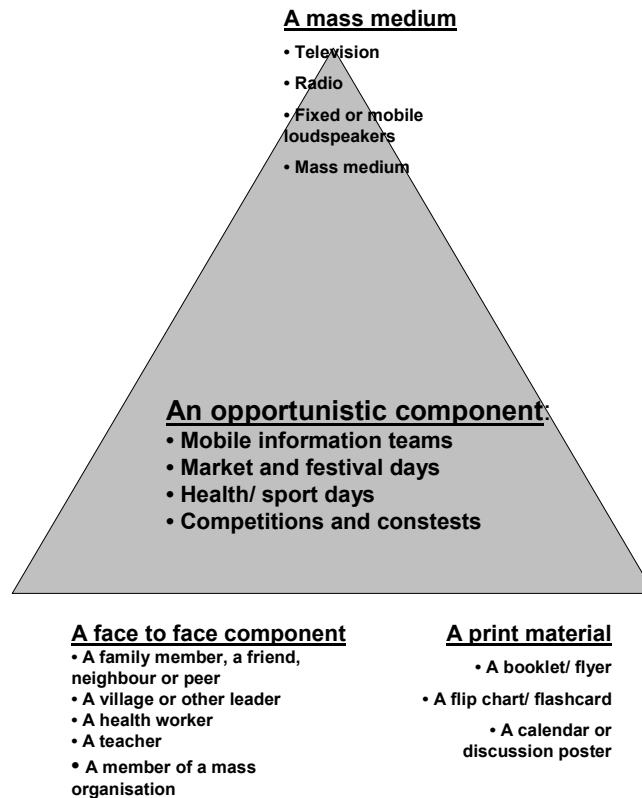
In general, the study found out that very few interviewees have been informed in the last six months about the company's services (water, wastewater, etc.). Thus, in a first step the IEC campaigns should be intensified considerably in order to inform stakeholders. These campaigns should be custom-tailored as regards channels, sources used, and contents of IEC messages. Below are recommendations in this respect.

WWM IEC channel

The study found that the actually used sources/ channels to inform, educate and communicate with people are not completely identical with the channels perceived as most effective by commuters themselves. Thus, channels used should be more in accordance with those perceived as effective by the people.

Additionally, according to international experience, IEC campaigns proved to be most effective if the four groups of channels- a mass medium, a face-to-face component, a print material and an opportunistic component- are combined. This is called by UNICEF the Δ -Formula (Figure 23).

Figure 23: UNICEF’s basic [Δ] formula for the IEC strategic approach in Vietnam



Source:UNICEF (2001), Effective Information, Education and Communication in Vietnam, Hanoi.

According to interviewees statements and above mentioned UNICEF formula, the following channels are recommended to be used in combination: Home visits (face-to-face component) by a respected and trained person (on this, find more information below). On this occasion, this information sender should also distribute print materials (leaflets, brochures) and discuss the contents with the households.

In addition, Public Information Campaigns, such as parades, should be implemented. Furthermore, TV spots should be used to disseminate IEC messages since this channel is perceived as very effective by interviewees and TV-sets are available in all households interviewed.

- IEC on WWM should be integrated into monthly meeting of staff of company, head of wards with local people. “Modeling is a form of activity that can mobilize people to emulate WWM practice.
- IEC training by IEC experts should be organized beforehand for local cadres/ household group heads. Then the leaders will affect IEC to the people at the meetings. During the IEC meetings, visual aids should be used (poster/photos) to show the positive and negative effects. Handouts should also be distributes\ for further readings. Video films on wastewater and others sanitation education can also be programmed at these meetings. This will enhance better understanding for everyone.
- Big meetings with many participants are suitable for announcing, building good cheer and solidarity among people. To aim to improve participants’ knowledge and skills on WWM, the small group discussions (with 7 – 9 persons) should be organized once or twice a month. A meeting should last around one hour, at evening (6 – 7 pm), after dinner.

