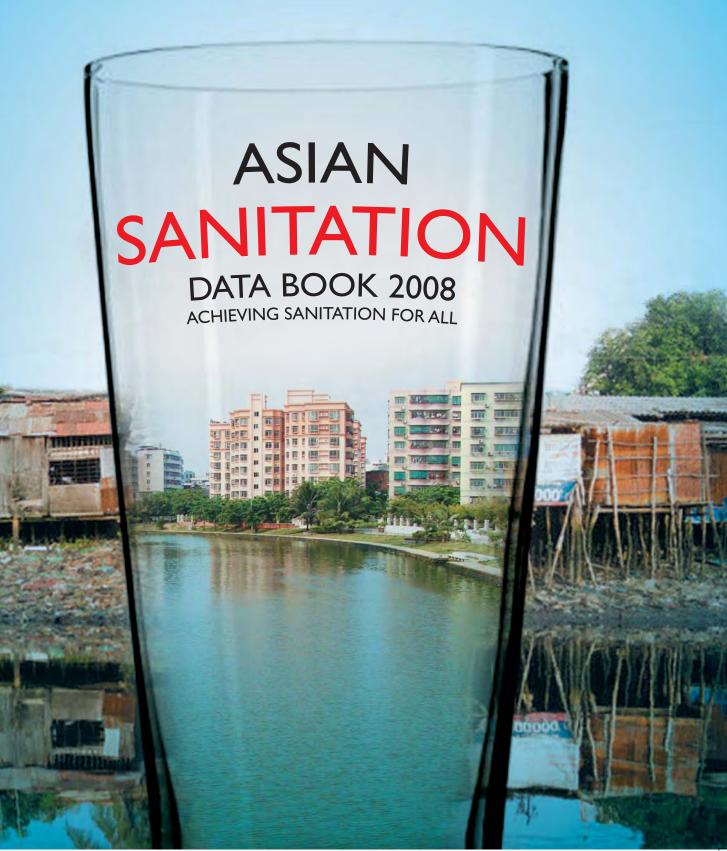
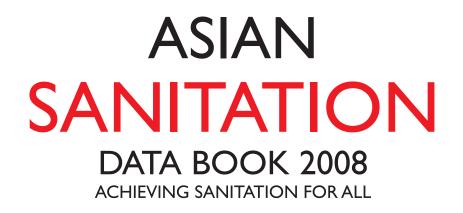


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FOREWORD

It is our great pleasure to present this publication, Asian Sanitation Data Book 2008—Achieving Sanitation for All. This publication is the first data book on sanitation for the Asia and Pacific region and the first joint effort of CITYNET, the Asian Development Bank (ADB), the United Nations Human Settlements Programme (UN-HABITAT), and Veolia Environnement.

The initiative was realized in response to the needs of Asian cities and local governments, which gathered at the International Seminar on Sanitation 2007— Delivering Our Vision: Sanitation For All, organized by CITYNET, ADB, and the city government of Makati, at the ADB headquarters in Metro Manila, Philippines, in November 2007.

Sanitation has long been an issue that has received little attention due to its complexity. The absence of relevant data has hindered cities and local governments from adopting appropriate policies and strategies to meet the provision of "sanitation for all." Moreover, technologies that reflect the needs of communities, as well as the communities' ability and willingness to pay for better sanitation, are limited.

This publication highlights the need for more work to be done on sanitation in Asia and the Pacific. Focus and action must be directed at accurate data collection and management to support decision making, appropriate and low-cost technologies, and the allocation of resources for the provision of sanitation. These are but a few issues that need immediate attention and action.

CITYNET is ready to convert the data book into action by undertaking a "benchmarking program" in the form of city-to-city cooperation—a flagship activity of CITYNET—to ensure improved access to sanitation in more rapid and efficient ways. As a unique network of active local governments in more than 20 countries mainly in Asia and the Pacific, CITYNET will continue cooperating with other institutions working on sanitation issues to meet the Millennium Development Goal target of reducing the proportion of people without access to improved sanitation by half, by 2015.

I would like to express my sincere gratitude to the coauthors of this publication—ADB and UN-HABITAT—as well as Veolia Environnement, the first private company in our network, for their great contribution. I also wish to thank the numerous cities that have submitted information and data that helped make this project a reality, and the program team of the CITYNET Secretariat for their committed work. Without everyone's support, this publication would not have been concretized.

Lastly, I hope this publication will be a useful resource, and will inspire all to believe that sanitation for everyone is possible.

Dato'Lakhbir Singh Chahl Secretary–General CITYNET

PREFACE

Access to safer sanitation is on the rise in Asian cities. From 1990 to 2002, urban access to improved sanitation increased by 366 million people. Many countries in Asia are expanding their sanitation coverage at rates that surpass progress on drinking water, but often because they are starting from a low base. Access to basic latrines alone eludes nearly 2 billion Asians, and lags far behind access to safe drinking water.

To reach truly respectable and humanitarian levels of sanitation coverage, urban planners, managers, and decision makers need quality data that they currently do not have. Whatever data they have is typically incomplete, distorted, and unreliable. Many utilities do not have reliable systems for data collection and management. Better systems can help planners and managers formulate feasible targets and support the planning and monitoring of the inputs, outputs, and processes that are essential to achieving those targets. Reliable data would also help governments prioritize investments and reforms that support sustainable sanitation and waste management.

Reliable information on sanitation—which can be further refined and expanded—is now available for 27 cities in the Asia and Pacific region. This Asian Sanitation Data Book 2008—Achieving Sanitation for All offers both raw data and analysis. Conceptualized in 2007 by CITYNET, the project was supported by the Asian Development Bank (ADB) and the United Nations Human Settlements Programme (UN-HABITAT).

ADB's experience with producing water utility data books for the Asia and Pacific region made it the natural coordinator for this project. ADB finalized agreements with participating mayors, provided experts on the development of the sanitation indicators, conducted data analysis, and published the book. CITYNET, an active network of urban managers in Asia, coordinated the data collection in the participating cities. UN-HABITAT played a critical support role to CITYNET, successfully expanding the pool of cities included in the survey.

We hope more mayors and urban planners will replicate these efforts and improve the information management methods and tools for their own knowledge development, advocacy, and planning. In particular, we look forward to the enhancement and adoption of the sanitation indicators into the benchmarking programs of the water utility networks that have been created to bring together utilities in Southeast, South, and Central Asia. As they expand their business plan to include sanitation, we hope they will use this data book as a guide for their own sanitation benchmarking.

Sanitation is high on ADB's agenda under the Water Financing Program and we hope to continue partnering with cities in contributing to the overall positive trends in sanitation coverage in Asia and the Pacific. The Millennium Development Goals, specifically Target 10, implores us to monitor and support country and city efforts to cut in half, by 2015, the proportion of people without access to safe drinking water and improved sanitation. This is not just a matter of personal, household, and public health issues, but of creating sustainable environments and economic progress.

en y la

WooChong Um Director Infrastructure Division Regional and Sustainable Development Department Asian Development Bank

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LIST OF PARTICIPATING CITIES AND/OR MUNICIPALITIES

East Asia

People's Republic of China Jinghong* Kunming* Puer*

South Asia

Bangladesh Dhaka City

India

Bhopal* Gwalior* Indore* Jabalpur*

Nepal

Bharatpur* Hetauda* Kathmandu Metropolitan City Lekhnath* Pokhara Sub-Metropolitan City

Sri Lanka

Colombo Negombo

* Indicates areas where survey responses were facilitated by UN-HABITAT.

South East Asia Indonesia Banda Aceh

Lao People's Democratic Republic Phine* Sayabouly* Xieng Ngeun*

Philippines Calbayog City, Samar Makati City San Fernando City, La Union

Viet Nam

Cam Ranh* Ho Chi Minh City Hue City Song Cau* Thap Cham*

ABBREVIATIONS

ADB	-	Asian Development Bank
BOD	_	biochemical oxygen demand
COD	_	chemical oxygen demand
HH	_	household
PCB	_	polychlorinated biphenyl
UN-HABITAT	_	United Nations Human Settlements Programme

MEASUREMENT UNIT AND SYMBOLS

\$/cap	-	dollar per capita
\$/con	_	dollar per connection
\$/ST	_	dollar per septic tank
#	-	number
CFU	-	colony forming unit
ha	-	hectare
Hg	_	mercury
1	_	liter
lpcd	-	liters per capita per day
mg	-	milligrams
ml	-	milliliter
m ³	-	cubic meter
m³/d	-	cubic meter per day
mg/l	_	milligram per liter
MPN	-	most probable number
Pb	_	lead

NOTE

In this report, "\$" refers to US dollars.

PART I

SUMMARY OF FINDINGS

Introduction

The information presented in this publication, Asian Sanitation Data Book 2008—Achieving Sanitation for All, comes from a survey of 27 cities that are members of CITYNET and participants in the Water for Asian Cities Program of the Asian Development Bank (ADB) and the United Nations Human Settlements Programme (UN-HABITAT). Gathering of survey data was facilitated by CITYNET and UN-HABITAT. Information contained in the returned survey forms was not complete, so analysis may not be as extensive (see Table 1). However, a number of conclusions may be drawn from the data.

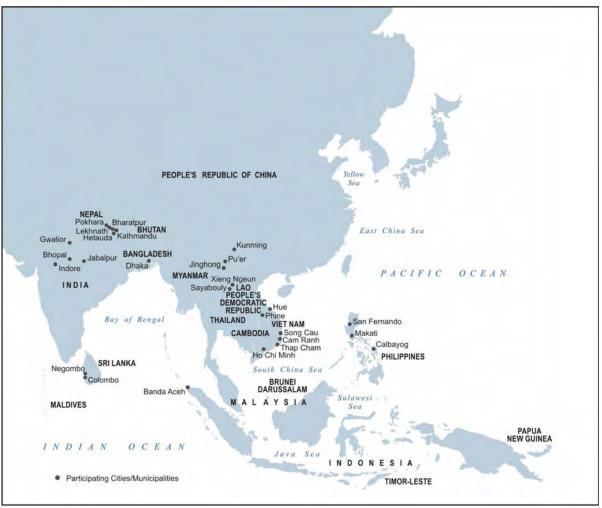
Of the 27 cities, 1 is in Bangladesh, 3 are in the People's Republic of China, 4 are in India, 1 in Indonesia, 3 in the Lao People's Democratic Republic (Lao PDR), 5 in Nepal, 3 are in the Philippines, 2 in Sri Lanka, and 5 in Viet Nam (see Figure 1).

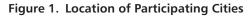
What does good sanitation mean? For ADB, it refers to good health and environmental outcomes and therefore encompasses personal hygiene and care for the environment. It means dealing with both human and water wastes from households and commercial and industrial enterprises. Good sanitation is best judged by health and environmental outcomes as shown in Figure 2.

The overall city sanitation picture is not bright. Sanitation has not been given sufficient priority and certainly lags behind provision of drinking water. Based on this survey, the key findings are the following:

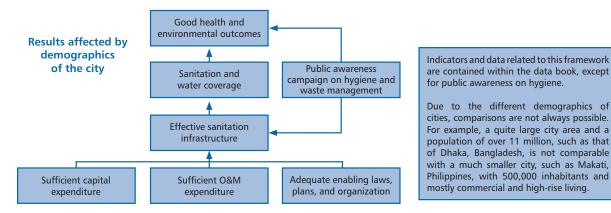
- Lack of sanitation and household wastewater treatment facilities is polluting ground and surface waters.
- Sustaining public health is an expected outcome of having adequate sanitation, but over half of the cities were unable to report key health statistics. Those that did reveal increasing diarrheal cases when the share of household wastewater increases.
- Far too many cities still have incidences of open defecation (ranging from 10%–40%) and sanitation coverage depends on private householders investing in toilets and septic tank systems.
- Although almost all cities are aware of their sanitation problems, only 40% of responding cities have sanitation plans, and few were able to provide information on capital expenditure and operations and maintenance costs.
- Most cities that provide sanitation services rely on government funding to pay for capital and operating costs, with only 10% indicating that sanitation fees and charges can cover their costs.
- Multiple agencies have responsibilities for some aspects of sanitation. However, local government seems to be the primary organization. These organizations were operating under at least several national laws and one local law. These

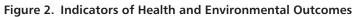






Source: Asian Development Bank.





institutional arrangements may frustrate action and reduce accountability.

This information may not come as any surprise to those closely involved in public health and water and sanitation utilities. The findings, despite qualifications about data quality, point to priority actions required to increase sanitation coverage and improve health and environmental conditions.

Based on this survey, governments, in coordination with various stakeholders, must undertake the following priority actions:

- Initiate city sanitation plans, including setting targets for sanitation outcomes and coverage.
- Simplify institutional arrangements to strengthen accountability and avoid multiple-agency involvement that can cause delays in taking action; set in place a coordinating mechanism.
- Review operation and maintenance expenditures and cost recovery policies to ensure sanitation providers can sustain operations and extend services.
- Improve sanitation benchmark indicators and set in place a sanitation information management system that will be regularly updated to help planners and decision makers make investment and operations decisions.
- As significant investment is needed, consider sourcing funds from beyond government

sources—such as the private sector and user fees; and other revenue-generating mechanisms.

Outcomes on the Key Indicators

a. Good Health and Environmental Outcomes

Based on the results of the survey, wastewater, particularly from households, is slowly polluting the groundwater and surface water sources of the respondent cities. Twenty out of 27 participating cities monitored their groundwater and surface water quality and about half of the water pollution came from household liquid waste. About 70% of the wastewater was discharged to bodies of water without treatment. Four cities reported that their rivers were "heavily" polluted, while the rest reported that the pollution levels of their rivers were "medium" or "low."

Many cities are adjacent to each other and are expected to work cooperatively to address sanitation and wastewater issues. However, only three cities reported that they were working cooperatively with neighboring towns and/or cities on pollution problems. The rest were tackling the issue independently.

Monitoring water quality should be expected in cities. Only 6 out of 27 cities have reported groundwater quality monitoring results and one city violated the standards on total coliform. Alarmingly, most cities



have a pollution load two to eight times their surface water quality standards.

Monitoring health outcomes is equally important. However, of the 27 respondents, only 12 cities (44%) reported their health statistics. Nevertheless, data show that the incidence of reported cases of diarrhea increases as the share of the household solid and liquid wastes rises.

If better public health and environmental conditions were a government priority, then provision of sanitation infrastructure facilities, particularly wastewater treatment facilities, and efficient surface and groundwater quality monitoring are imperative. The cost of cleaning up polluted rivers and lakes would be more expensive than the cost of providing sanitation infrastructure facilities. However, managing water resources on a long-term sustainable basis calls for reliable and up-to-date data.

Which cities then appear to show the best results in terms of overall practices, environment, and health?

Overall best sanitation practices. Based on the data gathered and due to most cities' lack of available information in some parameters, it is difficult to choose the city with the best sanitation practices.

Environmental statistics. Most cities failed to meet nearly all of the standards (Table 2). In terms of total coliform, Gwalior (India), Phine (Lao PDR), and Xieng Ngeun (Lao PDR) have <1 #/ml, meeting the standard for this parameter. All the cities have biochemical oxygen demand (BOD) levels higher than four. Except for Jabalpur, India, and Sayabouly, Lao PDR, the surface water quality in the respondent cities indicated very high levels of total suspended solids.

Health statistics. Negombo, Sri Lanka, has the lowest cases of diarrhea at 0.64 per 10,000 population, followed by Colombo with 0.73. Negombo also has very low hepatitis and malaria cases, which both stand at 0.13 cases per 10,000 population. Calbayog City, Philippines, and Lekhnath, Nepal have no cases of hepatitis, trachoma, or malaria. However, Lekhnath has a high incidence of diarrhea at 194.11 cases per 10,000 population. Survey results show that Negombo has the best health indicators, followed by Colombo (Table 3).

b. Adequate Sanitation and Water Coverage

The survey results show that sanitation is not a government priority. Because of poverty, many cities still have open defecation areas. Half of the cities reported having open defecation areas, with 10 cities (almost 40%) indicating that about 10%–35% of their households still practice open defecation.

In contrast, provision of water supply is a priority for all respondent cities. All have a central water supply system and some have water treatment facilities—although with low coverage. All respondent cities have a central water supply system serving 4%–100% of households. In this central supply system type, all cities have inhouse piped water supply connection and 15 cities use communal sources. The central water supply system serving 71% of the total respondents' city population.

Of the 15 cities with communal water supply source, 6 cities have more than 11%–44% of their households relying on this water source.

Of the cities, 15 still use boreholes as water supply source. Of these, 10 cities have more than 20% of households relying on boreholes as their major water source.

Of the cities, 22 have water treatment plants with capacities ranging from 1.4 to 137 liters per capita per day (lpcd) and averaging 25 lpcd. Due to poor water quality, 25%–80% of the population in six cities indicated they buy bottled water.

Most cities still need to boost their investment in water supply to provide potable water to all their households. However, a large investment that requires partnerships between government, the private sector, and external support agencies is needed.



Increasing the coverage of water supply exacerbates the sanitation situation as more wastewater volumes are generated for disposal. However, the necessary wastewater facilities are not being provided. Investments in water supply could be undermined without investing in improved sanitation.

Which cities have high sanitation and water supply coverage?

Sanitation coverage. Among the 27 cities, Kunming, People's Republic of China, and Thap Cham, Viet Nam, both ranked first in providing improved sanitation facilities, with 100% of their population having individual toilets that are connected to centralized sewerage system with treatment facilities. Gwalior, India, ranked second, with 86% of the population having individual toilets connected to a sewerage system, and Colombo, Sri Lanka, third—with 80% of its population having individual toilets connected to a sewerage system. Both Gwalior and Colombo have no sewage treatment plants.

Water supply coverage. Among the 27 cities, Kathmandu, Nepal, ranked first in terms of water supply coverage, with 100% of the households connected to a central water supply system. Makati City, Philippines ranked second, with 100% of the city land area served by the central water supply system and 99.7% of its population connected. Makati City also has a water treatment facility with a capacity of 137.2 lpcd, the highest among the 27 cities. Ranking as second is Colombo's facility, with a capacity of 105.2 lpcd.

c. Adequate Sanitation Infrastructure

Without adequate private and public infrastructure, health and environmental outcomes will not materialize. Collection of waste is one important facet, but another is treatment, which is a neglected area. Household human waste in cities can be collected and treated in various ways but respondents in the survey showed overreliance on individual household's providing their own sanitation facilities. Twenty-two cities rely on individual toilet with a septic tank system, but only four cities (less than 20%) reported having a septage treatment plant.

Fifteen cities out of 26 respondents have a central sewerage system, yet 11 of the 15 sewered cities still need to cover 70% of their population. Of these,



eight cities (30%) have reported having a wastewater treatment plant (Table 4).

Thap Cham (Viet Nam) reported 98% of its area being served by a central sewerage system, with 100% connection and 99% of its wastewater is treated. However, no information is given on the quality of surface water. Another city, Kunming (People's Republic of China), also has 100% connection, but only 0.4% of its area is served by a central sewerage system.

Newer techniques for dealing with human waste, such as technologies involving no water, have been advocated in recent years. One such technology is the "eco-san" toilet that separates solid from liquid human wastes and requires no running water. Despite nongovernment organizations' strong advocacy of such technologies, only two cities have adopted the eco-san toilets.

Key messages that can be deduced here are (i) all cities need to boost their investment in sanitation, starting with toilets, followed by a sewage collection, treatment, and disposal system; (ii) regular desludging services and septage treatment facilities should be provided for cities with a high proportion of households having septic tanks; and (iii) increasing water supply coverage should go hand-in-hand with a complementary investment plan to deal effectively with the additional wastewater to achieve the targeted health benefits.

d. Sufficient Capital and Operation and Maintenance Expenditure

Infrastructure needs to be renewed, expanded, and maintained. Survey results show only few cities know and could provide information on their annual investment requirement and/or the operation and maintenance (O&M) cost. Eight cities indicated their annual capital investment program. On average, the funding sources for the proposed capital investments were from local government (44%), national government (31%), loans (17%), and others—mostly grants (12%). Ten cities indicated their sources of capital investment, but not the amount. In this group, the funding sources were from local government (23%), loans (24%), and others (37%). No city has indicated tariff revenue as a source for capital investment.