WWM IEC sources

- Face-to-face communication is perceived as very effective by interviewees. Asked about who is the most influential communicator, majority answered (n descending order) “head of ward” and “representative of company”. Thus, these sources should be mobilized and integrated thoroughly in IEC measures. However, it is essential that these motivators receive sufficient training, materials and support in order to implement their tasks.
- It is international experience that the best results from IEC activities are achieved when participatory methods are used. The focus should therefore be on a participatory process with the establishment of a dialogue and the provision of background information and explanations so that people can make their own choice.
- To motivate key people’s participation in WWM IEC activities: some alternative communication channels should be used in tandem with existing mainstream ones. The local people should elect motivators, as they are keen on choosing the right persons. These elected person will cooperate, share workload with professionals – who often lack of time – to perform IEC. And the people network (e.g.: health volunteer network it includes: Khmer Monks, respected persons...) should be supported to build capacity, motivation.
- To improve communication knowledge and skills of WWM IEC senders, message producers: in order to achieve the objective, firstly, the capacity of agents at wards should be improved and then the people network (senders) created. Along with WWM knowledge and skill, the knowledge and skill in communication, group work, teambuilding, monitoring of the mentioned agents (senders) should be improved.
- To motivate the existing WWM IEC Communicators to apply bottom – up approaches in all steps of WWM IEC activities: concerning other sources such as WWM IEC message producers (those who produce WWM IEC poster, news, model performances). They should be motivated and supported to change from top – down to bottom up approach as Vietnam Government recent policies (Democratization at Grass-roots). From that, the form, content, language, and culture of WWM IEC messages will be improved to fit with culture, background of various groups’ people. In order to maintain WWM IEC network a participatory monitoring and evaluation system should be assisted to be organized step by step.

6. Customer Service

- The customer care services department and training process about the knowledge and skills for the department’s staff should be strengthened so that they can fulfill their duties. Additionally, since it is customer’s right to complain about issues that are in the responsibility of the company, they however are not informed about this right they have, customers should be in a first step informed that a customer care unit exists where they can air their complaints and ask for help/ support. For this purpose, face-to-face information channels should be used - preferably, the company’s staff should inform customers while they collect the monthly bills.
- Solid waste collection fee should be collected together with the wastewater management fee. On this occasion, interviewees should be informed about their rights and responsibilities and the benefits of above mentioned services for them and the whole community. This is a crucial step to create awareness, willingness-to-pay and higher customer satisfaction.

7. Willingness to Pay

The survey revealed that generally a high percentage of interviewees are willing to pay for wastewater management and solid waste collection services. However, they should be thoroughly informed about health and hygiene issues and its link with water/ wastewater/ solid waste, applied technology options, the cost of these, the organizational "requirements"

etc. This strengthens the awareness of stakeholders, convinces them that payments are necessary and thus supports revenue rates suitable for an economically sound operation of these services.

APPENDICES

APPENDIX 1: QUESTIONNAIRE

Questionnaire Control number:	Ward/commune: Soc Trang
Name of Interviewer	Residential are/hamlet:
Telephone No.:	Residential Unit:
Date/Time:	Address:
Name of City/Province:	Telephone number of Interviewee:

**DRAFT BASELINE SURVEY QUESTIONNAIRE
Waste Water Management Program Towns**

**INTERVIEWER: → PLEASE READ OUT THIS TEXT TO THE INTERVIEWEE
CAREFULLY BEFORE YOU START WITH THE INTERVIEW!**

In the framework of waste water & solid waste management in provincial centers, we are conducting the baseline survey incorporating Knowledge-Attitude-Practice & Consumer-Satisfaction-Survey, related with the waste water, solid waste and sanitation, in different levels. On behalf of the Program management we would like to thank you very much for your cooperation and having time to answer the questions. All information provided by you will be considered for this study only and not used for any other purposes.

I. PART 1 FAMILY STATUS

1. **Name of interviewee:**
2. **Age:**
3. **Gender:**
 - 1 Male
 - 2 Female
4. **Ethnicity:**
 - 1 Kinh
 - 2 Khmer
 - 3 Hoa
 - 4 Other, please specify.....
5. **Education level:**
 - 1 Illiterate
 - 2 Grade1-5
 - 3 Grade 6-9
 - 4 Grade 10-12
 - 5 University/college
 - 6 Vocational education

7 Other, please specify.....

6. Profession:

- 1 Official
- 2 Worker
- 3 Small-scale trading
- 4 Farming
- 5 Fishing
- 6 Private business
- 7 Home Duties
- 8 Other, please specify.

7. Average monthly household income in last 12 months (estimated)?

- 1 < 500,000 VND
- 2 500,000 - under 1 million VND
- 3 1- under 2 Million VND
- 4 2- under 3 Million VND
- 5 3- under 5 Million VND
- 6 5 Million VND or over

8. Number of members registered in the households?

- 1 One
- 2 Two
- 3 Three
- 4 Four
- 5 Five
- 6 > Five

9. Does your household possess one or more of the following facilities?

Note: Multiple answers possible!

- 1 TV
- 2 Radio
- 3 VCD/DVD
- 4 Other, please specify.....

PART II: KAP RELATED TO WATER, WASTE WATER, SANITATION, PUBLIC LIGHT SYSTEM, TREES AND PARK

A SANITATION

10. Do you have a household toilet?

- 1 Yes
- 2 No → GO TO QUESTION 13

11. If “Yes”, what kind of toilet?

- 1 Septic tank toilet
- 2 Pit toilet→ **GO TO QUESTION 16**
- 3 Central (off-site) sewage system→ **GO TO QUESTION 16**
- 4 River toilet→ **GO TO QUESTION 16**
- 5 Other, please specify→ **GO TO QUESTION 16**

12. If you have a septic tank, how often do you empty the tank?

- 1 Whenever it is blocked
- 2 Whenever it is full
- 3 Other, please specify.....

13. If “No toilet”, where do you dispose of human waste?

- 1 In the river
- 2 In the street
- 3 In the field
- 4 Use plastic (PVC) bag
- 5 Use neighbor’s latrine
- 6 In Public Toilet
- 7 Other, please specify
- 8 I don’t know/ No answer

14. If you don’t have a toilet yet, are you willing to borrow money in order to build a sanitary household toilet?

- 1 Yes, why?.....
- 2 No, why not?.....
- 3 I don’t know/ No answer

15. Would you share a toilet in common with one of your neighborhoods?

- 1 Yes, Why?.....
- 2 No, why not?.....
- 3 I don’t know/ No answer

16. Do you think disposing outside e.g. in the river or field will impacts on the environment?

Note: Multiple answers possible!

- 1 Spreads dangerous diseases?
- 2 Pollutes the water source?
- 3 Is not harmful?
- 4 Other, please specify
- 5 Don’t know/ No answer?

B WASTE WATER/ DRAINAGE

17. What are the sources of waste water around your house?

- 1 Daily activities in the household (bathing, cleaning, washing)
- 2 Nearby Hospital
- 3 Nearby Industrial area
- 4 Construction in neighbourhood
- 5 Nearby Market
- 6 Other, please specify

18. Is there a public sewerage/drainage system around your house?

- 1 Yes (continue with next questions)
- 2 No → **GO TO QUESTION 22**

19. Is your house connected to the public sewerage/drainage system?

- 1 Yes
- 2 No → **GO TO QUESTION 22**

20. If “YES”, what type of sewerage/drainage system is it?

- 1 Open drain
- 2 Covered drain
- 3 Drain leading to a pond, canal or garden
- 4 Other, please specify.....

21. How long have you been connected?

- 1 < 1 year
- 2 1 - 3 years
- 3 > 3 years
- 4 Don't know/No answer

22. Are you satisfied with the current sewerage/drainage system around your home/street?

- 1 Yes, Why?..... → **GO TO QUESTION 24**
- 2 No (continue with question 23)
- 3 I don't know/ No answer → **GO TO QUESTION 24**

23. If No, what are the problems?

- 1 Mosquitoes breeding
- 2 Spread diseases
- 3 Bad odors
- 4 Polluted water source
- 5 Flooding
- 6 Other, please specify.....