Some responses showed that with proper design and planning, tariff revenues can cover the O&M costs. Eleven cities indicated their O&M expenditure requirement ranges from \$0.08–\$8.3 per capita, and about 75% of them have O&M costs below \$1.0 per capita. On average, the funding sources for O&M costs were local government (70%), tariff revenues (20%), loans (9%), and national government (1%).

Only four cities (under 20%) reported having separate sanitation revenues. Three of the four cities that have sanitation revenues indicated their revenues can more than cover the sanitation O&M costs. Only 5 out of the 15 cities that have a central sewer system stated they have a sewer tariff rate.

Desludging services for septic tanks are carried out by both government (49%) and private firms (51%), indicating private sector involvement in sanitation. Desludging fees of the private firms ranged from \$4–\$133 per septic tank, with 70% of them charging below \$35, whereas government agencies charged from \$3.5 to \$30 per septic tank, with 60% of them charging below \$20. The current financial situation of some cities prevents them from adequately funding their sanitation investment program. Furthermore, most cities need to review their O&M protocol, and compare this with other cities.

Which cities have developed financing mechanism for sanitation?

Capital investment. Colombo (Sri Lanka) ranked first in this category with an annual capital investment of \$27.9 per capita, where 47% is subsidized by the national government and the remaining 53% sourced through loans. Coming close at second is Jabalpur (India) with an annual capital investment of \$22.5 per capita, with funding sourced from national government (50%), local government (20%), and loans (30%).

O&M expenditures. Only 11 cities have data on O&M expenditures for sanitation facilities. Out of the 11, only 6 have sewered areas. O&M aggregate cost (2007 data) ranges from \$7,200 to \$6,250,000. Sanitation O&M cost per hectare (ha) of the six sewered cities ranges from \$35.71/ ha to \$1,812.61/ha.

e. Adequate Enabling Laws, Plans, and Organization

Having the infrastructure is not a guarantee of excellent sanitation services and achievement of health and environmental outcomes. Accountable and properly staffed organizations, ably supported by appropriate laws and regulations, are also needed.

The survey shows that sanitation services involve more than just the city government. Other national and local government agencies are involved, and several laws on sanitation per city exist. On average, four organizations—mostly government agencies were involved in sanitation. Four cities reported that both national and local government agencies were involved in sanitation in their cities. One city indicated that mainly national government agencies were involved in sanitation, while 21 cities indicated that mainly local government agencies—ranging from 1 to 4 local offices—were responsible for sanitation. On the other hand, 11 cities reported that their sanitation facilities were being managed by government-controlled utilities, of which three cities had two government-owned utilities. Only one city indicated that a private water utility was involved in providing sanitation services.

Seventeen cities indicated very few personnel involved in sanitation. Only a quarter of the cities have more than 20 staff per 10,000 population engaged in sanitation, but personnel numbers may be understated since other agencies are often involved.

The cities operate, on average, under two national laws and one local law on sanitation. This mix of organizations and laws suggests that institutional arrangements and organizational structure should be simplified, with proper accountability and coordinating mechanisms. Governments should review the institutional setup for city sanitation and the corresponding laws that have to be enacted. Provision of sanitation facilities and services is generally the mandate of local governments. However, some cities need assistance in policy and legal and institutional reforms for more effective delivery of sanitation services.

Regarding planning, only 40% of respondents have a sanitation plan—reinforcing the belief that sanitation

has a low priority in city governments' agenda. Nevertheless, having a plan is not enough. The comprehensiveness and quality of sanitation plans need to be improved. Eleven cities reported having a sanitation plan, but only one indicated the year the plan was made. That means more than half of all cities have no formal plans or the plans may be old and no longer appropriate. Eight cities reported that they will prepare a sanitation plan in 2008 or 2009. Almost all cities (20) were aware of their sanitation problems, but only two indicated a definite project to resolve them, complete with funding requirement and sources. Some local governments might require technical and financial assistance in developing their sanitation plans.

Cities preparing sanitation plans now or in the near term should be collecting, monitoring, and analyzing important sanitation benchmark data. Some parameters and indicators used in this data book have to be improved or changed. City governments should consider setting up a water and sanitation information management system, with regular data collection, and updating of the database. This would help them identify priority areas of concern; set targets; determine costs, funding, and capacity requirements; formulate policies and guidelines; monitor progress; and recognize good practices.

			Availability of Environment	Availability of	Enabling
Population	Number	Urban Poor (%)	Results (%)	Health Results (%)	Environment (%)
Over 10 million	1	36	100	0	67
Between 5 and 10 million	2	3	50	50	100
Between 2 and 5 million	1	16	100	0	100
Between 1 and 2 million	2	26	100	0	67
Between 0.5 and 1 million	4	0–46	75	75	84
Between 100–500 thousand	10	0–33	40	70	80
Under 100 thousand	7	3–42	43	14	76
Total	27				

Table 1: Participating City Data Availability per Population Range

Source: Results of survey conducted in 27 cities in 2008.

City/Country	Total Coliform	BOD* (mg/l)	COD (mg/l)	Total Suspended Solids (mg/l)	Heavy Metals (mg/l)
Ho Chi Minh, Viet Nam	22,000 MPN/100 ml	4.5	10.8	261.0	-
Jabalpur, India	<200 #/ml	4.5	50.0	1.0	0.25
Banda Aceh, Indonesia		4.7	17.5	61.0	0.30
Phine, Lao PDR	<1#/ml	5.0	50.0	-	-
Sayabouly, Lao PDR	10#/ml	5.0	50.0	1.8	-
Xieng Ngeun, Lao PDR	<1#/ml	5.0	50.0	-	-
Bhopal, India	30 #/ml	6.0	50.0	200.0	0.25
Gwalior, India	<1#/ml	6.0	50.0	200.0	0.25
Indore, India	30 #/ml	6.0	50.0	200.0	0.25
Negombo, Sri Lanka	10,200 MPN/100 ml	6.0	22.0	-	-
Kunming, PRC		10.7	67.4	-	-
Hue, Viet Nam	5,000 MPN/100 ml	15.0	7.1	60.0	0.03
Pokhara, Nepal	291 CFU/100 ml	22.5	95.0	61.0	-
Dhaka, Bangladesh	11,450 MPN/100 ml	30.0	80.0	30.0	-
Kathmandu, Nepal	2,400,000 #/ml	36.0	207.0	-	0.05
Colombo, Sri Lanka	5,000 MPN/100 ml	48.0	75.0	83.3	16.7
Calbayog, Philippines	-	168.0	973.0	75.0	-
Jinghong, PRC	40 #/ml	180.0	360.0	250.0	-

Table 2: Surface Water Quality of Respondent Cities

BOD = biochemical oxygen demand, COD = chemical oxygen demand, # = number, CFU = colony forming unit, Lao PDR = Lao People's Democratic Republic, mg/l = milligram per liter, ml = milliliter, MPN = most probable number, PRC = People's Republic of China. Note: "--" means data not available.

* Table sorted per BOD in ascending order—only 18 cities out of 27 provided data. Based on 2007 data of the cities.

Source: Results of survey conducted in 27 cities in 2008; Part III of this Asian Sanitation Data Book 2008.

Water Quality Standards	Total Coliform	BOD	COD	Total Suspended Solids	Heavy Metals
WHO Guidelines for Drinking Water Quality ^a	0/100 ml of sample				Pb = 0.01 mg/l Hg = 0.006 mg/l
Viet Nam TCVN 5942 – 1995 Column A ^b	5,000 MPN/100 ml	<4 mg/l	<10 mg/l	20 mg/l	Pb = 0.05 mg/l Hg = 0.001 mg/l
PRC Standard for Water Quality – Category III ^c	10,000 <i>#/</i> I	4 mg/l	15 mg/l		Pb = 0.05 mg/l Hg = 0.05 mg/l
Philippines Water Quality Criteria – Class A ^d	1,000 MPN/100 ml	5 mg/l		50 mg/l	Pb = 0.05 mg/l Hg = 0.002 mg/l
(DAO 34, Series of 1990)	100 MPN/100 ml (fecal coliform)				
Philippines National Standards for Drinking Water ^e	0 #/100 ml (fecal coliform)				

DAO = DENR Administrative Order, DENR = Department of Environment and Natural Resources (Philippines), Hg = Mercury, mg/l = milligram per liter, ml = milliliter, MPN = most probable number, Pb = lead, PRC = People's Republic of China, TCVN = Viet Nam Standards, WHO = World Health Organization.

Source:

^a World Health Organization. 2008. *Guidelines for Drinking Water Quality* incorporating 1st and 2nd addenda, Vol. 1, *Recommendations*. 3rd ed. Geneva: WHO.

^b Viet Nam Surface Water Quality Standards (TCVN 5942-1995).

^c PRC Environmental Quality Standards–Surface Water (GB 3838-2002).

^d Philippine Department of Environment and Natural Resources Administrative Order (DAO) no. 34, Series of 1990.

^e Philippine Department of Health.

		orted Cases 000 population)	
City/Country	Acute Lower Respiratory Diarrhea Infection		Death (Children under 5 years of age) (per 10,000 population)
Negombo, Sri Lanka	0.6	-	-
Colombo, Sri Lanka	0.7	0.4	-
Hue, Viet Nam	7.2	3.2	0.03
Ho Chi Minh, Viet Nam	10.1	507.8	_
Calbayog, Philippines	27.7	46.1	0.50
Makati, Philippines	55.3	87.3	0.10
San Fernando, Philippines	58.9	250.8	-
Kathmandu, Nepal	142.2	180.7	0.03
Banda Aceh, Indonesia	154.9	1,559.0	-
Pokhara, Nepal	179.5	409.6	_
Leknath, Nepal	194.1	496.5	-
Bharatpur, Nepal	594.1	1,084.0	-

Table 3: Health Statistics of Respondent Cities

Note:

• Table sorted per diarrhea incidence in ascending order—12 out of 27 cities.

• Based on 2007 data.

• "--" means data not available.

Source: Results of survey conducted in 27 cities; Part III of this Asian Sanitation Data Book 2008.

Table 4: Central Sewerage System Coverage and Wastewater Treatment Capacity

		Wastewater Treatment	Averaged Water Consumption
City/Country	Household Coverage (%)	Capacity ^a	(lpcd)
Kunming, PRC	100	95	-
Thap Cham, Viet Nam	100	-	135
Gwalior, India	86	-	130
Colombo, Sri Lanka	80	-	120
Kathmandu, Nepal	67	34	90
Puer, PRC	57	132	-
Indore, India	55	75	80
Hue, Viet Nam	50	-	-
Bhopal, India	42	103	160
Xieng Ngeun, Lao PDR	27	-	80
Phine, Lao PDR	26	_	85
Makati, Philippines	23	353	-
Dhaka, Bangladesh	20	55	140
Sayabouly, Lao PDR	18	-	80
Jinghong, PRC	4	1,650	_

Lao PDR = Lao People's Democratic Republic, lpcd = liters per capita per day, PRC = People's Republic of China.

Note: ^a Based on served population.

• Table sorted per household coverage in descending order—15 out of 27 cities.

- Based on 2007 data of the cities.
- "--" means data not available.

Source: Results of survey conducted in 27 cities; Part III of this Asian Sanitation Data Book 2008

PART II

SANITATION COMPARISON

		Population					
		Number (2007)	Growth Rate	Number of Households	Average HH Size	Floating Pop'n	Urban Poor
	City	('000)	%	('000)	Number	%	%
1	Banda Aceh	217.9	2.87	43.59	5.0 (5.0)	4.6	-
2	Bharatpur*	134.8	7.10	19.92	4.5 (4.5)	0	9.46
3	Bhopal*	1,749.2	3.50	240.00	5.9 (5.9)	3.5	21.08
4	Calbayog	169.8	1.79	28.91	5.2 (5.0)	1.7	4.18
5	Cam Ranh*	94.2	1.80	18.26	5.0 (5.0)	0.0	15.12
6	Colombo	647.1	0.40	119.16	5.4 (6.0)	61.8	46.36
7	Dhaka	11,000.0	5.00	2,301.26	4.8 (4.8)	9.1	36.36
8	Gwalior*	959.1	2.50	175.00	4.7 (4.7)	48.4	7.26
9	Hetauda*	89.2	4.51	14.27	4.8 (4.8)	2.0	14.61
10	Ho Chi Minh	6,651.0	3.20	1,602.64	4.2 (4.1)	0	3.75
11	Hue	327.8	1.25	64.20	5.1 (5.1)	20.0	30.00
12	Indore*	2,171.4	4.80	330.00	5.0 (5.0)	6.1	15.86
13	Jabalpur*	1,100.0	2.80	151.03	6.2 (6.2)	4.8	31.12
14	Jinghong*	379.0	0.40	125.33	3.0 (3.0)	10.6	0
15	Kathmandu	876.4	4.53	152.16	4.4 (4.4)	7.4	-
16	Kunming*	6,155.6	0.62	1,531.94	4.0 (4.0)	18.1	1.34
17	Lekhnath Municipality*	50.1	3.23	9.36	4.4 (4.4)	0	2.81
18	Makati	510.4	1.91	113.42	4.5 (4.5)	724.9	0.34
19	Negombo	167.4	2.48	32.98	4.7 (5.0)	32.1	10.00
20	Phine District*	53.3	2.50	7.56	7.0 (7.0)	0	42.04
21	Pokhara	214.0	4.95	44.51	4.8 (4.8)	30.0	25.00
22	Puer*	265.6	0.60	78.90	3.2 (3.3)	5.7	2.69
23	San Fernando	114.8	1.63	24.85	4.6 (4.6)	25.0	32.84
24	Sayabouly District*	74.4	2.10	12.66	5.9 (5.9)	0	27.49
25	Song Cau*	21.1	4.67	4.22	4.8 (4.8)	0	31.66
26	Thap Cham*	162.9	1.25	32.59	5.0 (5.0)	0	-
27	Xieng Ngeun District*	33.6	2.90	5.52	6.1 (6.1)	0	30.01
	Top Value	11,000.0	7.10	2,301.30	7.0	724.9	46.36
	Top Quartile	959.1	4.51	152.20	5.1	30.0	31.12
	Range	21.1– 11,000.0	0.40-7.10	4.22– 2,301.26	3.0–7.0	0–724.9	0-46.36
	Average	1,273.7	2.80	269.80	4.9	53.5	18.40

Table 2.1:	Demographic	Indicators
	- one grapine	maioatoro

pop'n = population, HH = households.

Note: Value in () is the computed household size. "--" means data not available. * Indicates areas where survey responses were facilitated by UN-HABITAT.

CityCity Area (ha) (000)Urban Core Urban Core Urban Core Urban Core Urban Core NPeri-Urban NSlum Area N1Banda Aceh6.123.876.20.00.0-2Bharatpur*7.711.022.03.258.25.563Bhopal*28.59.811.920.050.28.074Calbayog90.351.44.60.05Cam Rant*8.086Colombo3.77Dhaka36.040.359.70.000.0-8Gwalor*17.710.211.319.850.87.919Hetauda*40.67.01.00.0076.40.7010Ho Chi Mini20.523.40.00.07.411Hetauda*40.57.149.16.40.7012Indore*13.410.411.920.149.38.2113Jabalpur*12.910.111.820.149.38.2114Jinghong*70.30.30.094.7-15Kathmandu7.940.623.40.00.035.9614Jinghong*2.101.20.51.00.035.96-15Kathmandu1.940.623.40.00.33-1									
1 Banda Aceh 6.1 23.8 76.2 0.0 0.0 - 2 Bharatpur* 7.7 11.0 22.0 3.2 58.2 5.56 3 Bhopal* 28.5 9.8 11.9 20.0 50.2 8.07 4 Calbayog 90.3 51.4 46.6 0.0 2.0 0.01 5 Cam Rah* 68.8 -<			City Area	Urban Core		Urban Fringe	Peri-Urban	Slum Area	
2 Bharatpur* 7.7 11.0 22.0 3.2 58.2 5.56 3 Bhopal* 28.5 9.8 11.9 20.0 50.2 8.07 4 Cabayog 90.3 51.4 46.6 0.0 2.0 0.01 5 Cam Rah* 68.8 - - - - - 6 Colombo 3.7 - - - - - 7 Dhaka 36.0 40.3 59.7 0.0 0.0 - 8 Gwalior* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Cri Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 1.6 13 Jabalpur* 12.9 10.1 11		City	(ha) (000)	%	%	%	%	%	
3 Bhopat* 28.5 9.8 11.9 20.0 50.2 8.07 4 Cabayog 90.3 51.4 46.6 0.0 2.0 0.01 5 Cam Ranh* 68.8 - - - - - 6 Colombo 3.7 - - - - - 7 Dhaka 36.0 40.3 59.7 0.0 0.0 - 8 Gwalior* 17.7 10.2 11.3 19.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 <	1	Banda Aceh	6.1	23.8	76.2	0.0	0.0	-	
4 Cabayog 90.3 51.4 46.6 0.0 2.0 0.01 5 Cam Ranh* 68.8 - - - - - 6 Colombo 3.7 - - - - - 7 Dhaka 36.0 40.3 59.7 0.0 0.0 - 8 Gwalior* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 82.1 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 <	2	Bharatpur*	7.7	11.0	22.0	3.2	58.2	5.56	
5 Can Ranh* 68.8 - - - - 6 Colombo 3.7 - - - - 7 Dhaka 36.0 40.3 59.7 0.0 0.0 - 8 Gwalior* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 49.3 8.21 14 Jinghong* 2.00.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7	3	Bhopal*	28.5	9.8	11.9	20.0	50.2	8.07	
6 Colombo 3.7 - - - - 7 Dhaka 36.0 40.3 59.7 0.0 0.0 - 8 Gwailor* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2.101.2 0.5 1.0 0.0<	4	Calbayog	90.3	51.4	46.6	0.0	2.0	0.01	
7 Dhaka 36.0 40.3 59.7 0.0 0.0 8 Gwalior* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunning* 2.101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath 7.9 1.6	5	Cam Ranh*	68.8	-	-	-	-	-	
8 Gwalior* 17.7 10.2 11.3 19.8 50.8 7.91 9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunning* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath 2.7 16.6 20.6 62.5 0.0 0.33 19 Megombo 3.1 -	6	Colombo	3.7	-	-	-	-	-	
9 Hetauda* 4.6 7.0 11.0 54.8 25.0 2.20 10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunning* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 <td< th=""><td>7</td><td>Dhaka</td><td>36.0</td><td>40.3</td><td>59.7</td><td>0.0</td><td>0.0</td><td>-</td></td<>	7	Dhaka	36.0	40.3	59.7	0.0	0.0	-	
10 Ho Chi Minh 209.5 23.4 0.0 0.0 76.4 0.16 11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7	8	Gwalior*	17.7	10.2	11.3	19.8	50.8	7.91	
11 Hue 7.1 69.7 14.1 9.1 6.4 0.70 12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7	9	Hetauda*	4.6	7.0	11.0	54.8	25.0	2.20	
12 Indore* 13.4 10.4 11.9 20.1 49.3 8.21 13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.	10	Ho Chi Minh	209.5	23.4	0.0	0.0	76.4	0.16	
13 Jabalpur* 12.9 10.1 11.8 20.1 50.3 7.74 14 Jinghong* 700.3 0.3 0.0 99.7 0.0 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District*	11	Hue	7.1	69.7	14.1	9.1	6.4	0.70	
14 Jinghong* 700.3 0.3 0.0 99.7 0.0 - 15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* <td< th=""><td>12</td><td>Indore*</td><td>13.4</td><td>10.4</td><td>11.9</td><td>20.1</td><td>49.3</td><td>8.21</td></td<>	12	Indore*	13.4	10.4	11.9	20.1	49.3	8.21	
15 Kathmandu 5.1 5.4 14.2 43.7 36.7 - 16 Kunming* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9	13	Jabalpur*	12.9	10.1	11.8	20.1	50.3	7.74	
16 Kunning* 2,101.2 0.5 1.0 0.0 98.5 - 17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.00 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - - 27 Kieng Ngeun District*	14	Jinghong*	700.3	0.3	0.0	99.7	0.0	-	
17 Lekhnath Municipality* 7.9 40.6 23.4 0.0 0.0 35.96 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - 26 Thap Cham* 7.9 - - - - - - - - - - -	15	Kathmandu	5.1	5.4	14.2	43.7	36.7	-	
Municipality* Municipality 18 Makati 2.7 16.6 20.6 62.5 0.0 0.33 19 Negombo 3.1 - - - - 20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - 27 Xieng Ngeun District* 121.0 6.6 4.1 2.5 86.8 - 28 Top Quartile	16	Kunming*	2,101.2	0.5	1.0	0.0	98.5	-	
19 Negombo 3.1	17		7.9	40.6	23.4	0.0	0.0	35.96	
20 Phine District* 269.9 2.7 1.8 0.9 94.7 - 21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 - 23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - 27 Xieng Ngeun District* 121.0 6.6 4.1 2.5 86.8 - 27 Top Value 2,101.2 69.7 76.2 99.7 98.5 35.96 28 Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 29 Range 1.5-2,101.2	18	Makati	2.7	16.6	20.6	62.5	0.0	0.33	
21 Pokhara 5.6 20.0 35.0 20.0 15.0 10.01 22 Puer* 22.7 16.7 17.7 44.4 21.1 23 San Fernando 10.5 21.5 0.0 0.0 78.5 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - 26 Thap Cham* 7.9 - - - - - 27 Xieng Ngeun District* 121.0 6.6 4.1 2.5 86.8 - 27 Top Value 2,101.2 69.7 76.2 99.7 98.5 35.96 28 Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 29 1.5-2,101.2 0.3-69.7 0-76.2 0-99.7 0-98.5 0-35.96	19	Negombo	3.1	-	-	-	-	-	
22 Puer* 22.7 16.7 17.7 44.4 21.1 23 San Fernando 10.5 21.5 0.0 0.0 78.5 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 25 Song Cau* 1.5 26 Thap Cham* 7.9 26 Thap Cham* 7.9	20	Phine District*	269.9	2.7	1.8	0.9	94.7	-	
23 San Fernando 10.5 21.5 0.0 0.0 78.5 - 24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 - - - - - 26 Thap Cham* 7.9 - - - - - 26 Thap Cham* 7.9 - - - - - - 26 Thap Cham* 7.9 -	21	Pokhara	5.6	20.0	35.0	20.0	15.0	10.01	
24 Sayabouly District* 391.6 10.0 0.8 15.0 74.2 - 25 Song Cau* 1.5 -<	22	Puer*	22.7	16.7	17.7	44.4	21.1	-	
District* District* 25 Song Cau* 1.5 - - - - 26 Thap Cham* 7.9 - - - - 27 Xieng Ngeun District* 121.0 6.6 4.1 2.5 86.8 - 27 Top Value 2,101.2 69.7 76.2 99.7 98.5 35.96 26 Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 Range 1.5-2,101.2 0.3-69.7 0-76.2 0-99.7 0-98.5 0-35.96	23	San Fernando	10.5	21.5	0.0	0.0	78.5	_	
26 Thap Cham* 7.9 - <	24	Sayabouly District*	391.6	10.0	0.8	15.0	74.2	-	
27 Xieng Ngeun District* 121.0 6.6 4.1 2.5 86.8 Top Value 2,101.2 69.7 76.2 99.7 98.5 35.96 Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 Range 1.5-2,101.2 0.3-69.7 0-76.2 0-99.7 0-98.5 0-35.96	25	Song Cau*	1.5	-	-	-	-	-	
District* Top Value 2,101.2 69.7 76.2 99.7 98.5 35.96 Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 Range 1.5–2,101.2 0.3–69.7 0–76.2 0–99.7 0–98.5 0–35.96	26	Thap Cham*	7.9	-	-	-	-	-	
Top Quartile 90.3 23.4 22.0 20.1 74.2 7.74 Range 1.5–2,101.2 0.3–69.7 0–76.2 0–99.7 0–98.5 0–35.96	27		121.0	6.6	4.1	2.5	86.8	-	
Range 1.5–2,101.2 0.3–69.7 0–76.2 0–99.7 0–98.5 0–35.96		Top Value	2,101.2	69.7	76.2	99.7	98.5	35.96	
-		Top Quartile	90.3	23.4	22.0	20.1	74.2	7.74	
Average 154.0 18.5 18.0 19.8 39.7 4		Range	1.5-2,101.2			0–99.7	0–98.5	0-35.96	
		Average	154.0	18.5	18.0	19.8	39.7	4	