24. As a general principle, do you agree that waste water should be treated (cleaned) before it returns to the river?

- 1 Yes
- 2 No

3 I Don't Know / No answer

25. As a general principle do you agree that private households should pay for waste water treatment?

1 Yes

2 No→ **GO TO QUESTION 27**

3 I don't Know/ No answer→ **GO TO QUESTION 27**

26. How much are you willing to pay for treating waste water per m3?

1 > 5.000 VND

2 > 3.000 - 5.000 VND

3 > 1.000 - 3.000 VND

4 Up to 1.000 VND

5 I don't know/ No answer

C SOLID WASTE

27. Do you have a solid waste collection service?

1 Yes

2 No→ **GO TO QUESTION 30**

28. How often is solid waste collected?

1 Daily

2 2-3 times per week

3 Weekly

4 Other, please specify

5 I don't know/ No answer

29. How much do you pay for this service per month?

1 Nothing

2 < 10 000 VND

3 10 000 – < 20 000 VND

4 20 000 – < 30 000 VND

5 > 30 000 VND

6 I don't know/ No answer

30. If 'No service', how do you dispose of the solid wastes?

Note: Multiple answers possible!

1 Bury it

2 Burn it

3 Throw it in the field

4 Throw it in the river, lake, ditch

5 Other, please specify.

6 I don't know/ No answer

31. Do/es the above mentioned method/s of solid waste disposal changes in the wet season or during floods?

- 1 Yes, which method/s?and in what way?.....
- 2 No

32. Are you satisfied with the current solid waste management practices in your area?

- 1 Yes→ **GO TO QUESTION 36**
- 2 No
- 3 I don't know/ No answer→ **GO TO QUESTION 36**

33. If not, what improvements do you suggest?

- 1 Hygiene problems
- 2 Frequency of collection
- 3 Costs of collection should be reduced
- 4 Blocked drains
- 5 Water pollution
- 6 Smell/Odor
- 7 Flies
- 8 Other, please specify.....

34. Are you willing to pay for improved solid waste management service?

- 1 Yes
- 2 No → **GO TO QUESTION 36**
- 3 Don't know/No answer → **GO TO QUESTION 36**

35. If Yes, how much are you willing to pay per month?

- 1 < 10 000 VND/month/HH
- 2 10 000 – < 20 000 VND/month/ HH
- 3 >= 20 000 VND/month/HH
- 4 I don't know/ No answer

36. What are some possible solutions to existing solid waste management problems?

.....
.....

D PUBLIC LIGHTING SYSTEM

37. Do you have the public lighting system around your place?

- 1 Yes
- 2 No→ **GO TO QUESTION 40**

38. If yes, what are you satisfied about?

	yes	no
The time lights are turn off/on	<input type="checkbox"/>	<input type="checkbox"/>
Distance between the lights	<input type="checkbox"/>	<input type="checkbox"/>
The brightness of the lights	<input type="checkbox"/>	<input type="checkbox"/>
The replacement of broken lights	<input type="checkbox"/>	<input type="checkbox"/>

39. Are you willing to pay when the lights are broken in case the company does not have the budget or supply materials on time?

- 1 Yes
- 2 No
- 3 I don't know/ No answer

40. What are some possible suggestions for the public light system?

.....

E INFORMATION ON TREES AND PARKS

41. Are there enough green trees and parks in your area

- 1 Enough
- 2 Not enough
- 3 Other, please specify.....

42. How do you perceive the maintenance of trees and parks?

- 1 Bad
- 2 Average
- 3 Good
- 4 Other, please specify.....
- 5 I don't know

43. What do you think about the maintenance of trees and parks of people?

- 1 Bad
- 2 Average
- 3 Good
- 4 Other, please specify.....
- 5 I don't know

44. What are some suggestions for maintaining or improving trees and parks?

.....

PART III INFORMATION, EDUCATION, COMMUNICATION PRACTICE

45. Did you receive any information in the last six months on the following issues?

Note: Multiple answers possible!

If “Yes”, go to next questions, If “No” go to question 49

Information about	Yes	No	I don't know/ No answer
1 Piped water			
2 Wastewater			
3 Sanitation			

46. If you received information about waste water management what kind of information did you received?

- 1 Rights in regard to waste water disposal
- 2 Duties in regard to waste water disposal
- 3 Other (please specify)

47. If yes, how often did you receive this information in the last 6 months?

Frequency	Piped water	Wastewater	Sanitation
1 <input type="checkbox"/> 1 time			
2 <input type="checkbox"/> 2-3 times			
3 <input type="checkbox"/> 4-5 times			
4 <input type="checkbox"/> More than 5 times			
5 <input type="checkbox"/> I don't know/ No answer			

48. If yes, from what sources did you get the information?

- 1 Neighbors/Friends
- 2 Public Works Company
- 3 Health communicator/ volunteer
- 4 Respected people in the ward
- 5 TV/Radio/Newspaper/Loudspeaker (please circle if applicable)
- 6 Member of mass organization (name agency).....
- 7 Other, please specify

49. Who is the most influential person to communicate about water, waste water & sanitation?

- 1 Head of ward
- 2 Representative of the Company
- 3 Health worker

- 4 Member of Women’s Union
- 5 Member of Youth Union
- 6 Respected person
- 7 Other, please specify.

50. How often are public meetings held in your ward?

- 1 Never
- 2 Monthly
- 3 Every 2 months
- 4 Every 2-6 months
- 5 > 6 monthly
- 6 I don’t know/ No answer

51. Is there a loudspeaker system in your ward?

- 1 Yes
- 2 No → **GO TO QUESTION 53**

52. If ‘Yes’, what is for you the most suitable time for listening to broadcasts from the loudspeakers?

Note: Multiple answers possible!

- 1 Early Morning
- 2 Mid Morning
- 3 Noon
- 4 Afternoon
- 5 Evening
- 6 Other

53. Ranking exercise: How do you rate the following communication channels for the Company to communicate with you (the households)?

Note: Multiple answers possible!

1- Ineffective; 2- Moderately effective; 3- Very effective

Communication channel	1 Ineffective	2 Moderately effective	3 Very effective
1 Home visit			
2 Neighborhood meeting			
3 Ward meeting			
4 Loud speakers			
5 Poster			
6 Leaflet			
7 Newsletter			
8 Radio			
9 TV			
10 Newspaper			

11 Notice Board			
12 Publicity Campaign			
13 Other <i>(Please specify)</i>			
.....			

PART IV CUSTOMER SERVICE SATISFACTION ON PIPED WATER, WASTEWATER & SOLID WASTE SERVICES, PUBLIC LIGHT SYSTEM , GREEN TREES , AND PARK

54. Are you satisfy with the following services?

Note: Multiple answers possible!

		1 - Dissatisfied	2 Relatively satisfied	Very satisfied
1	Wastewater			
2	Solid waste collection			
3	Public lighting system			
4	Green trees and parks			

55. What have you complained about wastewater service? (mark if it applies)

1	<input type="checkbox"/>	Poor Drainage	5	<input type="checkbox"/>	Bad odour
2	<input type="checkbox"/>	Blocked Pipes	6	<input type="checkbox"/>	Billing/Charges
3	<input type="checkbox"/>	Open manhole	7	<input type="checkbox"/>	Other (specify)
4	<input type="checkbox"/>	Flooding			

56. What have you complained about solid waste service? (mark if it applies)

1	<input type="checkbox"/>	Frequency of collection	5	<input type="checkbox"/>	Waste not fully collected
2	<input type="checkbox"/>	Billing/ Charges	6	<input type="checkbox"/>	Public waste bills not collected
3	<input type="checkbox"/>	Bad odor	7	<input type="checkbox"/>	Other, please specify
4	<input type="checkbox"/>	Polluted landfill	0	<input type="checkbox"/>	Not applicable

57. What have you complained about public lighting system? (mark if it applies)

58.