Table	2.2:	City	Area
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Note: "--" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

		Ave.City Density	Urban Core	Secondary Urban Area	Urban Fringe	Peri–Urban	Slum Area				
	City	#/ha	#/ha	#/ha	#/ha	#/ha	#/ha				
1	Banda Aceh	35.5	74.0	48.0	-	-	-				
2	Bharatpur*	11.6	30.0	14.0	4.9	6.9	18.0				
3	Bhopal*	49.9	153.0	75.0	55.0	20.0	62.0				
4	Calbayog	1.7	11.2	6.0	-	1.2	627.0				
5	Cam Ranh*	1.3	-	-	-	-	-				
6	Colombo	173.9	174.0	-	-	-	-				
7	Dhaka	305.6	-	-	-	-	-				
8	Gwalior*	46.7	138.0	75.0	52.0	18.0	59.0				
9	Hetauda*	15.0	72.3	36.0	3.8	7.0	100.0				
10	Ho Chi Minh	31.7	108.0	-	-	7.0	732.0				
11	Hue	46.1	60.0	50.0	20.0	30.0	40.0				
12	Indore*	122.3	350.0	184.0	133.0	50.0	149.0				
13	Jabalpur*	72.1	215.0	111.0	79.0	29.0	93.0				
14	Jinghong*	0.5	76.7	-	-	0.3	-				
15	Kathmandu	132.6	426.0	138.0	113.0	110.0	-				
16	Kunming*	2.9	163.0	24.0	-	1.9	-				
17	Lekhnath Municipality*	5.2	10.5	4.2	-	-	-				
18	Makati	186.5	115.0	438.0	282.0	-	3,858.0				
19	Negombo	50.4	3,166.0	-	-	-	-				
20	Phine District*	0.2	6.0	4.0	3.0	20.0	-				
21	Pokhara	38.5	67.0	33.0	29.0	26.0	39.0				
22	Puer*	11.3	39.0	-	-	-	-				
23	San Fernando	10.9	37.0	-	-	4.0	-				
24	Sayabouly District*	0.2	6.0	4.0	3.0	2.0	-				
25	Song Cau*	13.9	-	-	-	-	-				
26	Thap Cham*	20.5	20.0	-	-	-	-				
27	Xieng Ngeun District*	0.3	8.0	8.0	_	5.0	_				
	Top Value	305.6	3,166.0	438.0	282.0	110.0	3,858.0				
	Top Quartile	50.4	163	111.0	113.0	29.0	627.0				
	Range	0.2-305.6	6.0-3,166.0	4.0-438.0	3.0-282.0	0.34-110.0	18.0–3,858.0				
	Average	51.4	230.2	73.7	64.8	19.9	525.2				

Table 2.3: Population Density

Ave. = average, ha = hectare, # = number.

Note: "--" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

		Table 2.4: Environmental Statistics							
				Surface Water					
		Total Coliform	BOD	COD	Total Suspended Solids	Heavy Metal			
	City		mg/l	mg/l	mg/l	mg/l			
1	Banda Aceh	-	4.7	17.5	61.0	0.30			
2	Bharatpur*	-	_	-	-	-			
3	Bhopal*	30 #/ml	6.0	50.0	200.0	0.25			
4	Calbayog	-	168.0	973.0	75.0	-			
5	Cam Ranh*	-	-	-	-	-			
6	Colombo	5000 MPN/100ml	48.0	75.0	83.3	16.70			
7	Dhaka	11450 MPN/100ml	30.0	80.0	30.0	-			
8	Gwalior*	<1 #/ml	6.0	50.0	200.0	0.25			
9	Hetauda*	-	-	-	-	-			
10	Ho Chi Minh	22000MPN/100ml	4.5	10.8	261.0	-			
11	Hue	5000MPN/100ml	15.0	7.1	60.0	0.03			
12	Indore*	30 #/ml	6.0	50.0	200.0	0.25			
13	Jabalpur*	<200 #/ml	4.5	50.0	1.0	0.25			
14	Jinghong*	40 #/I	180.0	360.0	250.0	-			
15	Kathmandu	2400000 #/ml	36.0	207.0	-	0.05			
16	Kunming*	-	10.7	67.4	-	-			
17	Lekhnath Municipality*	-	-	-	-	-			
18	Makati	-	-	-	-	-			
19	Negombo	10200 MPN/100ml	6.0	22.0	-	-			
20	Phine District*	<1 #/ml	5.0	50.0	-	-			
21	Pokhara	291 CFU/100ml	22.5	95.0	61.0	-			
22	Puer*	-	-	-	-	-			
23	San Fernando	-	-	-	-	-			
24	Sayabouly District*	10 #/ml	5.0	50.0	1.8				
25	Song Cau*	-	-	-	-	-			
26	Thap Cham*	-	-	-	-	-			
27	Xieng Ngeun District*	<1 #/ml	5.0	50.0	-				
	Top Value		180.0	973.00	261.0	0.30			
	Top Quartile		30.0	80.0	200.0	0.25			
	Range		4.5-180.0	7.1–973.0	1.0-261.0	0.001-0.30			
	Average		28.7	122.5	109.7	0.17			
	Number of Respondents	15	18.0	18.0	13.0	8.00			

BOD = biochemical oxygen demand, CFU = colony forming unit, COD = chemical oxygen demand, mg/l = milligram per liter, ml = milliliter, MPN = most probable number.

Note: "--" means data not available.

 * Indicates areas where survey responses were facilitated by UN-HABITAT.

		Table 2.5a: Health Statistics Reported Cases (number per 10,000 population)							
			Reporte	d Cases (numbe		ation)			
		Diarrhea	Hepatitis A & B	Trachoma	Acute Lower Respiratory Infection	Measles	Malaria		
	City	#	#	#	#	#	#		
1	Banda Aceh	154.86	-	-	1,559.01	2.29	28.91		
2	Bharatpur*	594.14	-	294.55	1,084.04	-	-		
3	Bhopal*	-	-	-	-	-	-		
4	Calbayog	27.67	0	0	46.13	0	0		
5	Cam Ranh*	-	-	-	-	-	-		
6	Colombo	0.73	0.71	-	0.36	-	-		
7	Dhaka	-	-	-	-	-	-		
8	Gwalior*	-	-	-	-	-	-		
9	Hetauda*	-	-	-	-	-	-		
10	Ho Chi Minh	10.10	0.22	0.30	507.79	0	0.09		
11	Hue	7.23	6.86	3.51	3.23	4.45	3.54		
12	Indore*	-	-	-	-	-	-		
13	Jabalpur*	-	-	-	-	-	-		
14	Jinghong*	-	-	-	-	-	-		
15	Kathmandu	142.23	23.79	0.01	180.66	0.60	7.56		
16	Kunming*	-	-	-	-	-	-		
17	Lekhnath Municipality*	194.11	0	0	496.51	0.48	0		
18	Makati	55.33	0.16	0	87.33	0	9.07		
19	Negombo	0.64	0.13	-	-	-	0.13		
20	Phine District*	-	-	-	-	-	-		
21	Pokhara	179.49	53.88	305.47	409.58	1.36	0.23		
22	Puer*	-	-	-	-	-	-		
23	San Fernando	58.88	2.35	0	250.84	0.61	0		
24	Sayabouly District*	-	-	-	-	-	-		
25	Song Cau*	-	-	-	-	-	-		
26	Thap Cham*	-	-	-	-	-	-		
27	Xieng Ngeun District*	-	-	-	-	-	-		
	Top Value	594.10	53.88	305.47	1,559.01	4.45	28.91		
	Top Quartile	179.49	6.86	294.55	507.79	2.29	9.07		
	Range	0.60–594.10	0–53.88	0-305.47	0.36–1,559.01	0-4.45	0.09–28.91		
	Average	118.80	8.80	67.10	420.50	1.10	5.00		

Table 2.5a: Health Statistics

= number.

Note: "--" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

		Iable 2.5b: Health Statistics Death (Children under five years of age) (number per 10,000 population)						
			Death (Children und	ler five years of		10,000 population)		
		Diarrhea	Hepatitis A & B	Trachoma	Acute Lower Respiratory Infection	Measles	Malaria	
	City	#	#	#	#	#	#	
1	Banda Aceh	-	-	-	-	-	-	
2	Bharatpur*	-	-	-	-	-	-	
3	Bhopal*	-	-	-	-	-	-	
4	Calbayog	0.47	0	0	0.27	0	0	
5	Cam Ranh*	-	-	-	-	-	-	
6	Colombo	-	-	-	-	-	-	
7	Dhaka	-	-	-	-	-	-	
8	Gwalior*	-	-	-	-	-	-	
9	Hetauda*	-	-	-	-	-	-	
10	Ho Chi Minh	0	0	0	0.01	0	0	
11	Hue	0.03	0	0	0	0.03	0	
12	Indore*	-	-	-	-	-	-	
13	Jabalpur*	-	-	-	-	-	-	
14	Jinghong*	-	-	-	-	-	-	
15	Kathmandu	0.03	1.18	0	0	0.01	0.07	
16	Kunming*	-	-	-	-	-	-	
17	Lekhnath Municipality*	0	0	0	0	0	0	
18	Makati	0.10	0	0	0	0	0.04	
19	Negombo	0	0	-	-	-	-	
20	Phine District*	-	-	-	-	-	-	
21	Pokhara	-	-	-	-	-	-	
22	Puer*	-	-	-	-	-	-	
23	San Fernando	-	-	-	-	-	-	
24	Sayabouly District*	-	-	-	-	-	-	
25	Song Cau*	-	-	-	-	-	-	
26	Thap Cham*	-	-	-	-	-	-	
27	Xieng Ngeun District*	-	-	-	-	-	-	
	Top Value	0.47	1.18	0	0.27	0.03	0.07	
	Top Quartile	0.10	0	0	0.01	0.03	0.04	
	Range	0-0.47	0–1.18		0-0.27	0-0.03	0-0.07	
	Average	0.10	1.20	0	0.20	0.001	0.10	

Table 2.5b: Health Statistics

= number.

Note: "--" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

		City Land Area	Central Sewerage System Area Coverage	Central Water Supply Sytem Area Coverage	City Population (as reported)	Central Sewerage System Service Coverage	Central Water Supply System Service Coverage
	City	ha	%	%	('000)	%	%
1	Banda Aceh	6.14	-	20.0	217.94	0	20.0
2	Bharatpur*	7.73	7.8	58.2	89.32	0	56.2
3	Bhopal*	28.50	2.1	70.0	1,423.00	41.7	45.3
4	Calbayog	90.30	-	0.5	150.00	0	72.6
5	Cam Ranh*	68.80	-	35.0	90.90	0	35.1
6	Colombo	3.72	80.0	100.0	647.10	80.0	100.0
7	Dhaka	36.00	30.6	97.2	11,000.00	20.0	80.0
8	Gwalior*	17.70	79.1	85.9	827.00	85.7	68.6
9	Hetauda*	4.55	4.4	11.00	68.43	0	35.2
10	Ho Chi Minh	209.50	31.0	45.6	6,651.00	-	37.5
11	Hue	7.11	100.0	84.3	327.80	49.8	98.0
12	Indore*	13.40	44.8	48.5	1,639.00	55.0	98.5
13	Jabalpur*	12.92	-	92.9	932.00	0	84.8
14	Jinghong*	700.31	0.3	0.3	376.00	3.6	3.6
15	Kathmandu	5.07	92.0	100.0	671.80	67.1	100.0
16	Kunming*	2,101.20	0.4	0.9	6,080.00	100.0	90.8
17	Lekhnath Municipality*	7.89	-	65.1	41.37	0	71.8
18	Makati	2.74	21.5	100.0	510.38	22.5	99.7
19	Negombo	3.09	-	30.0	155.58	0	30.0
20	Phine District*	269.94	11.6	27.8	53.28	26.0	5.4
21	Pokhara	5.56	-	70.0	214.00	0	62.4
22	Puer*	22.70	18.5	9.6	256.23	57.2	57.2
23	San Fernando	10.53	-	25.7	114.81	0	47.9
24	Sayabouly District*	391.60	10.0	30.0	74.41	17.8	18.8
25	Song Cau*	1.45	-	54.0	20.20	0	54.1
26	Thap Cham*	7.94	98.0	90.0	162.94	100.0	67.1
27	Xieng Ngeun District*	121.00	2.5	6.6	33.64	27.4	17.4
	Top Value	2,101.20	100.0	100.0	11,000.00	100.0	99.7
	Top Quartile	90.30	31.0	85.9	827.00	55.0	84.8
	Range	1.45-2,101.20	0-100.0	0.3–100.0	20.20-11,000.00	0–100.0	3.6–99.7
	Average	154.00	35.2	50.3	1,215.90	29.0	57.7

Table 2.6:	Sanitation	Coverage a	nd Water	Coverage

ha = hectare, # = number.

Note: "--" means data not available. * Indicates areas where survey responses were facilitated by UN-HABITAT.

		lap	le 2.7: Cover	age by Sanita	ation System		
		Central Sewerage System	Individual Toilet with Septic Tank	Communal Toilet with Septic Tank	Pit Latrine	EcoSan	Open Defecation
	City	%	%	%	%	%	%
1	Banda Aceh	0	96.4	0	2.6	0	1
2	Bharatpur*	0	75.1	0.2	20.1	0	5
3	Bhopal*	42	31.3	2.1	2.1	0	23
4	Calbayog	0	38.9	0	0.1	0	61
5	Cam Ranh*	0	62.0	0	25.0	0	13
6	Colombo	80	0	18.0	2.0	0	0
7	Dhaka	20	45.0	0	20.0	0	15
8	Gwalior*	86	2.3	0.5	0.7	0	11
9	Hetauda*	0	79.9	1.4	0.7	0	18
10	Ho Chi Minh	0	0	0	0	0	0
11	Hue	50	37.6	0.1	0	0	12
12	Indore*	55	19.7	3.5	11.3	0	11
13	Jabalpur*	0	49.2	0.8	15.0	0	35
14	Jinghong*	4	0	0	0	0	0
15	Kathmandu	67	32.9	0	0	0	0
16	Kunming*	100	0	0	0	0	0
17	Lekhnath Municipality*	0	49.8	0.1	22.2	0	28
18	Makati	23	77.5	0	0	0	0
19	Negombo	0	60.0	20.0	20.0	0	0
20	Phine District*	26	16.2	0	43.6	0	0
21	Pokhara	0	100.0	0	0	0	0
22	Puer*	57	42.8	0.1	0	0	0
23	San Fernando	0	47.1	10.5	41.2	0.9	0
24	Sayabouly District*	18	13.3	0	29.6	0	0
25	Song Cau*	0	70.0	0	25.0	0	5
26	Thap Cham*	100	0	0	0	0	0
27	Xieng Ngeun District*	27	1.7	0.5	27.4	0.3	0
	Top Value	100	100.0	20.0	43.6	0.9	61
	Top Quartile	55	62.0	0.8	22.2	0	13
	Range	0–100	0–100.0	0–20.0	0-43.6	0.3–0.9	0–61
	Average		47.7	4.4	17.1	0.6	17

	_		_
Table 2.7:	Coverage	by Sanitation	System

EcoSan = ecological sanitation.

Note: * Indicates areas where survey responses were facilitated by UN-HABITAT.

				Toilet Sys	tem Type ^a		
			ual Toilet vered Line		ual Toilet ptic Tank		unal Toilet eptic Tank
		Type I	Type la	Type II	Type IIa	Type III	Type IIIa
	City	%	%	%	%	%	%
1	Banda Aceh	-	-	95	5	-	-
2	Bharatpur*	-	-	0	100	0	100
3	Bhopal*	100	0	100	0	20	80
4	Calbayog	-	-	0	100	0	100
5	Cam Ranh*	-	-	0	100	-	-
6	Colombo	0	100	-	-	0	100
7	Dhaka	100	0	0	100	-	_
8	Gwalior*	0	100	50	50	62	38
9	Hetauda*	-	-	0	100	0	100
10	Ho Chi Minh	-	-	_	-	-	-
11	Hue	47	53	41	59	100	0
12	Indore*	100	0	100	0	43	57
13	Jabalpur*	-	-	0	100	0	100
14	Jinghong*	100	0	-	-	-	-
15	Kathmandu	0	100	100	0	-	-
16	Kunming*	100	0	-	-	-	-
17	Lekhnath Municipality*	-	-	0	100	0	100
18	Makati	51	49	100	0	-	-
19	Negombo	-	-	100	0	0	100
20	Phine District*	10	90	11	89	-	-
21	Pokhara	-	-	0	100	-	-
22	Puer*	100	0	100	0	100	0
23	San Fernando	-	-	0	100	0	100
24	Sayabouly District*	13	87	20	80	-	-
25	Song Cau*	-	-	0	100	-	-
26	Thap Cham*	99	1	-	-	-	-
27	Xieng Ngeun District*	1	99	16	84	20	80
	Top Value	100	100	100	100	100	100
	Top Quartile	99	87	100	100	83	100
	Range	0–100	0–100	0–100	0–100	0–100	0–100
	Average	68.4	75.5	69.5	85.4	57.7	87.8

Table 2.8a: Coverage by Toilet System

Note: ^a See Appendix, Note 1: Range of Sanitation Type. "-" means data not available. * Indicates areas where survey responses were facilitated by UN-HABITAT.

				Toilet Sys	stem Type ^a		
		Pit L	atrine	Eco	San	Open Def	ecation
		Type IV	Type IVa	Type V	Type Va	Type VI & VIa	Type VIb
	City	%	%	%	%	%	%
1	Banda Aceh	100.0	0	-	-	100	0
2	Bharatpur*	100.0	0	-	-	100	0
3	Bhopal*	4.0	96.0	-	-	100	0
4	Calbayog	87.5	12.5	-	-	100	0
5	Cam Ranh*	0	100.0	-	-	0	100
6	Colombo	0	100.0	-	-	-	-
7	Dhaka	100.0	0	-	-	100	0
8	Gwalior*	16.7	83.3	-	-	100	0
9	Hetauda*	0	100.0	-	-	100	0
10	Ho Chi Minh	-	-	-	-	-	-
11	Hue	-	-	-	-	0	100
12	Indore*	0.5	99.5	-	-	100	0
13	Jabalpur*	0	100.0	-	-	43	57
14	Jinghong*	-	-	-	-	-	-
15	Kathmandu	-	-	-	-	-	-
16	Kunming*	-	-	-	-	-	-
17	Lekhnath Municipality*	0	100.0	-	-	100	0
18	Makati	-	-	-	-	-	-
19	Negombo	50.0	50.0	-	-	-	-
20	Phine District*	86.5	13.5	-	-	-	-
21	Pokhara	-	-	-	-	-	-
22	Puer*	-	-	-	-	-	-
23	San Fernando	81.2	18.8	100	0	81	19
24	Sayabouly District*	91.6	8.4	-	-	-	-
25	Song Cau*	0	100.0	-	-	0	100
26	Thap Cham*	-	-	-	-	-	-
27	Xieng Ngeun District*	79.2	20.8	33	67	-	-
	Top Value	100	100	100	67	100	100
	Top Quartile	86	99	0	0	100	0
	Range	0–100	0–100	33–100	0–67	0–100	0–100
	Average	66.4	66.9	66.7	67	100	13.9

Table 2.8b: Coverage by Toilet System

EcoSan = ecological sanitation.

Note: a See Appendix, Note 1: Range of Sanitation Type. "-" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

			reatment Facilities Treatment Facilities			itment Facility Provi	der
		Wastewater	Septage	Desluding Frequency	Local Gov't.	National Gov't.	Private
	City	m ³ /day/10,000	m³/day	Year	%	%	%
1	Banda Aceh	-	110	-	100	-	-
2	Bharatpur*	-	-	-	-	-	-
3	Bhopal*	534.1	-	-	100	-	-
4	Calbayog	-	90	10	100	-	-
5	Cam Ranh*	-	-	-	-	-	-
6	Colombo	-	-	-	-	-	-
7	Dhaka	109.1	-	-	-	100	-
8	Gwalior*	-	-	-	-	-	-
9	Hetauda*	9.3	-	-	-	100	-
10	Ho Chi Minh	212	-	-	100	-	-
11	Hue	-	-	-	-	-	-
12	Indore*	549.1	-	-	100	-	-
13	Jabalpur*	-	-	-	-	-	-
14	Jinghong*	664.9	-	-	100	-	-
15	Kathmandu	297.7	50	-	-	100	-
16	Kunming*	962.2	-	-	100	-	-
17	Lekhnath Municipality*	-	-	-	-	-	-
18	Makati	812.2	814	5	-	-	99
19	Negombo	-	-	-	-	-	-
20	Phine District*	-	-	-	-	-	-
21	Pokhara	2.1	75	-	100	-	-
22	Puer*	780.5	-	12	100	-	-
23	San Fernando	17.4	-	-	100	-	-
24	Sayabouly District*	-	-	-	-	-	-
25	Song Cau*	-	-	-	-	-	-
26	Thap Cham*	-	-	2	-	-	100
27	Xieng Ngeun District*	-	-	-	-	-	-
	Top Value	962.2	814	12	100	100	100
	Top Quartile	664.9	110	10	100	0	0
	Range	2.1–962.2	50-814	2–12	0–100	0–100	0–100
	Average	65.0	227.8	7.3	66.7	20	13.3

Table 2.9:	Wastewater	and Septage	Treatment Facility
	maotomator	una ooptago	in outline in a onity

Gov't. = government, m^3 = cubic meter.

	Household Water Supply Facility								
		Central Water S	upply System		Protected				
		In-house	Communal	Borehole	Spring/Well	Rainwater	Vendor		
	City	%	%	%	%	%	%		
1	Banda Aceh	20	0	45	0	0	35		
2	Bharatpur*	35.1	21.1	0	43.8	0	0		
3	Bhopal*	43.3	1.9	54.5	0.2	0	0		
4	Calbayog	25.9	46.7	30.6	0	0	0		
5	Cam Ranh*	27.1	8	12.9	5.9	45.5	0.5		
6	Colombo	83.7	16.3	0	0	0	0		
7	Dhaka	80	0	0	20	0	0		
8	Gwalior*	57.1	11.4	28.6	2.9	0	0		
9	Hetauda*	35	0.2	1.6	63.2	0	0		
10	Ho Chi Minh	37.5	-	-	-	-	-		
11	Hue	91.9	6.1	2	0	0	0		
12	Indore*	54	44.5	0	1.5	0	0		
13	Jabalpur*	65	19.9	11.9	3.3	0	0		
14	Jinghong*	3.6	0	0	96.4	0	0		
15	Kathmandu	100	0	0	0	0	0		
16	Kunming*	90.8	0	0	9.2	0	0		
17	Lekhnath Municipality*	65.5	6.4	0.7	27.5	0	0		
18	Makati	97.7	2.1	0	0.3	0	0		
19	Negombo	27	3	60	4.9	0.1	5		
20	Phine District*	5.4	-	8.5	-	20	9.9		
21	Pokhara	54.6	7.8	37.6	0	0	0		
22	Puer*	57.2	0	42.8	0	0	0		
23	San Fernando	47.9	0	49.2	3	0	0		
24	Sayabouly District*	18.8	0	26.9	12.5	30.3	11.5		
25	Song Cau*	54.1	0	20.7	0	25.2	0		
26	Thap Cham*	67.1	0	2.3	16.3	14.2	0		
27	Xieng Ngeun District*	17.2	0.1	0	52.6	20	10		
	Top Value	100	46.65	60	96.41	45.52	35		
	Top Quartile	67.1	11.43	37.61	20	0.1	0.02		
	Range	3.59-100.00	0-46.65	0.04-60.00	0–96.41	0-45.52	0–35.00		
	Average	50.5	7.8	16.8	14.5	5.98	2.8		

Table	2.10a:	Water	Supply	Facility
IGNIC	_	mator	Cappig	i donity

		Population		Water		ter Treatment Prov	<i>v</i> ider
		Buying Bottled Water	Average Water Consumption	Treatment Facilities	Local Gov't.	National Gov't.	Private Concessionaire
	City	%	lpcd	lpcd	%	%	%
1	Banda Aceh	36	90	17	100	0	0
2	Bharatpur*	-	50	1.8	0	100	0
3	Bhopal*	-	160	17.1	100	0	0
4	Calbayog	10	75	1.5	95	0	5
5	Cam Ranh*	-	122	6.6	0	100	0
6	Colombo	1	120	105.2	0	100	0
7	Dhaka	5	140	16.4	0	100	0
8	Gwalior*	-	130	17.5	100	0	0
9	Hetauda*	-	40	1.4	0	100	0
10	Ho Chi Minh	-	150	18.6	-	-	-
11	Hue	15	-	45.8	-	-	-
12	Indore*	-	80	11.7	100	0	0
13	Jabalpur*	1	64	4.5	100	0	0
14	Jinghong*	-	-	13.3	100	0	0
15	Kathmandu	40	90	27.1	0	100	0
16	Kunming*	-	-	19.7	100	0	0
17	Lekhnath Municipality*	-	40	12.1	0	100	0
18	Makati	10	-	137.2	0	0	100
19	Negombo	25	-	13.1	0	100	0
20	Phine District*	80	85	-	-	-	-
21	Pokhara	-	90	-	-	-	-
22	Puer*	-	-	13.7	100	0	0
23	San Fernando	-	-	-	-	-	-
24	Sayabouly District*	80	80	-	-	-	-
25	Song Cau*	-	120	14.9	0	100	0
26	Thap Cham*	-	135	31.9	100	0	0
27	Xieng Ngeun District*	70	80	-	-	-	-
	Top Value	80	160	137.2	100	100	100
	Top Quartile	40	130	19.7	100	100	0
	Range	0–80	40–160	1.4–137.2	0–100	0–100	0–100
	Average	20.7	97.1	24.9	49.8	45	5.3

Table 2.10b: Water Supply Facility

Gov't. = government, lpcd = liters per capita per day.

		Source of Funds							
			National Local Tariff						
		Annual Amount	Government	Government	Loans	Revenues	Others		
	City	\$/capita	%	%	%	%	%		
1	Banda Aceh	-	0	0	0	0	100		
2	Bharatpur*	_	8	62	30	0	0		
3	Bhopal*	1.9	70	12	18	0	0		
4	Calbayog	-	-	-	-	-	-		
5	Cam Ranh*	-	-	-	-	-	-		
6	Colombo	7.2	0	100	0	0	0		
7	Dhaka	-	20	0	80	0	0		
8	Gwalior*	-	-	-	-	-	-		
9	Hetauda*	-	8	62	30	0	0		
10	Ho Chi Minh	-	0	0	0	0	100		
11	Hue	3.7	0	0	0	0	100		
12	Indore*	-	50	10	40	0	0		
13	Jabalpur*	22.5	50	20	30	0	0		
14	Jinghong*	-	-	-	60	-	-		
15	Kathmandu	-	-	-	-	-	-		
16	Kunming*	-	0	30	0	0	70		
17	Lekhnath Municipality*	1.0	80	20	0	0	0		
18	Makati	-	0	0	0	0	100		
19	Negombo	-	-	-	-	-	-		
20	Phine District*	-	-	-	-	-	-		
21	Pokhara	0.5	0	100	0	0	0		
22	Puer*	27.9	47	0	53	0	0		
23	San Fernando	1.2	0	100	0	0	0		
24	Sayabouly District*	-	-	-	-	-	-		
25	Song Cau*	-	-	-	-	-	-		
26	Thap Cham*	-	-	-	-	-	-		
27	Xieng Ngeun District*	-	70	30	0	0	0		
	Top Value	27.9	80	100	80	0	100		
	Top Quartile	22.5	70	0	0		100		
	Range	0.5–27.9	0–80	0–100	0–80		0–100		
	Average	8.2	24	32	19	0	28		

Table 2.11: Ca	pital Investment
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	Source of Funds						
		Annual Amount	National Government	Local Government	Loans	Tariff Revenues	Others
	City	\$/capita	%	%	%	%	%
1	Banda Aceh	0.2	0	0	50	50	0
2	Bharatpur*	0.7	0	50	0	50	0
3	Bhopal*	_	0	100	0	0	0
4	Calbayog	-	-	-	-	-	-
5	Cam Ranh*	-	-	-	-	-	-
6	Colombo	8.3	0	100	0	0	0
7	Dhaka	-	0	0	0	100	0
8	Gwalior*	0.6	0	100	0	0	0
9	Hetauda*	0.9	0	50	0	50	0
10	Ho Chi Minh	0.9	0	100	0	0	0
11	Hue	3.7	10	10	50	30	0
12	Indore*	-	0	100	0	0	0
13	Jabalpur*	5.4	0	100	0	0	0
14	Jinghong*	-	-	-	-	-	-
15	Kathmandu	-	-	-	-	-	-
16	Kunming*	-	0	10	0	90	0
17	Lekhnath Municipality*	0.2	0	60	0	40	0
18	Makati	-	0	0	0	0	100
19	Negombo	-	-	-	-	-	-
20	Phine District*	-	-	-	-	-	-
21	Pokhara	0.1	0	100	0	0	0
22	Puer*	-	47	0	53	0	0
23	San Fernando	0.1	0	100	0	0	0
24	Sayabouly District*	-	-	-	-	-	-
25	Song Cau*	-	-	-	-	-	-
26	Thap Cham*	-	-	-	-	-	-
27	Xieng Ngeun District*	-	-	-	-	-	-
	Top Value	8.3	47	100	53	100	100
	Top Quartile	3.7	0	100	0	50	0
	Range	0.1–8.3	0–47	0–100	0–53	0–100	0–100
	Average	1.9	3	58	9	24	6

Table 2.12:	Operations and	Maintenance	Expenditures
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			Sewered Area			Desludging Fee Septic Tanks			
		Total Revenue	Connection Charges	Tariff Rate	Pri	vate		rnment	
	City	\$/capita	\$/Connection	\$/m ³	\$	% share	\$	% share	
1	Banda Aceh	0.1	φ/ oomicotion	φ/ Π	10.0	50	10	50	
2	Bharatpur*	0.1	80.0	- 1	10.0		-	- 50	
2	Bhopal*	-	50.0	30–90	-	-	-	_	
4	Calbayog	-	50.0	30-30	-	-	-	_	
4 5	Cam Ranh*	-	_	_	_	90	22	- 10	
6	Colombo	-	-	-	-	90	22	10	
7	Dhaka	-	18.3	6	-	-	-	-	
8	Gwalior*	-	10.5	U	-	_	-	-	
0 9	Hetauda*	-	- 80.0	- 1	-	-	-	-	
	Ho Chi Minh	-		I	-	-	-	-	
10		-	-	-	-	-	-	-	
11	Hue Indexe*	9.2	-	-	4.0	1	3.5	99	
12	Indore*	-	50.0	30–90***	-	-	-	-	
13	Jabalpur*	15.0	-	-	0	0	30	100	
14	Jinghong*	-	-	-	0	-	-	100	
15	Kathmandu	-	-	-	30.0	70	20	30	
16	Kunming*	-	-	-	-	0	-	100	
17	Lekhnath Municipality*	-	-	-	33.0	100	-	0	
18	Makati	-	-	-	-	100	-	0	
19	Negombo	-	-	-	0.0	0	10	100	
20	Phine District*	-	-	-	-	-	-	-	
21	Pokhara	-	-	-	32.0	-	23	-	
22	Puer*	3.2	-	-	0.0	0	-	0	
23	San Fernando	-	-	-	133.0	100	0	-	
24	Sayabouly District*	-	-	-	18.0	-	-	-	
25	Song Cau*	-	-	-	85.0	_	20	-	
26	Thap Cham*	-	-	0**	90.0	-	22	0	
27	Xieng Ngeun District*	-	-	-	30.0	100	18	30	
	Top Value	15.0	80.0	90	133		30		
	Top Quartile	15.0	80.0	90	30		22		
	Range	0.1–15.0	18.3-80.0	0–90	4–133		3.5–30		
	Average	6.9	55.7	38	47		18		
	No. of Respondents	6.9	5	5	13		13		

	Table 2.13:	Revenues	and	Fees	for	Services
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Note: "–" means data not available, $m^3 =$ cubic meter.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

** Environmental charge added to water tariff. *** Proposed tariff.

		Source of Water Pollution					
		Monitoring Water Quality	Household Solid Waste	Household Liquid Waste	Industrial Waste	Commercial Waste	Hospital Waste
	City	Y/N	%	%	%	%	%
1	Banda Aceh	Y	5	50	10	35	0
2	Bharatpur*	Ν	50	50	0	0	0
3	Bhopal*	Y	10	60	10	15	5
4	Calbayog	Ν	45	35	2	15	3
5	Cam Ranh*	Y	0	100	0	0	0
6	Colombo	Y	10	20	38	15	17
7	Dhaka	Y	15	40	30	10	5
8	Gwalior*	Y	10	60	10	15	5
9	Hetauda*	Y	30	60	10	0	0
10	Ho Chi Minh	Y	5	60	25	5	5
11	Hue	Y	50	36	5	5	4
12	Indore*	Y	10	60	10	15	5
13	Jabalpur*	Y	10	70	0	18	2
14	Jinghong*	Y	12	38	34	11	5
15	Kathmandu	Ν	20	80	0	0	0
16	Kunming*	Y	0	50	10	0	0
17	Lekhnath Municipality*	Y	50	50	0	0	0
18	Makati	Y	10	70	5	10	5
19	Negombo	Y	67	0	8	25	0
20	Phine District*	Ν	10	15	-	-	-
21	Pokhara	Ν	-	-	-	-	-
22	Puer*	Y	-	-	-	-	-
23	San Fernando	Y	-	-	-	-	-
24	Sayabouly District*	Ν	10	15	-	-	-
25	Song Cau*	Y	20	80	0	0	0
26	Thap Cham*	Y	0	100	0	0	0
27	Xieng Ngeun District*	-	50	20	0	0	10
	Top Value		67	100	38	35	17
	Top Quartile		45	60	10	15	5
	Range		0–67	0–100	0–38	0–35	0–17
	Average		20.8	51	9	9	3

Table 2.14a: Environmental Situation

 $\mathsf{Y}=\mathsf{yes},\,\mathsf{N}=\mathsf{no}.$

			Table 2.140	: Environn	nental Situati		
					Wastewater	Freatment	
		Required to Treat Own Wastewater	Own Treatment Plant	Central Sewer System	No Treatment	Others	
	City	Y/N	%	%	%	%	Description
1	Banda Aceh	Y	2	0	98	0	-
2	Bharatpur*	Y	0	0	100	0	-
3	Bhopal*	Y	0	30	30	40	through septic tank
4	Calbayog	-	0	0	99	1	anaerobic baffled reactor
5	Cam Ranh*	Ν	0	0	100	0	-
6	Colombo	Y	-	-	-	-	-
7	Dhaka	Y	-	-	-	-	-
8	Gwalior*	Y	0	0	50	50	through septic tank
9	Hetauda*	Y	0	0	95	5	Hetauda Industrial Area has a small wastewater treatment plant
10	Ho Chi Minh	Y	80	0	20	0	-
11	Hue	Y	7	23	60	10	_
12	Indore*	Y	0	30	30	40	through septic tank
13	Jabalpur*	Y	0	0	50	50	through septic tank
14	Jinghong*	Y	-	-	-	-	-
15	Kathmandu	Ν	0	0	100	0	-
16	Kunming*	Y	100	0	0	0	-
17	Lekhnath Municipality*	Y	0	0	100	0	-
18	Makati	Y	88	11	1	0	-
19	Negombo	-	-	-	-	-	-
20	Phine District*	Ν	-	-	-	-	-
21	Pokhara	Y	0	0	100	0	-
22	Puer*	Y	0	29	71	0	-
23	San Fernando	Y	-	-	-	-	-
24	Sayabouly District*	-	-	-	-	-	-
25	Song Cau*	Ν	0	0	100	0	-
26	Thap Cham*	Ν	0	0	100	0	-
27	Xieng Ngeun District*	-	-	-	-	-	-
	Top Value		100	30	100	50	
	Top Quartile		2	11	100	50	
	Range		0–100	0–30	0–100	0–50	
	Average		14.6	6.5	68.6	10.3	