1	<input type="checkbox"/>	Times lights are turned on	4	<input type="checkbox"/>	Brightness of lights
2	<input type="checkbox"/>	Repair of damaged lights	5	<input type="checkbox"/>	Other (name)
3	<input type="checkbox"/>	Distance between lights	0	<input type="checkbox"/>	Not Applicable

59. What have you complained about parks and green trees? (mark if it applies)

1	<input type="checkbox"/>	Poor Maintenance	4	<input type="checkbox"/>	Not enough trees
2	<input type="checkbox"/>	Cleanliness	5	<input type="checkbox"/>	Other (name)
3	<input type="checkbox"/>	Safety	0	<input type="checkbox"/>	Not applicable

Courtesy of Company's staff

60. How would you rate the courtesy of Company staff who handled your complaint?

		Very Poor	Poor	Fair	Good	Very Good
1	Wastewater/drainage complaint	1	2	3	4	5
2	Solid waste Collection/management	1	2	3	4	5
3	Public light system	1	2	3	4	5
4	Condition of trees and parks	1	2	3	4	5

61. How effectively did they resolve your complaint?

		Not resolved	Partly resolved	Resolved
1	Water Supply Complaint	1	2	3
2	Wastewater/drainage complaint	1	2	3
3	Solid waste Collection/management	1	2	3
4	Public Lighting	1	2	3
5	Trees & Parks	1	2	3

Speed of resolution

62. From the date that you made your complaint, how long did it take for the Company to resolve it?

		1 day	2-3 days	4-7 days	8-14 days	>14 days
1	Water Supply Complaint					
2	Wastewater/drainage complaint					
3	Solid waste collection and management					
4	Public Lighting					
5	Trees & Parks					

63. Do you have any ideas to improve and the water supply and waste water services?

.....
.....

END OF INTERVIEW
Thank you for your cooperation!

APPENDIX 2: IDI & FDG GUIDELINES

The guideline for IDI

Guideline question for Ward People Committee

I. General information

1. The Socio – Economic situation in 2007
2. The general situation of environmental sanitation in ward
3. The general assessment of the environmental sanitation, public light system, and trees and park of the ward

II. Specific information

1. Infrastructures of wastewater/solid waste treatment and public light system, trees and parks

- 1.1 What do you assess on the infrastructures of wastewater/solid waste treatment, and public light system, trees and parks in ward?
- 1.2 What do you think of the management of wastewater treatment from the hospital and industrial areas?
- 1.3 What do you assess the management of wastewater/ solid waste treatment, sanitation and public light system, trees and parks?
- 1.4 Does the People Committee have any orientations for the company to prevent the stolen electrical line and the trees are cut in usually?

2. Information – Education – Communication Activities?

- 2.1 Do you have any activities of IEC on wastewater/ solid waste treatment, sanitation in your ward?
- 2.2 Do you have any the order to combine for IEC among the Mass Organizations on the wastewater/solid waste treatment and environmental sanitation?
- 2.3 Are there any results? Are there any methods to assess?
- 2.4 What do you think the roles of people to combine operating on wastewater treatment and protecting environment?
- 2.5 How do you encourage people to participate in IEC on protecting environment and public schemes?

III. Orientation on wastewater/solid waste treatment, and public light system, trees and parks:

1. What do you think of the STPWUC will operate in the market mechanism?
2. Are there other Programs on Environmental sanitation in the city? What kinds of activity? And belong to which organizations and countries?
3. Are there any provisions for the company? (Human resources, policies and combine with other organization in propaganda)
4. Do you have any orientation for wastewater treatment from hospital, Industrial areas?
5. Do you have any policies to maintenance - monitoring and evolution for the scheme after it operating?

Thank you

Guideline Question for Leader City of Soc Trang People Committee

I. General information

1. The Socio- Economic of the city in 2007

II. Specific information

1. Infrastructures of wastewater/solid waste treatment and public light system, trees and parks:

- 1.1 What do you assess on the infrastructures of wastewater/solid waste treatment, and public light system, trees and parks in city
- 1.2 What do you think of the management of wastewater treatment from the hospital and industrial areas?
- 1.3 What do you assess the management of wastewater/ solid waste treatment, sanitation and public light system, trees and parks?
- 1.4 Does The People Committee have any orientations for the company to prevent the stolen electrical line and the trees are cut in usually?