 $\mathsf{Y}=\mathsf{yes},\,\mathsf{N}=\mathsf{no}.$

			Table 2.14C. Environ			Adiaini	ing Town
		Located in	Rive	r Basin		Aujoin	ing iown
		River Basin	River/Basin Name	Basin Area		Pollution	Sanitation
	City	Y/N	Name	На	City Location	Load	Work/Plan
1	Banda Aceh	Y	Aceh River, Daroy River	-	Downstream	Medium	Individual
2	Bharatpur*	Y	Narayani	-	Midstream	-	-
3	Bhopal*	Y	Kolans	36,500	Downstream	-	-
4	Calbayog	N	-	-		Medium	-
5	Cam Ranh*	N	-	-		-	-
6	Colombo	Ν	-	-		Heavy	Cooperative
7	Dhaka	Y	Sitalakhay,Buriganga, Turag, Tha Balu	-	Midstream	Medium	Cooperative
8	Gwalior*	Y	Swama Rekha	2,000	Midstream	-	-
9	Hetauda*	Y	Rapti and Karra	-	Downstream	-	-
10	Ho Chi Minh	Y	Sai Gon-Dong Nai	4,826,800	Downstream	Heavy	Individual
11	Hue	Y	Perfume River	5,000	Midstream	-	-
12	Indore*	Y	Khan and Saraswati	-	Midstream	-	-
13	Jabalpur*	Y	Narmada	4,939,800	Midstream	-	-
14	Jinghong*	Y	Lancang River, Liusha River	709,300	Downstream	Medium	-
15	Kathmandu	Y	Bagmati, Bishnumati, Dhobikhola	-	Midstream	Heavy	Individual
16	Kunming*	Y	Jinsha River	292,000	Upstream	Medium	-
17	Lekhnath Municipality*	Y	Seti Gandakii	-	Upstream	Heavy	Individual
18	Makati	Y	Pasig River	-	Midstream	Medium	Cooperative
19	Negombo	Y	Maha Oya	-	Downstream	Medium	-
20	Phine District*	Y	Sedon River	-	-	Medium	-
21	Pokhara	Y	Seti Gandakii	-		Very Low	-
22	Puer*	Y	Langcang River	5,000	Midstream	Medium	Individual
23	San Fernando	Ν	-	-	-	Medium	Individual
24	Sayabouly District*	-	-	-	-	-	-
25	Song Cau*	Ν	-	-	-	-	-
26	Thap Cham*	Ν	-	-	-	-	-
27	Xieng Ngeun District*	-	-	-	-	Medium	Individual
	Top Value			4,939,800			
	Top Quartile			4,826,800			
	Range			2,000– 4,939,800			
	Average			1,352,050			

Table 2.14c:	Environmental	Situation
		onadion

 $\mathsf{Y}=\mathsf{yes},\,\mathsf{N}=\mathsf{no}.$

	Existing Sanitation Plan Planned Sanitation Strategy						euv		
		With Sanitation			Amount per				
		Plan	Year Made	Planned Year	Total Amount	Capita	Source of Fund		
	City	Y/N	Year	Year	\$(M)	\$/capita	Name		
1	Banda Aceh	Ν	-	-	-	-	-		
2	Bharatpur*	Ν	-	-	-	-	-		
3	Bhopal*	Ν	-	2008	13.60	9.6	Other agency		
4	Calbayog	Ν	-	2009	0.11	0.7	General Fund, City Government		
5	Cam Ranh*	Ν	-	-	-	-	-		
6	Colombo	Y	-	-	-	-	-		
7	Dhaka	Ν	-	2008	-	-	World Bank		
8	Gwalior*	Ν	-	2008	395.00	477.6	Other agency		
9	Hetauda*	Ν	-	-	-	-	-		
10	Ho Chi Minh	Y	-	-	-	-	-		
11	Hue	Ν	-	2008	250.00	762.7	JBIC		
12	Indore*	Y	2006	2008	13.00	7.9	Other agency		
13	Jabalpur*	Ν	-	2008	37.00	39.7	Other agency		
14	Jinghong*	Y	-	-	-	-	-		
15	Kathmandu	Ν	-	-	-	-	-		
16	Kunming*	Y	-	-	-	-	-		
17	Lekhnath Municipality*	Ν	-	2008	0.03	0.6	Pokhara Valley Town Dev Com and Lekhnath Municipality		
18	Makati	Y	-	-	-	-	-		
19	Negombo	Ν	-	-	-	-	-		
20	Phine District*	Ν	-	-	-	-	-		
21	Pokhara	Ν	-	-	-	-	-		
22	Puer*	Y	-	-	-	-	-		
23	San Fernando	Y	-	-	-	-	-		
24	Sayabouly District*	Ν	-	-	-	-	-		
25	Song Cau*	Y	-	-	-	-	-		
26	Thap Cham*	Y	-	-	-	-	-		
27	Xieng Ngeun District*	Y	2007	-	-	-	-		
	Top Value	11	2007	2009	395.00	762.7			
	Top Quartile		2006	2008	250.00	477.6			
	Range	16–11	2006–2007	2008–2009	0.03-395.00	0.6-762.7			
	Average				101.25	185.5			

Table 2.15a: Sanitation Plannin	Table	2.15a:	Sanitation	Planninc
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 $\mathsf{JBIC}=\mathsf{Japan}\ \mathsf{Bank}\ \mathsf{for}\ \mathsf{International}\ \mathsf{Cooperation}, \,\mathsf{Y}=\mathsf{yes}, \,\mathsf{N}=\mathsf{no}.$

Note: "--" means data not available.

 * Indicates areas where survey responses were facilitated by UN-HABITAT.

					Funding	
		Major Sanitation	Future Programs/		Amount	Source of
	City	Problem	Projects List	Indicator	\$(M)	Fund
1	Banda Aceh	-	-	-	-	-
2	Negombo	No septage/sewage treatment facility	Construction of septage/sewage treatment plants	-	-	-
3	Dhaka	Unprecedented increase in population	Expansion and rehabilitation	-	-	World Bank
4	Dhaka	Upland urbanization	North Dhaka East Sewerage treatment plant and associated works	-	-	World Bank/People's Republic of China
5	Colombo	100-year-old sewer system needs rehabilitation	Rehabilitation of main sewer lines	-	-	-
6	Makati	Lack of understanding and appreciation of local pollution laws.	Capacity building of deputized barangay officials	-	-	-
7	Ho Chi Minh	Wastewater discharged into canals and rivers	-	-	-	-
8	Hue	Rivers/lakes water pollution	-	-	-	-
9	Kathmandu	Wastewater directly discharged into the river.	-	-	-	-
10	Pokhara			-	-	-
11	San Fernando	Contamination of ground, surface, and coastal water	Provision of sanitary toilets and sanitation promotion	Reduced water-borne diseases	0.96	City government and loan
12	Gwalior*	Missing sewer links, insufficient community toilet	Make the city open defecation free	open defecation	-	-
13	Jabalpur*	Absence of sewer system	Slum improvement and sewerage system	open defecation	-	GOI, ADB Municipal Corporation, Jabalpur
14	Indore*	Missing sewer links, insufficient community toilet	Open defecation free and totally sewered	open defecation	-	-
15	Bharatpur*	Lack of sanitary urban facilities	Open defecation free by 2009	open defecation	-	-
16	Hetauda*	Poor cannot afford basic sanitation services	Make municipality open defecation free by year 2010	open defecation	-	-
17	Lekhnath Municipality*	No sewer and waste water treatment facilities	Open defecation-free city by 2009	open defecation	-	-

continued next page

					Funding	
		Major Sanitation	Future Programs/		Amount	Source of
	City	Problem	Projects List	Indicator	\$(M)	Fund
18	Jinghong*	Increase in pollution due to increased development	-	-	-	-
19	Kunming*	Rate of wastewater treatment cannot meet the requirements	Improvement of water supply, sanitation, and treatment	-	1.79	Kunming Government, UN-HABITAT
20	Puer*	-	-	-	-	-
21	Phine District*	-	-	-	-	-
22	Sayabouly District*	-	-	-	-	-
23	Xieng Ngeun District*	-	-	-	-	-
24	Cam Ranh*	-	-	-	-	-
25	Song Cau*	No wastewater system in the town	-	-	-	-
26	Thap Cham*	Flooding during the rainy season	-	-	-	-
27	Bhopal*	There are still open defecation	Making the city "open defecation free."	open defecation	-	-
28	Calbayog	Pollution of bodies of water (e.g., rivers, sea, swamps) of wastewater	-	-	-	-
	Top Value				1.79	
	Top Quartile				1.79	
	Range				0.96–1.79	
	Average				1.37	

	Table 2.15b:	Sanitation	Planning	(continued)
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ADB = Asian Development Bank, GOI = Government of India.

Note: "--" means data not available.

* Indicates areas where survey responses were facilitated by UN-HABITAT.

			Number of Institutions Involved in Sanitation							
			Government		Priv					
	City	National	Local	Utility	Water Utility	Enterprise	NGO			
1	Banda Aceh	1	1	-	_	-	-			
2	Bharatpur*	-	1	2	-	-	-			
3	Bhopal*	-	2	-	-	-	-			
4	Calbayog	-	3	-	-	-	-			
5	Cam Ranh*	-	-	1	-	-	-			
6	Colombo	-	1	-	-	-	-			
7	Dhaka	-	1	1	-	-	-			
8	Gwalior*	-	2	-	-	-	-			
9	Hetauda*	-	-	1	-	-	-			
10	Ho Chi Minh	6	1	-	-	-	-			
11	Hue	-	1	1	-	-	-			
12	Indore*	-	2	-	-	-	-			
13	Jabalpur*	-	2	-	-	-	-			
14	Jinghong*	-	1	2	-	-	-			
15	Kathmandu	2	2	-	-	-	-			
16	Kunming*	-	3	1	-	-	-			
17	Lekhnath Municipality*	-	-	1	-	-	-			
18	Makati	3	2	-	2	-	-			
19	Negombo	2	-	-	-	-	-			
20	Phine District*	-	1	-	-	-	-			
21	Pokhara	-	1	-	-	-	-			
22	Puer*	-	2	2	-	-	-			
23	San Fernando	-	4	-	-	-	-			
24	Sayabouly District*	-	1	-	-	-	-			
25	Song Cau*	-	-	1	-	-	-			
26	Thap Cham*	-	-	1	-	-	-			
27	Xieng Ngeun District*	-	2	-	-	-	-			
	Top Value	6	4	2	2					
	Top Quartile	2	2	1	2					
	Range	1–6	1–4	1–2	-					
	Average	2.8	1.7	1.3	2					

Table 2.16: Organizational Arrangement

NGO = nongovernment organization.

				rnment		Priva	ate
		Total Personnel	Planning & Monitoring	Construction	Operations & Maintenance	Total Personnel	Operations & Maintenance
	City	#/10,000 pop'n	%	%	%	#/10,000 pop'n	%
1	Banda Aceh	0.46	_	-	100	-	-
2	Bharatpur*	5.15	-	-	-	-	-
3	Bhopal*	11.95	-	-	-	-	-
4	Calbayog	9.8	-	-	-	-	-
5	Cam Ranh*	-	-	-	-	-	-
6	Colombo	-	-	-	-	-	-
7	Dhaka	0.73	-	-	-	-	-
8	Gwalior*	20.56	-	-	-	-	-
9	Hetauda*	-	-	-	-	-	-
10	Ho Chi Minh	-	-	-	-	-	-
11	Hue	36.3	43.7	-	-	-	-
12	Indore*	14.03	-	-	-	-	-
13	Jabalpur*	21.67	-	-	-	-	-
14	Jinghong*	9.76	23.4	-	76.6	-	-
15	Kathmandu	0.46	-	-	-	-	-
16	Kunming*	-	-	-	-	-	-
17	Lekhnath Municipality*	3.14	-	-	-	-	-
18	Makati	-	-	-	-	30.96	-
19	Negombo	-	-	-	-	-	-
20	Phine District*	-	-	-	-	-	-
21	Pokhara	6.26	-	-	-	-	-
22	Puer*	10.15	12.7	-	87.3	-	-
23	San Fernando	2.09	-	-	-	-	-
24	Sayabouly District*	0.4	-	-	-	-	-
25	Song Cau*	-	-	-	-	-	-
26	Thap Cham*	-	-	-	-	-	-
27	Xieng Ngeun District*	100.77	15.6	-	84.4	-	-
	Top Value	100.77	43.7		100.0	30.96	
	Top Quartile	20.56	43.7		100.0	30.96	
	Range	0.46–100.77	12.7-43.7		76.6-100.0	-	-
	Average	14.9	23.9		87.1	30.96	

Table 2.17: Personnel Co

Pop'n = population.

							cting Fees for on Service
		Number of Laws	s on Sanitation	Year E	nacted	With Law?	
	City	National	Local	Oldest	Latest	Y/N	Year Enacted
1	Negombo	_	-	-	-	N	-
2	Dhaka	3	1	1983	1998	Y	1996
3	Calbayog	2	-	2000	2002	Ν	-
4	Colombo	1	1	1947	1980	-	-
5	Makati	4	-	1974	2004	Y	1997
6	Ho Chi Minh	1	3	2006	2007	Y	2003
7	Hue	1	-	2005	2005	Y	2007
8	Kathmandu	4	-	1987	1999	Y	1990
9	Pokhara	-	-	-	-	-	-
10	San Fernando	4	2	1972	2006	Ν	-
11	Bhopal*	-	1	1956	1956	Y	1956
12	Gwalior*	-	1	1956	1956	Y	1956
13	Jabalpur*	-	1	1956	1956	Y	1956
14	Indore*	-	1	1956	1956	Y	1956
15	Bharatpur*	1	-	1996	1996	Y	1999
16	Hetauda*	1	-	1993	1993	Y	1999
17	Lekhnath Municipality*	1	-	1993	1993	Y	1999
18	Kunming*	3	1	1984	2002	Y	2002
19	Puer*	1	1	1994	2002	Ν	-
20	Phine District*	-	-	-	-	-	-
21	Xieng Ngeun District*	-	-	-	-	Ν	-
22	Cam Ranh*	2	1	2003	2007	Y	2003
23	Song Cau*	2	1	2003	2007	Y	2003
24	Thap Cham*	2	1	2003	2007	Y	2003
25	Banda Aceh	1	-	1995	1995	Y	2003
26	Jinghong*	1	1	1993	2002	Ν	-
27	Sayabouly District*	-	1	2007	2007	Ν	-
	Top Value	4	3	2007	2007	17	2007
	Top Quartile	3	1	2000	2005	-	2003
	Range	1–4	1–3	1947–2007	1956–2007	7–17	1956–2007
	Average	1.9	1.2				

 $\mathsf{Y}=\mathsf{yes},\,\mathsf{N}=\mathsf{no}.$

PART III

CITY SANITATION PROFILE

Dhaka, Banglade	sh			For All	Surveyed C	ities and Munici	palities
Participating City							
Coordinator	Md. Golam Mostofa, Secretary						
Office	Dhaka City Corporation						
Address	5, Hafezi Huzur Road, Fulbaria, Dhaka	Bangladesh					
Fax	88029565979						
Telephone	88029563507						
E–mail address	mayordhaka@yahoo.com						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Average
Seniographics	D. 1.11. (0007)						-
	Population (2007)	#(000)	11,000.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	5.00	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	2,301.26	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.78	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	9.10	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	36.36	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	36.00	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	59.72	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	0	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban	%	0	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	305.60	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	-	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/lia #/ha	-	282.00	113.00	3-282.0 (12)	64.8
	-		-				
	Peri–Urban	#/ha #/ba	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage						
	Central Sewerage System	%	30.6	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	97.2	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						
	Central Sewerage System	%	20.0	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	80.0	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
Samation Facility			•		-		-
	I. Central Sewerage System	%	20	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	45	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	20	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	15	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	100	100.0	99.0	0-100 (15)	68.4
	Type la	%	0	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
		%	100			0-100 (21)	85.4
	Type IIa		100	100.0	100.0		
	Type III	%	-	100.0	83.0	0-100 (14)	57.7
	Type IIIa	%	-	100.0	100.0	0-100 (14)	87.8
	Type IV	%	100	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	0	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	100	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	0	100.0	0	0-100 (14)	13.9
Treatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plant						
	Capacity (10,000 population)	m³/d	109.1	962.2	664.9	2.1-962.2 (22)	65.0
	Provid						
		vernment %	0	100.0	100.0	0-100 (20)	49.8
		Government %	100	100.0	100.0	0-100 (20)	45.0
	Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant	70	0	100.0	v	0 .00 (20)	0.0
	Capacity	m³/d		914.0	110.0	50 914 (5)	227.8
			-	814.0	110.0	50-814 (5)	227.8
				100.0		0.400.000	
	Provide			100.0	100.0	0-100 (15)	66.7
	Provid Local G	vernment %	-				
	Provid Local C Nationa	vernment % Government %	-	100.0	0	0-100 (15)	20.0
	Provid Local G	vernment %	-				20.0
	Provid Local C Nationa	vernment % Government %	-	100.0	0	0-100 (15)	20.0
	Provid Local G Nationa Private	vernment % Government % %	-	100.0	0	0–100 (15) 0–100 (15)	20.0 13.3
	Provid Local C Nationa Private Desludging Services Frequency	vernment % Government % % year	-	100.0 100.0	0 0	0-100 (15)	20.0 13.3
	Provid Local C Nationa Private Desludging Services Frequency Provid	vernment % Government % % year	-	100.0 100.0 12.0	0 0 10.0	0–100 (15) 0–100 (15) 2–12 (4)	20.0 13.3 7.3
	Provid Local C Nationa Private Desludging Services Frequency	vernment % Government % % year	-	100.0 100.0	0 0	0–100 (15) 0–100 (15)	20.0 13.3

= number, ha = hectare, m³/d = cubic meter per day.

	esh				For All	Surveyed Cit	ties and Munic	palities	
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag	
	Household Water Supply So	urce							
		Central Water Supply–Individual	%	80.0	100.00	67.10	3.59-100.00 (27)	50.50	
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80	
		Borehole	%	0	60.00	37.61	0.04-60.00 (26)	16.80	
		Protected Spring/Well	%	20.0	96.41	20.00	0.00-96.41 (25)	14.50	
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98	
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80	
		Population Buying Bottled Water	%	5	80.00	40.00	0-80 (18)	20.70	
				140.0	160.00	135.00		97.10	
		Average Water Consumption	lpcd				40-160 (20)		
		Water Treatment Facilities	lpcd	163.6	1,371.50	197.40	14.0-1,371.5(22)	11.80	
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80	
		National Government	%	100.0	100.00	100.00	0-100 (22)	45.00	
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30	
Organizational Arrange	ment		Unit	City Value	Top Value	Top Quartile	Range	Averag	
nstitutions Involved in Sanif	ation								
	Public Sector								
		National Government	#	-	6	2	1-6 (5)	2.8	
		Local Government	#	1	4	2	1-4 (21)	1.7	
		State-Owned Utility	#	1	2	1	1-2 (11)	1.3	
	Private Sector						. ,		
		Water Utility	#	-	2	2	2-2 (1)	2.0	
		Enterprise	#	-	_	_	- (0)		
		Nongovernment Organization	#	-	_	_	- (0)	_	
Number of Personnel		Nongovernment organization	#	-	_	-	- (0)		
NUMBER OF PERSONNEL	Public Sector								
	Fublic Sector	Total Personnel (per 10,000 pop'n)	#	0.73	100.77	20.56	0.46-100.77 (17)	14.9	
			** %	0.75	43.70		· · /	23.9	
		Planning and Monitoring		-	43.70	43.7	12.7-43.70 (4)		
		Construction	%	-	(00	-	0	(
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1	
Private Sector		T					00.00.00		
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96	
		Operations and Maintenance	%	-		-	- (0)		
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag	
egal Mandate of Sanitation									
	Number of Laws on Sanitation								
					4	3	1-4 (18)		
		National	#	3		5	1-4 (10)		
		Local	#	3 1	3	1	1-3 (15)		
	Year Enacted								
	Year Enacted							1.2	
	Year Enacted	Local	#	1	3	1	1–3 (15)	1.2 1985	
	Year Enacted Sanitation Service Charges	Local Oldest	# year	1 1983	3 2007	1 2000	1–3 (15) 1947–2007 (23)	1.2 1985	
		Local Oldest Latest	# year	1 1983	3 2007	1 2000	1–3 (15) 1947–2007 (23) 1956–2007 (23)	1.2 1985	
		Local Oldest	# year year	1 1983 1998	3 2007 2007	1 2000	1–3 (15) 1947–2007 (23)	1.9 1.2 1985 1993 1993	
Planning		Local Oldest Latest Law on Collecting Fees	# year year Y/N	1 1983 1998 Y	3 2007 2007 17	1 2000 2005	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25)	1.2 1985 1993	
•		Local Oldest Latest Law on Collecting Fees	# year year Y/N year	1 1983 1998 Y 1996	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990	
•		Local Oldest Latest Law on Collecting Fees	# year year Y/N year	1 1983 1998 Y 1996	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990	
•	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees	# year year Y/N year Unit	1 1983 1998 Y 1996	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990	
•	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	# year year Y/N year Unit	1 1983 1998 Y 1996 City Value	3 2007 2007 7 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.2 1985 1993 1990 Averag	
•	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted	# year year Y/N year Unit	1 1983 1998 Y 1996 City Value	3 2007 2007 17 2007 Top Value	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range	1.2 1985 1993 1990	
•	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	# year year Y/N year Unit Y/N year	1 1983 1998 Y 1996 City Value	3 2007 2007 7 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.: 198: 199: 199: Avera (
•	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	# year year Y/N year Y/N year Y/N	1 1983 1998 Y 1996 City Value N -	3 2007 2007 7 2007 Top Value 11 2007	1 2000 2005 2003 Top Quartile 2006	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1.3 1983 1993 Averag 2000	
•	Sanitation Service Charges	Local Oldest Latest Latest With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Plan Preparation Year	# year Y/N year Unit Y/N year Y/N year	1 1983 1998 Y 1996 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1.1 1983 1993 Averag 2000	
•	Sanitation Service Charges	Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	# year Y/N year Unit Y/N year Y/N year \$	1 1983 1998 Y 1996 City Value N -	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1 198 199 Avera 200 200 101.2	
•	Sanitation Service Charges	Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	1 1983 1998 Y 1996 City Value N - - 2008 - -	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1 198 199 Avera 200 200 101.2	
Planning Strategic Sanitation Plan	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Latest With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year year V/N year Unit Y/N year Y/N year \$ \$/capita list	1 1983 1998 Y 1996 City Value N - 2008 - 2008 - - Vorld Bank	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1 198 199 Avera 200 200 101.2	
•	Sanitation Service Charges	Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	1 1983 1998 Y 1996 City Value N - - 2008 - -	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1 198 199 Avera 200 200 101.2	
•	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Latest With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year year V/N year Unit Y/N year Y/N year \$ \$/capita list	1 1983 1998 Y 1996 City Value N - 2008 - 2008 - - Vorld Bank	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1 198 199 Avera 200 200 101.2	
•	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Latest With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	# year Y/N year Unit Y/N year Y/N year \$ \$(capita list list	1 1983 1998 Y 1996 City Value N - 2008 - - 2008 - - - World Bank increase in population	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.: 198: 199: 199: Avera (

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Dhaka, Bangladesi	1				FOR All	Surveyed Ch	ties and Munici	panties
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	\$/capita	_	27.9	22.5	0.5–27.9 (27)	8.20
	Source of Fund	Annual Annualit	φ/σαρπα	-	21.5	22.5	0.5-21.5 (21)	0.20
		National Government	%	20	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	0	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	80	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Amount	\$/capita	_	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	/ indui / induit	φ/σαριτα		0.0	0.00	0.00 0.04 (11)	1.5
	obaroo or rand	National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	0	100.0	100.00	0-100 (17)	57.6
		Loans	%	ŏ	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	100	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			0	ony func	Top Fullo	iop daarnie	inango	monug
lotal Revenue	Couvered Area Charges		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	6	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee		A /07		(00		4 400 (40)	17.0
		Private Government	\$/ST \$/ST		133 30	30 22	4-133 (13)	47.0 18.0
	Other Fees	Government	\$/51	-	30	22	3.5–30 (13)	18.0
Environmental Situation	041011000		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Harris I. C. P. Martin	0/	45	07	15	0.07.(0.4)	00.0
		Household Solid Waste	%	15	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	40	100	60	0-100 (24)	50.8
		Industrial Waste	%	30	38	10	0-38 (22)	9.4
		Commercial Waste	%	10	35	15	0-35 (22)	8.8
		Hospital Waste	%	5	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastewa	ater	Y/N	N				
	Current Wastewater Disposal							
		Own Treatment Plant	%	-	100	2	0-100 (19)	14.6
		Central Sewer System	%	-	30	11	0-30 (19)	6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	%	-	50	1	0-50 (19)	10.3
		Description	list	-			(. ,	
	Within River Basin		Y/N	Y				
	Than Thron Baom	River Basin/Major River Name	name	Sitalakhay,Buriganga,				
		niver basity major niver name	name	Turag, Tha Balu				
		Basin Area	ha .	-				
	Adjoining Town	City Location	u,m,d	Midstream				
	Aujoining town	Pollution Load	vh-vl	Medium				
		Sanitation Work/Plan	i/c	Cooperative				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			•		•		
	Surface Water							
		Total Coliform	MPN/100ml	11,450				
		BOD	mg/l	30	180	30	2.4-180	28.7
		COD	mg/l	80	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	30	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases	acculation)						
	Reported Cases (per 10,000 p	Diarrhea	#		594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#		53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-				
				-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
	Death (children 1 5	Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years				0.47	0.4	0.0.0.5.(7)	0.4
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6) 0.00-0.07 (6)	0.007
		Malaria	#		0.07	0.04		0.1

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; ml = milliliter; mg/l = milligram per liter; MPN = most probable number; ST = septic tank; u,m,d = upstream, midstream; vh-vl = very high to very low.

Bhopal, India				For All	Surveyed C	ities and Munici	palities
articipating City							•
Coordinator	Mr. Daiach Biogria, Braiact Managar						
	Mr. Rajesh Bisaria, Project Manager						
Office	Project Implementation Unit UWSEIP, N						
ddress	Harshvardhan, Block–II, Matamandir, E	opal, India					
ax	917554252517						
Telephone	917552701411						
E-mail address	pmpiubbhopal@yahoo.com						
	F	11-3	Olto Malua	Ten Malua	Ton Oursetille	Danas	A
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)	#(000)	1,423.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	3.50	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	240.00	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	5.93	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	3.50	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	21.08	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	28.50	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	11.93	76.23	21.99	0.79-76.23 (22)	18.0
	-			99.75			19.8
	Urban Fringe	%	20.00		20.15	0.00-99.75 (22)	
	Peri–Urban	%	50.20	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	8.07	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	49.90	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	153.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	75.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	55.00	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	20.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	62.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
Samanon Coverage		Um	ony value	iop value	Top Quartife	nange	Averag
	Area Coverage						
	Central Sewerage System	%	2.1	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	70.0	100.0	85.88	0.3-100 (25)	50.3
		/0	70.0	100.0	05.00	0.3-100 (23)	30.3
	Population Coverage						
	Central Sewerage System	%	41.7	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	45.3	99.7.0	84.80	3.6-99.7 (26)	57.7
Ponitation Facility		Ilait	City Value	Ten Volue	Ten Questile		Augros
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System	%	42	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	31	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	2.1	20.0	0.8	0.0-20.0 (13)	4.4
		%					
	IV. Pit Latrine		2.1	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	23	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Туре І	%	100	100.0	99.0	0-100 (15)	68.4
	Type la	%	0	100.0	87.0	0-100 (15)	75.5
	Type II	%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	0	100.0	100.0	0-100 (21)	85.4
	Type III	%	20	100.0	83.0	0-100 (14)	57.7
		%	80	100.0	100.0		87.8
	Type IIIa					0-100 (14)	
	Type IV	%	4	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	96	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	_	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	100	100.0	100.0	0-100 (14)	100.0
		%				()	
	Type VIb		0	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plant						
			76000	000.0	664.0	21 062 2 (00)	05.0
	Capacity (10,000 population)	m³/d	76000	962.2	664.9	2.1-962.2 (22)	65.0
	Provide						
	Local Go		100	100.0	100.0	0-100 (20)	49.8
	National	overnment %	0	100.0	100.0	0-100 (20)	45.0
	Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant	/0	U	100.0	Ū	0 .00 (20)	0.0
		A				50.044.00	
	Capacity	m³/d	-	814.0	110.0	50-814 (5)	227.8
	Provide						
	Local Go	ernment %	_	100.0	100.0	0-100 (15)	66.7
		overnment %	-	100.0	0	0-100 (15)	20.0
	Private	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services						
	Frequency	year	_	12.0	10.0	2-12 (4)	7.3
	Provide	yodi		12.0	10.0	2 12 (7)	1.0
						0.105	
	Governn Private	nt % %	-	100.0 100.0	50.0 50.0	0-100 (13) 0-100 (13)	53.0 47.0

= number, ha = hectare, m³/d = cubic meter per day.

Bhopal, India					For All	Surveyed Cit	ies and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						-
		Central Water Supply-Individual	%	43.33	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	1.92	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	54.53	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0.21	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	0	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	160.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	170.70	1,371.50	197.40	14.0–1,371.5(22)	11.80
								49.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangem			Unit	City Value	Top Value	Top Quartile	Range	Averag
nstitutions Involved in Sanitat								
	Public Sector	National Operations				0	1.0 (5)	0.0
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop/n)	#	11.95	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop/n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
-			Unit	ony value		iop quartito	nungo	monug
Legal Mandate of Sanitation	Number of Lowe on Conitatio							
	Number of Laws on Sanitation		,,			0	4 4 (40)	4.0
		National	#	-	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1–3 (15)	1.2
	Year Enacted							
		Oldest	year	1956	2007	2000	1947-2007 (23)	1985
		Latest	year	1956	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	V	17		17 (25)	
		Earl off concounty 1000	.,	Y			1050 0007 (17)	1990
		Year Enacted	year	1956	2007	2003	1956-2007 (17)	1330
Planning		•				2003 Top Quartile	Range	Average
		•	year	1956	2007			
Planning Strategic Sanitation Plan	Existing Sanitation Plan	•	year	1956	2007			
	Existing Sanitation Plan	•	year Unit	1956	2007			
-	Existing Sanitation Plan	Year Enacted	year	1956 City Value	2007 Top Value		Range	
	Existing Sanitation Plan	Year Enacted With Sanitation Plan	year Unit Y/N	1956 City Value	2007 Top Value 11	Top Quartile	Range	Averag
-		Year Enacted With Sanitation Plan When Prepared	year Unit Y/N year	1956 City Value	2007 Top Value 11	Top Quartile	Range	Averag
-		Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year Unit Y/N year Y/N	1956 City Value N -	2007 Top Value 11 2007	Top Quartile	Range 11–27 2006–2007 (2)	Averag 2006
-		Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	year Unit Y/N year Y/N year	1956 City Value N - 2008	2007 Top Value 11 2007 2009	Top Quartile 2006 2008	Range 11–27 2006–2007 (2) 2008–2009 (8)	Averag 2006 2008
		Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	year Unit Y/N year Y/N year \$	1956 City Value N - - 2008 13.6	2007 Top Value 11 2007 2009 395	Top Quartile 2006 2008 250	Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	Averag 2006 2008 101.25
		Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year Unit Y/N year Y/N year \$ \$/capita	1956 City Value N - 2008 13.6 9.6	2007 Top Value 11 2007 2009	Top Quartile 2006 2008	Range 11–27 2006–2007 (2) 2008–2009 (8)	Averag 2006 2008 101.25
-	New Sanitation Plan	Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year Unit Y/N year Y/N y/N y/N y/N y/N y/N y/N y/N y/N y/N y	1956 City Value N - - 2008 13.6 9.6 Other agency	2007 Top Value 11 2007 2009 395	Top Quartile 2006 2008 250	Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	Averag 2006 2008 101.25
-		Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year Unit Y/N year Y/N year \$ \$/capita	1956 City Value N - 2008 13.6 9.6	2007 Top Value 11 2007 2009 395	Top Quartile 2006 2008 250	Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	Averag 2006 2008 101.25
	New Sanitation Plan	Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year Unit Y/N year Y/N y/N y/N y/N y/N y/N y/N y/N y/N y/N y	1956 City Value N - 2008 13.6 9.6 Other agency There are still open	2007 Top Value 11 2007 2009 395	Top Quartile 2006 2008 250	Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	Averag 2006 2008 101.25
	New Sanitation Plan	Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year Unit Y/N year \$ \$/capita list list	1956 City Value N - 2008 13.6 9.6 Other agency There are still open defecation	2007 Top Value 11 2007 2009 395	Top Quartile 2006 2008 250	Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	Averag

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Bhopal, India					For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Source of Fund	Annual Amount	\$/capita	1.9	27.9	22.5	0.5–27.9 (27)	8.20
		National Government	%	70	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	12	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	18	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Annount	¢/aanita		0.0	0.00	0.00.0.04 (11)	1.0
	Source of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			A (a a a i b a		15			
Total Revenue	Sewered Area Charges		\$/capita	-	15	0.1	0.1–15.0 (4)	6.9
	contration and only goo	Connection Charge	\$/connection	4618	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	90	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST		133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	-	133	22	3.5-30 (13)	18.0
Environmental Situation	Utilet rees		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		Unit	City value	TOP Value	TOP QUALTIC	nanye	Average
	-	Water Quality Monitored	Y/N	N				
	Sources of Water Pollution							
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	60	100	60	0-100 (24)	50.8
		Industrial Waste	%	10	38	10	0-38 (22)	9.4
		Commercial Waste	%	15	35	15	0-35 (22)	8.8
	Polluter to Treat Own Wastev	Hospital Waste	% Y/N	5 N	17	5	0-17 (22)	3.2
	Current Wastewater Disposa		T/IN	IN				
	ourion musici bisposa	Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	30	30	11	0-30 (19)	6.5
		No Treatment	%	30	100	100	0-100 (19)	68.6
		Others	%	40	50	1	0-50 (19)	10.3
		Description	list	through septic tank			0 00 (10)	10.0
	Within River Basin	Boonplion	Y/N	Y				
		River Basin/Major River Name	name	Kolans				
		Basin Area	ha	36,500				
		City Location	u,m,d	Downstream				
	Adjoining Town							
		Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c	e			_	
Environmental Statistics	Water Overlite		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality Surface Water							
	Sui lace Walei	Total Coliform	#/ml	30				
		BOD	mg/l	6	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	200	261	200	1-261	109.7
		Heavy Metals	mg/l	0.25	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases						-	
	Reported Cases (per 10,000		11		5047	470.40	0.0.5044 (46)	440.0
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection		-	1,559.01	507.79 2.29	0.36-1,559.01 (11) 0.00-4.45 (9)	420.5
		Measles Malaria	#	-	4.45	2.29 9.07	0.00-4.45 (9)	1.1 5.0
	Death (children under 5 year		#	-	_	9.07	0.09-20.91 (10)	3.0
	South (officiation and of 9 year	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	-	0.07	0.04	0.00-0.07 (6)	0.1

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; mg/l = milligram per liter; ml = milliliter; ST = septic tank; u,m,d = upstream, midstream, downstream; vh-vl = very high to very low.

Note: Value in () is the number of cities and municipalities with data.

"--" means data not available.