2. Information – Education – Communication Activities?

- 2.1 How do you think about the IEC activities of Mass organizations on the wastewater/solid waste treatment and environmental sanitation?
- 2.2 Do you have any the order to combine for IEC among the Mass Organizations on the wastewater/solid waste treatment and environmental sanitation?
- 2.3 Are there any results? Are there any methods to assess?
- 2.4 What do you think the roles of people to combine operating on wastewater treatment and protecting environment?
- 2.5 How do you encourage people to participate in IEC on protecting environment and public schemes?

III. Orientation on wastewater/solid waste treatment, and public light system, trees and parks:

1. What do you think of the STPWUC will operate in the market mechanism?
2. Are there other Programs on Environmental sanitation in the city? What kinds of activity? And belong to which organizations and countries?
3. Are there any provisions for the company? (Human resources, policies and combine with other organization in propaganda)
4. Do you have any orientation for wastewater treatment from hospital, Industrial areas?

Thank you

Guideline Question for In-Depth Interview
Urban Management Office

I. General information

1. The general activities of the Office in 2007 (the report on 2007)
2. The functions and responsibilities of the office in management of environmental sanitation.
3. The general assessment of the environmental sanitation, public light system, and trees and park of the city

II. Specific information

1. Infrastructures of wastewater/solid waste treatment and public light system, trees and parks

- 1.1 What do you assess on the infrastructures of wastewater/solid waste treatment, and public light system, trees and parks?
- 1.2 What do you think of the management of wastewater treatment from the hospital and industrial areas?
- 1.3 Do people have any feedback the activities of the office in wastewater treatment and environmental sanitation?
- 1.4 Who do you assess the management of wastewater/ solid waste treatment, sanitation and public light system, trees and parks?

2. Information – Education – Communication Activities

- 2.1 How do you assess the activities of IEC on the environmental sanitation?
- 2.2 What do you think the roles of people to combine operating on wastewater treatment and protecting environment?

III. Orientation on wastewater/solid waste treatment, and public light system, trees and parks:

1. What do you think of wastewater treatment's payment (the necessarily payment, the cost of payment, the procedure of payment, and the time of payment)
2. Have you have been planning for drainage system, environmental sanitation? (forms and time to operate)
3. What do you think of the STPWUC will operate in the market mechanism?
4. What do you suggest for improving for current situation?

Thank you

Guideline Question for Ethnic Committee Department

I. General information

1. Brief introduction on the Functions and responsibilities Ethnic committee Department?
2. The general assessment of the environmental sanitation, public light system, and trees and park of the city
3. What do you think of wastewater treatment's payment (the necessarily payment, the cost of payment, the procedure of payment, and the time of payment)

II. Information – Education – Communication Activities?

2. What is difference and difficulty in IEC between the Ethnic? (Kinh – Chinese and Khmer)

- 2.1 What are the appropriated forms to communicate on environmental sanitation between the ethnic?
- 2.2 What are the appropriated contents to communicate on environmental sanitation between the ethnic?
- 2.3 Is there the combination among the Ethnic Committee and other organizations in communicating on Wastewater/solid waste treatment, and environmental sanitation?
- 2.4 What do you think the roles of people to combine operating on wastewater treatment and protecting environment?
- 2.5 Will the Ethnic Committee Department has the capacity to combine with the company in propaganda? (Capacity, forms, advantages, and disadvantages)
- 2.6 Do the people complain about the wastewater/solid waste treatment and public light system, trees and park? Why?
- 2.7 Do you have any suggestions for wastewater/solid waste treatment, and public light system, trees and parks?