Gwalior, India				For All	Surveyed C	ities and Munici	palities
Participating City							
Coordinator	Mr. K.K. Shrivastav, Project Manager						
Office	Project Implementation Unit, Municipal Corporati	ion					
Address	Galav Rest House, Capt. Roop Singh Stadium, G	walior, India					
Fax	+917512347144						
Telephone	+917512438357						
E–mail address	piugwalior@yahoo.com.in						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averan
Demographics			-	-	•		Averag
	Population (2007)	#(000)	827	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	2.5	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	175	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.73	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	48.4	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	7.26	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	17.7	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	11.3	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	19.77	99.75	20.15	0.00-99.75 (22)	19.8
		%					
	Peri–Urban		50.8	98.52	74.23	0.00-98.52 (22)	39.1
	Slum Area	%	7.91	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	46.7	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	138	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	75	438.00	21.99	4.0-438.0 (17)	73.
	Urban Fringe	#/ha	52	282.00	113.00	3-282.0 (12)	64.
	Peri–Urban	#/ha	18	110.00	29.00	0.34-110.0 (17)	19.
	Slum Area	#/ha	59	3,858.00	627.00	18–3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
annauon ooverage	Area Couerere	Unit	ony value	TOP Value	Top Quartine	nanye	Averaç
	Area Coverage	%	70.1	100.0	21.00	0.0.100.0	25.4
	Central Sewerage System		79.1	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	85.9	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						
	Central Sewerage System	%	85.7	100.0	55.00	0-100.0 (1)	29.
	Central Water Supply System	%	68.6	99.7.0	84.80	3.6-99.7 (26)	57.3
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
				-	-		
	I. Central Sewerage System	%	86	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	2	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0.5	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	0.7	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	11	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	0	100.0	99.0	0-100 (15)	68.4
	Type la	%	100	100.0	87.0	0-100 (15)	75.
	Type II	/0	100	100.0	07.0	0-100 (13)	10.0
		0/	50	100.0	100.0	0 100 (01)	0.0
		%	50	100.0	100.0	0-100 (21)	
	Type IIa	%	50	100.0	100.0	0-100 (21)	85
	Type IIa Type III	%	50 62	100.0 100.0	100.0 83.0	0-100 (21) 0-100 (14)	85.4 57.1
	Type IIa Type III Type IIIa	% % %	50 62 38	100.0 100.0 100.0	100.0 83.0 100.0	0-100 (21)	85. 57. 87.
	Type IIa Type III Type IIIa Type IV	%	50 62	100.0 100.0	100.0 83.0	0-100 (21) 0-100 (14)	85 57. 87.:
	Type IIa Type III Type IIIa	% % %	50 62 38	100.0 100.0 100.0	100.0 83.0 100.0	0–100 (21) 0–100 (14) 0–100 (14)	85. 57. 87. 66.
	Type IIa Type III Type IIIa Type IV Type IVa	% % %	50 62 38 17	100.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18)	85. 57. 87. 66. 66.
	Type IIa Type III Type IIIa Type IV Type IV Type V	% % % % %	50 62 38 17	100.0 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2)	85 57. 87 66 66 66
	Type IIa Type III Type IIIa Type IV Type IVa Type V Type Va	% % % % % %	50 62 38 17 83 - -	100.0 100.0 100.0 100.0 100.0 100.0 67.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23)	85. 57. 87. 66. 66. 66.
	Type IIa Type III Type IIIa Type IV Type IVa Type V Type Va Type VIa	% % % % %	50 62 38 17 83 -	100.0 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14)	85. 57. 87. 66. 66. 66. 100.
reatment Facility	Type IIa Type III Type IIIa Type IV Type IVa Type V Type Va	% % % % % % % %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14)	85.4 57.7 87.8 66.4 66.7 66.7 66.7 100.0 13.9
Freatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type Va Type V & Vla Type VI& Vla	% % % % % % %	50 62 38 17 83 - - 100	100.0 100.0 100.0 100.0 100.0 100.0 67.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14)	69.5 85.4 57.7 87.8 66.4 66.7 66.7 100.0 13.9 Averag
Freatment Facility	Type IIa Type III Type IIIa Type IV Type IV Type V Type V Type VI & VIa Type VIb Waste Water Treatment Plant	% % % % % % % Unit	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range	85. 57. 66. 66. 66. 66. 100. 13. Averag
Freatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & Type VI & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population)	% % % % % % % %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14)	85. 57. 66. 66. 66. 100. 13. Averag
Freatment Facility	Type IIa Type III Type IIV Type IV Type IV Type V Type Va Type VI & VIa Type VI & VIa Type VID Waste Water Treatment Plant Capacity (10,000 population) Provider	% % % % % % % % % Unit	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2	100.0 83.0 100.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22)	85. 57. 87. 66. 66. 66. 100. 13. Avera 65.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type Va Type V & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government	% % % % % % % % Unit m ² /d	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20)	85. 57. 87. 66. 66. 66. 100. 13. Averag 65.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V Type V & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government	% % % % % % % Unit m³/d t t %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20)	85.4 57.7 87.4 66.4 66.5 66.7 100.0 13.9 Averag 65.1 49.4 45.1
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V Type V & VIa Type VI & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private	% % % % % % % % Unit m ² /d	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20)	85. 57. 87. 66. 66. 66. 100. 13. Averag 65. 49. 49.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type Va Type V & Vla Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government National Government Private	% % % % % % % % % * * * * * * * * * * *	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20)	85 57 87.4 66 66 66 100.1 13.9 Averag 65.1 49.1 45.5.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V Type V & VIa Type VI & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private	% % % % % % % Unit m³/d t t %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20)	85. 57. 87. 66. 66. 66. 100. 13. Averag 65. 65. 49. 45.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type Va Type V & Vla Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government National Government Private	% % % % % % % % % * * * * * * * * * * *	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20)	85. 57. 87. 66. 66. 66. 100. 13. Avera 65. 65. 49. 45. 5.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & Vla Type V & Vla Type V & Vla Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private Septage Treatment Plant Capacity	% % % % % % % % % m³/d m³/d m³/d	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 57.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 814.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 100.0 0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5)	85. 57. 87. 66. 66. 66. 100. 13. Avera 65. 49. 45. 5.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & VIa Type V & VIa Type VI & VIa Type VI & VIa Type VI, & VIa Type VI, & VIa Type VIA Capacity (10,000 population) Provider Local Government National Government Private Septage Treatment Plant Capacity Provider Local Government	% % % % % % % % * * * * % * * * * * * *	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 814.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15)	85. 57. 87. 66. 66. 66. 66. 100. 13. Avera 65. 49. 45. 5. 227. 66.
reatment Facility	Type IIa Type III Type III Type III Type IV Type IV Type IV Type V A Type V A Type V A VIa Type VI A VIa Type VIB V Capacity (10,000 population) Provider Capacity (10,000 population) Frovider Capacity (10,000 population) Frovider Capacity (10,000 population) Provider Capacity Comparison Private Private Private Capacity Capaci	% % % % % % % % % m³/d i: % m³/d i: %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 962.2 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15) 0-100 (15)	85. 57. 87. 66. 66. 66. 100. 13. Averag 65. 49. 45. 5. 227. 66. 20.
reatment Facility	Type IIa Type III Type III Type III Type IV Type IV Type V Type V Type V September 1 Capacity (10,000 population) Provider Local Government National Governm Private Capacity Provider Local Government National Government National Government National Government Private	% % % % % % % % * * * * % * * * * * * *	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 814.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15)	85. 57. 87. 66. 66. 66. 100. 13. Averag 65. 49. 45. 5. 227. 66. 20.
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & VIa Type V & VIa Type V & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private Septage Treatment Plant Capacity Provider Local Government National Government	% % % % % % % % % m³/d ± %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 100.0 0 0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) 0-100 (14) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15) 0-100 (15) 0-100 (15)	85. 57. 87. 66. 66. 66. 100. 13. Avera 65. 49. 45. 5. 227. 66. 20. 13.
Treatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & VIa Type V & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private Septage Treatment Plant Capacity Provider Local Government National Government National Government National Government National Government National Government National Government Private	% % % % % % % % % % % % % m ¹ /d % m ³ /d t % m ³ /d t %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 962.2 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15) 0-100 (15)	85. 57. 86. 66. 66. 100. 13. Averag 65. 49. 45. 5. 227. 66. 20. 13.
'reatment Facility	Type IIa Type III Type III Type IIV Type IV Type IV Type V1A Capacity (10,000 population) Provider Cocal Government National Government National Government National Government Provider Desludging Services Frequency	% % % % % % % % m³/d t % m³/d t % m³/d t % with % year	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 67.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	100.0 83.0 99.0 86.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 0 0 100.0 0 0	0-100 (21) 0-100 (14) 0-100 (14) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) Range 2.1-962.2 (22) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15) 0-100	85.4 57.7 87.1 66.6 66.5 66.7 100.1 13.9 Averag 65.1 49.1 45.5 5.7 227.1 66.2 20.1 13.3 7.3
reatment Facility	Type IIa Type III Type III Type IV Type IV Type V Type V & VIa Type V & VIa Type VIb Waste Water Treatment Plant Capacity (10,000 population) Provider Local Government National Government Private Septage Treatment Plant Capacity Provider Local Government National Government National Government National Government National Government National Government Private Provider Local Government Private	% % % % % % % % % m³/d ± %	50 62 38 17 83 - - 100 0	100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Top Value 962.2 100.0 100.0 100.0 100.0 100.0 100.0	100.0 83.0 100.0 88.0 99.0 82.0 80.0 100.0 0 Top Quartile 664.9 100.0 100.0 0 110.0 100.0 0 0	0-100 (21) 0-100 (14) 0-100 (18) 0-100 (18) 0-100 (18) 33-100 (2) 0-67 (23) 0-100 (14) 0-100 (14) 0-100 (14) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 0-100 (20) 50-814 (5) 0-100 (15) 0-100 (15) 0-100 (15)	85.4 57.7 87.8 66.4 66.7 66.7 66.7 100.0 13.9

= number, ha = hectare, m³/d = cubic meter per day.

Gwalior, India					For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply Sou	Irce						
	,	Central Water Supply-Individual	%	57.14	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	11.43	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	28.57	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	2.86	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	130.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	175.30	1.371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangem	ient		Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanitat			•	ony func	Top Fulleo	Top Quantito	nungo	
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	20.56	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop,n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
	Number of Laws on Sanitation							
		National	#	-	4	3	1-4 (18)	1.9
							1-3 (15)	
		Local	#	1	3	1	1-5 (15)	1.2
	Year Enacted	Local	#	1			1-5 (15)	
	Year Enacted	Local Oldest	# year	1956	2007	2000	1947-2007 (23)	1985
		Local						
	Year Enacted Sanitation Service Charges	Local Oldest	year year	1956	2007	2000	1947-2007 (23)	1985
		Local Oldest	year	1956	2007	2000	1947-2007 (23)	1985
		Local Oldest Latest	year year	1956 1956	2007 2007	2000	1947–2007 (23) 1956–2007 (23)	1985
Planning		Local Oldest Latest Law on Collecting Fees	year year Y/N	1956 1956 Y	2007 2007 17	2000 2005	1947–2007 (23) 1956–2007 (23) 17 (25)	1985 1993
		Local Oldest Latest Law on Collecting Fees	year year Y/N year	1956 1956 Y 1956	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
		Local Oldest Latest Law on Collecting Fees	year year Y/N year Unit	1956 1956 Y 1956	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees	year year Y/N year	1956 1956 Y 1956	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990 Average
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	1956 1956 Y 1956 City Value	2007 2007 17 2007 Top Value	2000 2005 2003	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1985 1993 1990
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	1956 1956 Y 1956 City Value	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Averag e
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	1956 1956 Y 1956 City Value	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Averag e
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	year year Y/N year Unit Y/N year	1956 1956 Y 1956 City Value N -	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Averag e
<u> </u>	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year year Y/N year Unit Y/N year Y/N	1956 1956 Y 1956 City Value N –	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1985 1993 1990 Average 2006
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	year year Y/N year Unit Y/N year Y/N year	1956 1956 Y 1956 City Value N - 2008	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006 2008	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1985 1993 1990 Averag u 2006 2008
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year Y/N year \$	1956 1956 Y 1956 City Value N – 2008 395.0 477.6	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
	Sanitation Service Charges	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year \$ \$/capita	1956 1956 Y 1956 City Value N - - 2008 395.0 477.6 Other agency	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag u 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita list	1956 1956 Y 1955 City Value N - 2008 395.0 477.6 Other agency Missing sever	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
<u> </u>	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita list	1956 1956 Y 1956 City Value N - 2008 395.0 477.6 Other agency Missing sewer links, insufficient	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
Planning Strategic Sanitation Plan	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year year Y/N year Unit Y/N year \$ X/Capita list list	1956 1956 Y 1956 City Value N – 2008 395.0 477.6 Other agency Missing sever links, insufficient community toilet	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008 101.25
<u> </u>	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita list	1956 1956 Y 1956 City Value N - 2008 395.0 477.6 Other agency Missing sewer links, insufficient	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag u 2006 2008 101.25

Y= yes, N= no, lcpd = liters per capita per day, pop'n = population.

Gwalior, India					For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Course of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%	_	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	_	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	Ő	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	0.6	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Covernment	0/	0	47.0	0	0 47 (17)	0.4
		National Government Local Government	%	0 100	47.0	0	0-47 (17)	3.4 57.6
		Loans	%	0	100.0 53.0	100.00 50.00	0–100 (17) 0–53 (17)	57.6 9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	orvioco	Guidio	Unit					
Annual Revenues and Fees	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
fotal Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges		ç, cupitu		15	0.1	0.1 10.0 (+)	0.9
		Connection Charge	\$/connection	20,000	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST		133	30	4-133 (13)	47.0
	04	Government	\$/ST	-	30	22	3.5-30 (13)	18.0
Facility and all Olderation	Other Fees		\$	Olto Malua	Ten Malua	Ton Overstille	Dawas	A
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution	Mater Quality Manitared	V/M	N				
	Sources of Water Pollution	Water Quality Monitored	Y/N	N	20			
	Sources of Water Follution	Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	60	100	60	0-100 (24)	50.8
		Industrial Waste	%	10	38	10	0-38 (22)	9.4
		Commercial Waste	%	15	35	15	0-35 (22)	8.8
		Hospital Waste	%	5	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Ň		0	0 11 (22)	0.2
	Current Wastewater Disposa		.,					
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	50	100	100	0-100 (19)	68.6
		Others	%	50	50	1	0-50 (19)	10.3
		Description	list	through septic tank			()	
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Swama Rekha				
		Basin Area	ha	2,000				
		City Location	u,m,d	Midstream				
	Adjoining Town	Delle d'an Lond						
		Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c	Other Markers	Ten Melue	Ton Overstille	Dawas	A
Environmental Statistics	Weber Overlike		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality Surface Water							
	Sui lace Water	Total Coliform	#/ml	1				
		BOD	#///// mg/l	6	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	200	261	200	1-261	122.5
		Heavy Metals	mg/l	0.25	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases		Unit	ony value	Top Value	Top quarties	nungo	monage
	Reported Cases (per 10,000) population)						
	1	Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year	rs) (per 10,000 population)						
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles Malaria	#	-	0.03 0.07	0.03 0.04	0.00-0.03 (6) 0.00-0.07 (6)	0.007

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; mg/l = milligram per liter; ml = milliliter; ST = septic tank; u,m,d = upstream, midstream, downstream; vh-vl = very high to very low.

Indore, India					For All	Surveyed C	ities and Munici	palities
Participating City								·
Coordinator	Mr. Prabhas Sankhla, Project	Managor						
Office	Project Implementation Unit L							
Address	Narmda Project, Musakhedi, I	nuore, mula						
Fax	917312710708							
Telephone	917312710695							
E–mail address	piuindore@hotmail.com							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
Bonnographiloo	Description (0007)			-		-		
	Population (2007)		#(000)	1,639.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	4.80	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	330.00	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	4.97	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	6.10	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	15.86	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	13.40	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	11.94	76.23	21.99	0.79-76.23 (22)	18.0
			%					19.8
	Urban Fringe			20.15	99.75	20.15	0.00-99.75 (22)	
	Peri–Urban		%	49.30	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	8.21	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	122.30	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	350.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	184.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	133.00	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	50.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	149.00	3,858.00	627.00	18–3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
	Area Coverage							
	Central Sewerage System		%	44.8	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	48.5	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage		70	-10.0	100.0	00.00	0.0 100 (20)	00.0
			0/	55.0	400.0	55.00	0 400 0 (4)	00.0
	Central Sewerage System		%	55.0	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	98.5	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
,				-			-	-
	I. Central Sewerage System		%	55	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	20	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tar	k	%	3.5	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	11.3	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	11	61.0	13.0	0.0-61.0 (14)	17.0
			,0		0110	1010	0.0 01.0 (11)	
	Toilet System		0/	100	100.0	00.0	0.100.(15)	00.4
	Type I		%	100	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	0	100.0	87.0	0-100 (15)	75.5
	Type II		%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	0	100.0	100.0	0-100 (21)	85.4
	Type III		%	43	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	57	100.0	100.0	0-100 (14)	87.8
			%	1	100.0	86.0	. ,	66.4
	Type IV						0-100 (18)	
	Type IVa		%	99	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	100	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	0	100.0	0	0-100 (14)	13.9
Treatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plar	+	oiiit	en, talao	.op taluð	top quantito		morage
	Capacity (10,000 population)		m³/d	90000	962.2	664.9	2 1_062 2 (22)	65.0
	Capacity (10,000 population)		IIIº/U	90000	902.2	004.9	2.1-962.2 (22)	0.00
		Provider						
		Local Government	%	100	100.0	100.0	0-100 (20)	49.8
		National Government	%	0	100.0	100.0	0-100 (20)	45.0
		Private	%	0	100.0	0	0-100 (20)	5.3
						-		210
	Septage Treatment Plant				814.0	110.0	50-814 (5)	007.0
	Septage Treatment Plant		m3/d					227.8
	Septage Treatment Plant Capacity	Deside	m³/d	-	01110	110.0	00 014 (0)	
		Provider		-				
		Provider Local Government	%	-	100.0	100.0	0-100 (15)	66.7
				-				
		Local Government National Government	%	-	100.0 100.0	100.0 0	0–100 (15) 0–100 (15)	20.0
	Capacity	Local Government	%		100.0	100.0	0–100 (15)	20.0
	Capacity Desludging Services	Local Government National Government	% % %		100.0 100.0 100.0	100.0 0 0	0–100 (15) 0–100 (15) 0–100 (15)	20.0 13.3
	Capacity	Local Government National Government Private	%	-	100.0 100.0	100.0 0	0–100 (15) 0–100 (15)	20.0 13.3
	Capacity Desludging Services	Local Government National Government Private Provider	% % year		100.0 100.0 100.0 12.0	100.0 0 10.0	0–100 (15) 0–100 (15) 0–100 (15) 2–12 (4)	20.0 13.3 7.3
	Capacity Desludging Services	Local Government National Government Private	% % %	-	100.0 100.0 100.0	100.0 0 0	0–100 (15) 0–100 (15) 0–100 (15)	66.7 20.0 13.3 7.3 53.0

= number, ha = hectare, m³/d = cubic meter per day.

					For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce						
		Central Water Supply–Individual	%	54.00	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	44.48	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	1.52	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	U	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	80.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	117.10	1,371.50	197.40	14.0–1,371.5(22)	11.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	49.80
				100.00		100.00		
		National Government	%	Ű	100.00		0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangem			Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanitat								
	Public Sector	Netter 1 October 1					4.0 (7)	
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	14.03	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
Legal Mandate of Sanitation	Number of Laws on Sanitation	n						
Legal Mandate of Sanitation	Number of Laws on Sanitation	n National	#	-	4	3	1-4 (18)	1.9
Legal Mandate of Sanitation	Number of Laws on Sanitation		#	- 1	4	3 1	1–4 (18) 1–3 (15)	1.9 1.2
Legal Mandate of Sanitation	Number of Laws on Sanitation	National		- 1				
Legal Mandate of Sanitation		National		- 1 1956				
Legal Mandate of Sanitation		National Local	#		3	1	1–3 (15)	1.2
Legal Mandate of Sanitation		National Local Oldest	# year	1956	3 2007	1 2000	1–3 (15) 1947–2007 (23)	1.2 1985
Legal Mandate of Sanitation	Year Enacted	National Local Oldest	# year	1956	3 2007	1 2000	1–3 (15) 1947–2007 (23)	1.2 1985
Legal Mandate of Sanitation	Year Enacted	National Local Oldest Latest	# year year	1956 1956	3 2007 2007	1 2000	1–3 (15) 1947–2007 (23) 1956–2007 (23)	1.2 1985
	Year Enacted	National Local Oldest Latest Law on Collecting Fees	# year year Y/N	1956 1956 Y 1956	3 2007 2007 17	1 2000 2005	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25)	1.2 1985 1993 1990
Planning	Year Enacted	National Local Oldest Latest Law on Collecting Fees	# year year Y/N year	1956 1956 Y	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993
Planning	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees	# year year Y/N year	1956 1956 Y 1956	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990
Legal Mandate of Sanitation Planning Strategic Sanitation Plan	Year Enacted	National Local Oldest Latest Law on Collecting Fees Year Enacted	# year year Y/N year Unit	1956 1956 Y 1956	3 2007 2007 17 2007 Top Value	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range	1.2 1985 1993 1990
Planning	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	# year year Y/N year Unit Y/N	1956 1956 Y 1956 City Value Y	3 2007 2007 17 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27	1.2 1985 1993 1990 Average
Planning	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees Year Enacted	# year year Y/N year Unit	1956 1956 Y 1956 City Value	3 2007 2007 17 2007 Top Value	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range	1.2 1985 1993 1990
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	# year y/N year Unit Y/N year	1956 1956 Y 1956 City Value Y 2006	3 2007 2007 17 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27	1.2 1985 1993 1990 Averag
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	# year Y/N year Unit Y/N year Y/N	1956 1956 Y 1956 City Value Y 2006 2006	3 2007 2007 17 2007 Top Value 11 2007	1 2000 2005 2003 Top Quartile 2006	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2)	1.2 1985 1993 1990 Averagy 2006
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	# year Y/N year Unit Y/N year Y/N year	1956 1956 Y 1956 City Value Y 2006 2006 2008	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8)	1.2 1985 1993 1990 Averag 2006 2008
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	# year Y/N year Unit Y/N year Y/N year \$	1956 1956 Y 1956 City Value Y 2006 2006 2008 13.0	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	1956 1956 Y 1956 City Value Y 2006 2006 2008 13.0 7.9	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8)	1.2 1985 1993 1990 Averag 2006 2008
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year Y/N year Unit Y/N year Y/N year \$ \$ \$/capita list	1956 1956 Y 1956 City Value Y 2006 2008 13.0 7.9 Other agency	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	1956 1956 Y 1956 City Value Y 2006 2008 13.0 7.9 Other agency Missing sewer	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year Y/N year Unit Y/N year Y/N year \$ \$ \$/capita list	1956 1956 Y 1956 City Value Y 2006 2008 13.0 7.9 Other agency Missing sewer links, insufficient	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	# year Y/N year Unit Y/N year Y/N year \$ \$/capita list list	1956 1956 Y 1956 City Value Y 2006 2006 2008 13.0 7.9 Other agency Missing sewer links, insufficient community toilet	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year Y/N year Unit Y/N year Y/N year \$ \$ \$/capita list	1956 1956 Y 1956 City Value Y 2006 2008 13.0 7.9 Other agency Missing sewer links, insufficient	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Indore, India					For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
•	Annual Capital Investment			•		•		
		Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	Netlesel Oscillation and	0/	50				
		National Government Local Government	%	50 10	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	40	100.0 80.0	0	0.0-100.0 (17)	32.10 18.90
		Tariff Revenue	%	40	80.0	0	0.0-80.0 (18) 0-0 (17)	18.90
		Others	%	0	100.0	100	0.0–100.0 (17)	27.65
Oneretiens and Maintena	noo Expondituroo	Outers	Unit	City Value				
Operations and Maintena	Annual O&M Cost		Unit	Gity value	Top Value	Top Quartile	Range	Average
	Allitual Oalwi Gust	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	, undar / undarit	φ/σαρπα		0.0	0.00	0.00 0.04 (11)	1.0
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	arvices	00000	Unit	City Value	Top Value	Top Quartile		
Annual Revenues and Fees	EIVIGES		Unit	Gity value	TOP VALUE	Top Quartile	Range	Average
fotal Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges		o, oupitu		10	0.1	3.1 10.0 (1)	0.0
		Connection Charge	\$/connection	146,800	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	90	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST		133	30	4-133 (13)	47.0
		Government	\$/ST	-	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
	0 (NK) D # #	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Hannahald Oalld Weste	0/	40			0.07.00.0	
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	60	100	60	0-100 (24)	50.8
		Industrial Waste	%	10	38	10	0-38 (22)	9.4
		Commercial Waste	%	15	35	15	0-35 (22)	8.8
		Hospital Waste	%	5	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	N				
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	30	30	11	0-30 (19)	6.5
		No Treatment	%	30	100	100	0-100 (19)	68.6
		Others	%	40	50	1	0-50 (19)	10.3
		Description	list	through septic tank			(,	
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Khan & Saraswati				
		Basin Area	ha	-				
		City Location	u,m,d	Midstream				
	Adjoining Town							
		Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water							
		Total Coliform	#/ml	30				
		BOD	mg/l	6	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	200	261	200	1-261	109.7
		Heavy Metals	mg/l	0.25	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000		"		504.4	470.40	0.0.5044 (40)	440.0
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year							
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#		0.07	0.04	0.00-0.07 (6)	0.1

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; mg/l = milligram per liter; ml = milliliter; ST = septic tank; u,m,d = upstream, midstream, downstream; vh-vl = very high to very low.