Thank you

Guideline Question for the Monks

I. General Information

1. Brief introduction on Temple
2. The general assessment of the environmental sanitation, public light system, and trees and park of the city
3. What do you think of wastewater treatment's payment (the necessarily payment, the cost of payment, the procedure of payment, and the time of payment)

II. Information – Education – Communication Activities ?

- 2.1 What is difference and difficulty in IEC between the Ethnic? (Kinh – Chinese and Khmer)
- 2.2. What are the appropriated forms to communicate on environmental sanitation between the ethnic?
- 2.3 What are the appropriated contents to communicate on environmental sanitation between the ethnic?
- 2.4. Is there the combination among the Ethnic Committee and other organizations in communicating on Wastewater/solid waste treatment, and environmental sanitation?
- 2.5. What do you think the roles of people to combine operating on wastewater treatment and protecting environment?
- 2.6. Will the temple has the capacity to combine with the company in propaganda? (Capacity, forms, advantages, and disadvantages)
- 2.7. Do the people complain about the wastewater/solid waste treatment and public light system, trees and park? Why?
- 2.8. Do you have any suggestions for wastewater/solid waste treatment, and public light system, trees and parks?

Thank you

Guidelines of FGD

I. Behavior relate to wastewater and sanitation

1. Is there a public sewerage/drainage system around your house your house connected to the public sewerage/drainage system?
2. Are there industrial areas, hospital, construction in your neighborhood ?
3. Have you effected by disposing wastewater from these sources (health, traffic, daily activities, business)
4. How do you think of the situation of sanitation in your neighborhood?
5. And how do you assess the activities of sanitation?
6. How much do you pay for the activities of sanitation per month?
7. What do you think of wastewater treatment's payment (the necessarily payment, the cost of payment, the procedure of payment, and the time of payment)
8. How do you assess in the situation of public light system, trees and park in your places?

II. Information – Education – Communication

1. Are there any activities of IEC on Wastewater, solid waste, and sanitation currently?
2. What kinds of method, facilities? And who are responsible?
3. According to you, what kinds of benefit which these activities of IEC bring to you in wastewater, solid waster treatment and sanitation?
4. What kinds of information will be appropriated with you and other people in neighborhood? (the contents and forms of communication)
5. What kinds of communicating form will be appropriated in your condition and the other people in your neighborhood?
6. What do you think about the role of people in IEC on sanitation (asking them how do they stop throwing the garbage into canal/river

III. Improvement

1. The most important thing to do following:
 - Clean Water supply Hệ thống cấp nước sạch
 - Wastewater treatment
 - Drainage system
 - Establishment and improvement the solid waste collection service
 - Other schemes (specific)
2. Why do you think it is the most important thing?
3. Do you have any suggestions for wastewater treatment and sanitation currently?
4. Do you have any suggestion for improvement?
5. What kinds of solution of community which can contribute for the Program

Thank you

**APPENDIX 3: DISTRIBUTION AND CONSTITUTION OF FGD IN THE SURVEYED
 WARDS**

WARD	THE NUMBER OF PARTICIPANTS IN FGDS			TOTAL
	FEMALE GROUP	MALE GROUP	MOS GROUP	
1	5	10	9	24
3	10	3	10	23
5	10	8	7	25
TOTAL	25	21	26	62

APPENDIX 4: THE LIST OF INTERVIEWERS

The List of Interviewers

Full name	Position
1/ Thái Bình Khuôi	The staff of planning bureau
2/ Thạch Huông	The chief of wastewater
3/ Nguyễn Quốc Khởi	The chief of Trees and Parks
4/ Nguyễn Hoàng Hải Thiên	The Vice –chief of solid waste fee collection
5/ Nguyễn Hữu Tòng	The chief of public light system
6/ Đinh Xuân Trung	Vice Chief - Sanitation Team
7/ Huỳnh Thanh Hoàng	Planning bureau
8/ Nguyễn Thu Trang	The staff of personnel bureau
9/ Huỳnh Thị Thùy Trang	The staff of planning bureau
10/ Đặng Hồng Nghi	The staff of finance bureau
11/ Hà Sa Ri Benne	The vice- chief of wastewater