Jabalpur, India					For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	Mr. Ashish Shrivastav, Project M	anager						
Office	Municipal Corporation, Jabalpur	unugu						
Address	Manas Bhawan, Jabalpur, India							
ax	917612410892							
Telephone	917612411077							
E–mail address	piuadb_jbp@yahoo.co.in							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
Demographics						-		-
	Population (2007)		#(000)	932.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	2.80	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	151.03	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	6.17	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	4.80	724.90	30.00	. ,	53.5
							1.7-724.9 (19)	
	Urban Poor		%	31.12	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	12.90	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	11.76	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	20.12	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	50.30	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	7.74	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	72.10	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	215.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	111.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	79.00	282.00	113.00	3-282.0 (12)	64.8
	•							
	Peri–Urban		#/ha	29.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	93.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage							
	Central Sewerage System		%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	92.9				50.3
			70	92.9	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	84.8	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
Samalion Facility	Sanitation System Type			-		-		
	I. Central Sewerage System		%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	49	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank		%	0.8	20.0	0.8	0.0-20.0 (13)	4.4
		%	15	43.6	22.2	0.0-43.6 (18)	17.1	
	IV. Pit Latrine						. ,	
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	35	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	-	100.0	87.0	0-100 (15)	75.5
	Type II		%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	100	100.0	100.0	0-100 (21)	85.4
	Type III		%	0	100.0	83.0	0-100 (14)	57.7
	Type Illa		%	100	100.0	100.0	0-100 (14)	87.8
	Type IV		%	0	100.0	86.0	0-100 (18)	66.4
			%	100	100.0		0-100 (18)	
	Type IVa			100		99.0	· /	66.9
	Туре V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	43	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	57	100.0	0	0-100 (14)	13.9
Treatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
reatinent raciiity			Unit	ony value	Top value	Top Quartile	nallye	Average
	Waste Water Treatment Plant				0000		0.4.000.0 (00)	
	Capacity (10,000 population)		m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
	Pi	ovider						
	Lo	ical Government	%	-	100.0	100.0	0-100 (20)	49.8
		ational Government	%	_	100.0	100.0	0-100 (20)	45.0
		ivate	%		100.0	0	0-100 (20)	5.3
			70	_	100.0	0	0 100 (20)	0.0
	Septage Treatment Plant						50.0/1.00	
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
	Pi	ovider						
	Lo	ical Government	%	-	100.0	100.0	0-100 (15)	66.7
		ational Government	%	_	100.0	0	0-100 (15)	20.0
			%					
		ivate	%	-	100.0	0	0-100 (15)	13.3
	Pr							
	Pr		year	-	12.0	10.0	2-12 (4)	7.3
	Pr Desludging Services Frequency		year	-	12.0	10.0	2–12 (4)	7.3
	Pr Desludging Services Frequency Pr	ovider		-				7.3 53.0
	Pr Desludging Services Frequency Pr Gi		year % %	- 100 0	12.0 100.0 100.0	10.0 50.0 50.0	2–12 (4) 0–100 (13) 0–100 (13)	

= number, ha = hectare, m³/d = cubic meter per day.

Jabalpur, India					For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						
		Central Water Supply-Individual	%	64.97	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply–Communal	%	19.86	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	11.86	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	3.31	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0.01	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
			%			40.00		20.70
		Population Buying Bottled Water		1.00	80.00		0-80 (18)	
		Average Water Consumption	lpcd	64.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	45.10	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrange	ment		Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanit								
	Public Sector	Notice of Occurrent	"		0	0	4.0 (5)	0.0
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
	Delasta Ocari	State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector					0	0.0.00	
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	21.67	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation	1							-
•	Number of Laws on Sanitati	on						
		National	#	-	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted						. ,	
		Oldest	year	1956	2007	2000	1947-2007 (23)	1985
		Latest	year	1956	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges	Lutor	your	1000	2001	2000	1000 2001 (20)	1000
	canalon control charges	Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	1956	2007	2003	1956–2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan			UIII	ony value		Top quartito	nungo	monuge
on alogio ounitation i fun	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Ν	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan		your		2001	2000	2000 2001 (2)	2000
	non ounitation rian	Will Prepare Sanitation Plan	Y/N	_				
		Preparation Year		2008	2009	2008	2008-2009 (8)	2008
			year	37.0		2008		101.25
		Estimated Cost	\$		395		0.03-395.00 (7)	
		Amount per Capita	\$/capita	39.7	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	Other agency				
	Sanitation Problem	Major Sanitation Problem	list	Absence of sewer system				
		Future Programs/Projects	list	null				
		Funding Amount	\$/capita	iuii	1.79	1.79	0.96-1.79 (2)	1.37
		Funding Source	s/capita list	-	1.79	1.79	0.50-1.79 (2)	1.37

Y= yes, N= no, lcpd = liters per capita per day, pop'n = population.

Jabalpur, India					For All	Surveyed Cit	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Course of Fund	Annual Amount	\$/capita	22.5	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%	50	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	20	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	30	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	5.4	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	0/	0	47.0	0	0 47 (17)	2.4
		Local Government	%	100	47.0 100.0	0 100.00	0-47 (17)	3.4 57.6
		Loans	%	0	53.0	50.00	0-100 (17) 0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	Ő	100.0	00.00	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Innual Revenues and Fees	GI VIGG3		Unit	City value	TOP Value	Top Quartite	nanye	Average
otal Revenue			\$/capita	15	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	30000	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Division	A /07					
		Private	\$/ST		133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	-	30	22	3.5-30 (13)	18.0
Environmental Situation	Oulei 1665		Unit	City Value	Ton Voluo	Ton Quartila	Dongo	Average
	Water Quality and Dellution		UIII	Gity value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	water duality worntored	1/11	N	20			
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	70	100	60	0-100 (24)	50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	18	35	15	0-35 (22)	8.8
		Hospital Waste	%	2	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Ň			()	
	Current Wastewater Disposa	d						
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	50	100	100	0-100 (19)	68.6
		Others	%	50	50	1	0-50 (19)	10.3
		Description	list	through septic tank				
	Within River Basin	Disco Desis (Maise Disco News)	Y/N	Y				
		River Basin/Major River Name	name	Narmada				
		Basin Area City Location	ha u,m,d	4939800 Midstream				
	Adjoining Town	City Location	u,iii,u	Wiusucam				
	Aujoining town	Pollution Load	vh-vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			,				
	Surface Water							
		Total Coliform	#/ml	<200				
		BOD	mg/l	4.5	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	1	261	200	1-261	109.7
		Heavy Metals	mg/l	0.25	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000							
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	# #	-	4.45	2.29	0.00-4.45 (9)	1.1
	Death (children under 5 year	Malaria (ner 10 000 nonulation)	Ŧ	-	-	9.07	0.09-28.91 (10)	5.0
	boaur (onnuren unuer 5 year	Diarrhea	#	_	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0.1	0.0–1.2 (10)	1.2
		Trachoma	#	_	0	0	0-0 (6)	0
		Acute Lower Respiratory Infection		-	0.27	0.01		
			# #	-		0.01 0.03	0.00-0.27 (6) 0.00-0.03 (6)	0.2

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; mg/l = milligram per liter; ml = milliliter; ST = septic tank; u,m,d = upstream, midstream, downstream; vh-vl = very high to very low.

Banda Aceh, Indo	onesia				For All	Surveyed C	ities and Munici	palities
						,		
articipating City								
Coordinator	Yubasri							
Office	Road Infrastructure and Water Re	source Agency						
Address	jl. K.H.Ahmad Dahlan No. 3, Band	a Aceh, Indonesia						
ax								
Telephone								
	teri Quiter en							
E–mail address	yubasri@yahoo.com							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	217.94	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	2.87	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	43.59	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	5.00	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	4.60	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%		46.36	31.12	0.00-46.36 (24)	18.4
				-				
	City Area		ha (000)	6.10	2,101.20	90.30	1.5-2,101.2 (27)	154.0
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	76.23	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	0	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	0	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	35.50	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	74.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	48.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	.0.00	282.00	113.00	3-282.0 (12)	64.8
	*			-			. ,	
	Peri–Urban		#/ha	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
ounder officiage			•	011, 14140	Top Fullo		ilailige	monug
	Area Coverage							
	Central Sewerage System		%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	20	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
			0/		100.0	FF 00	0 100 0 (1)	00.0
	Central Sewerage System		%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	20	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
Jannadon Fabinity				-	-			
	I. Central Sewerage System		%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	96	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank		%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	2.6	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	1	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	-	100.0	99.0	0-100 (15)	68.4
	Type la		%		100.0	87.0	0-100 (15)	75.5
				-				
	Type II		%	95	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	5	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	100	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	0	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	100	100.0	100.0	0-100 (14)	100.0
			%	0	100.0	0		
	Type VIb						0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plant							
					000.0	004.0	0.1.000.0.(00)	05.0
	Capacity (10,000 population)		m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
		vider						
	Loc	al Government	%	100	100.0	100.0	0-100 (20)	49.8
		onal Government	%	_	100.0	100.0	0-100 (20)	45.0
	Priv		%		100.0	0		5.3
		aic	70	-	100.0	U	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m³/d	110	814.0	110.0	50-814 (5)	227.8
		vider						
		al Government	%	100	100.0	100.0	0_100 (15)	66.7
							0-100 (15)	
	Nat	onal Government	%	0	100.0	0	0-100 (15)	20.0
			0/	0	100.0	0	0-100 (15)	13.3
	Priv	ate	%	0				
	Priv	ate	%	U	10010	-		
	Priv Desludging Services	ate		U				7.0
	Priv Desludging Services Frequency		% year	-	12.0	10.0	2–12 (4)	7.3
	Priv Desludging Services Frequency Pro	vider	year	-	12.0	10.0	2–12 (4)	
	Priv Desludging Services Frequency Pro			- 50				7.3

= number, ha = hectare, m³/d = cubic meter per day.

Banda Aceh, Indo	nesia				For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						-
		Central Water Supply–Individual	%	20	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	45	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	45	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	70 %	0	45.52	0.10	0.00-90.41 (25)	5.98
		Water Vendor	%	35	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	36	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	90	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	170.5	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
)rganizational Arrangem	ent		Unit	City Value	Top Value	Top Quartile	Range	Averag
stitutions Involved in Sanitat	ion							
	Public Sector							
		National Government	#	1	6	2	1-6 (5)	2.8
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
umber of Personnel							(-)	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	0.46	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	_	45.70	40.7	0	20.0
			%	100	100	100	-	
	Diate Orates	Operations and Maintenance	%	100	100	100	76.60-100.00 (4)	87.1
	Private Sector		"		00.00	00.00	00.00 (4)	00.00
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag
egal Mandate of Sanitation								
	Number of Laws on Sanitation	n						
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	1995	2007	2000	1947-2007 (23)	1985
		Latest	year	1995	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges						(12)	
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	2003	2007	2003	1956-2007 (17)	1990
lanning			Unit	City Value	Top Value	Top Quartile	Range	Averag
trategic Sanitation Plan			0.111	ony value	.op valuo	top quartito		····
aatogio oannallon Flan	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Ν	11		11–27	
		When Prepared	year	-	2007	2006	2006–2007 (2)	2006
	New Sanitation Plan	montroparou	yoai		2007	2000	2000-2007 (2)	2000
		Will Prepare Sanitation Plan	Y/N	_				
		Preparation Year	year	_	2009	2008	2008-2009 (8)	2008
		Estimated Cost	yeai \$		395	250	0.03-395.00 (7)	101.25
				-			· · ·	
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	-				
		Future Programs/Projects	list	null				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37
		Funding Source	list					

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Banda Aceh, Indor	nesia				For All	Surveyed Cit	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annaunt	¢/aanita		07.0	00.5	0.5.07.0 (07)	0.00
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5–27.9 (27)	8.20
	oodroo orrana	National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	0	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	100	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Source of Fund	Annual Amount	\$/capita	0.2	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fullu	National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	0	100.0	100.00	0-100 (17)	57.6
		Loans	%	50	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	50	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0–100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees								
Total Revenue			\$/capita	0.1	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charac	¢/ooneration	0	00	10.0	10.05 00 (5)	FF 7
		Connection Charge Tariff Rate	\$/connection \$/m ³	0	80 90	18.3 6.0	18.25-80 (5)	55.7 37.6
	Septic Tank Desludging Fee	rum fitto	ψ/11	-	90	0.0	1-90 (5)	37.0
	ooptio taint booldaging too	Private	\$/ST	10 (50%)	133	30	4-133 (13)	47.0
		Government	\$/ST	10 (50%)	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Users and Ost a Wester	0/	5	07	15	0.07(04)	00.0
		Household Solid Waste Household Liquid Waste	%	5 50	67 100	45 60	0-67 (24)	20.8 50.8
		Industrial Waste	%	10	38	10	0-100 (24) 0-38 (22)	9.4
		Commercial Waste	%	35	35	15	0-35 (22)	8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N	N		Ū	0 11 (22)	0.2
	Current Wastewater Disposal							
		Own Treatment Plant	%	2	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	98	100	100	0-100 (19)	68.6
		Others Description	% list	0	50	1	0–50 (19)	10.3
	Within River Basin	Description	Y/N	Y				
	Within Theor Dabin	River Basin/Major River Name	name	Aceh River, Daroy				
		niter Basin, major niter name	namo	River				
		Basin Area	ha	-				
		City Location	u,m,d	Downstream				
	Adjoining Town							
		Pollution Load	vh–vl	Medium				
		Sanitation Work/Plan	i/c	Individual		T O 17	-	
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water	Total Coliform	#/ml					
		BOD	#/ml mg/l	4.72	180	30	2.4-180	28.7
		COD	mg/l	17.46	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	61	261	200	1-261	109.7
		Heavy Metals	mg/l	0.3	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases			•	· · ·	•		
	Reported Cases (per 10,000							
		Diarrhea	#	154.86	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	1507 74	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#	1587.71 3.07	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Malaria	#	28.91	4.45	2.29 9.07	0.00-4.45 (9) 0.09-28.91 (10)	1.1 5.0
	Death (children under 5 years		#	20.91	-	9.07	0.05-20.91 (10)	5.0
	Soadi (onitaton under o years	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0	-	0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	-	0.07	0.04	0.00-0.07 (6)	0.1

Y = yes; N = no; BOD = biochemical oxygen demand; COD = chemical oxygen demand; ha = hectare; i/c = individually/cooperatively; m³ = cubic meter; mg/l = milligram per liter; ml = milliliter; ST = septic tank; u,m,d = upstream, midstream, downstream; vh-vl = very high to very low.

	o People's Democra	ис керирис			For All	Surveyed C	ities and Munici	alities
Participating City								
oordinator		ad of Public Health, Head of Sanit	ation and Environment					
Iffice	Public Health Office							
Address	Phine District, Savannakhet P	rovince, Lao People's Democratic	Republic					
ax								
Telephone	8560205642497							
E–mail address	cvijaya.k@gmail.com							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Averag
Jennographics	D. 1.11 (0007)			-				
	Population (2007)		#(000)	53.28	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	2.50	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	7.56	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	7.04	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%		724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	42.04	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	269.90	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	1.78	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	0.85	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	94.70	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	0.20	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	6.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	4.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	3.00	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	20.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18–3,858.0 (11)	525.2
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage							
	Central Sewerage System		%	11.6	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	27.8	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	26.0	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	5.4	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Averag
Junitation Fability								
	I. Central Sewerage System		%	26	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	16	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tar	ık	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	43.6	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	10	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	90	100.0	87.0	0-100 (15)	75.5
	Type II		%	11	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	89	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	_	100.0	100.0	0-100 (14)	87.8
	Type IV		%	86	100.0	86.0		66.4
							0-100 (18)	
	Type IVa		%	14	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plan							
	Capacity (10,000 population)		m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	-	100.0	100.0	0-100 (20)	49.8
		National Government	%	-	100.0	100.0	0-100 (20)	45.0
		Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							227.8
			m ³ /d	-	814.0	110.0	50-814 (5)	
	Septage Treatment Plant Capacity	Provider	m³/d	-	814.0	110.0	50-814 (5)	
		Provider		-				
		Local Government	%	-	100.0	100.0	0–100 (15)	66.7
		Local Government National Government	%	-	100.0	100.0 0	0–100 (15) 0–100 (15)	66.7 20.0
	Capacity	Local Government	%	- - -	100.0	100.0	0–100 (15)	66.7 20.0
	Capacity Desludging Services	Local Government National Government	% % %	-	100.0 100.0 100.0	100.0 0 0	0–100 (15) 0–100 (15) 0–100 (15)	66.7 20.0 13.3
	Capacity	Local Government National Government Private	%		100.0	100.0 0	0–100 (15) 0–100 (15)	66.7 20.0 13.3
	Capacity Desludging Services	Local Government National Government Private Provider	% % %	-	100.0 100.0 100.0 12.0	100.0 0 10.0	0–100 (15) 0–100 (15) 0–100 (15)	66.7 20.0 13.3 7.3
	Capacity Desludging Services	Local Government National Government Private	% % %	-	100.0 100.0 100.0	100.0 0 0	0–100 (15) 0–100 (15) 0–100 (15)	66.7 20.0 13.3

= number, ha = hectare, m³/d = cubic meter per day.

People's Democra	luc Republic			For All	Surveyed Ci	lies and munic	painties
		Unit	City Value	Top Value	Top Quartile	Range	Average
Household Water Supply Sou	Irce						
	Central Water Supply-Individual	%	5.45	100.00	67.10	3.59-100.00 (27)	50.50
	Central Water Supply–Communal	%	-	46.65	11.43	0.00-46.65 (25)	7.80
	Borehole	%	8.52	60.00	37.61	0.04-60.00 (26)	16.80
	Protected Spring/Well	%	-	96.41	20.00	0.00-96.41 (25)	14.50
	Rainwater	%	19.99	45.52	0.10	0.00-45.52 (26)	5.98
	Water Vendor	%	9.92	35.00	0.02	0.00-35.00 (26)	2.80
	Population Buying Bottled Water	%	80.00	80.00	40.00	0-80 (18)	20.70
			85.00				97.10
			-				11.80
			-				49.80
			-				45.00
			-				5.30
ent			City Value				Averag
		Unit	City value	TOP Value		nange	Averag
Public Sector							
	National Government	#	-	6	2	1-6 (5)	2.8
			1				1.7
			-		1		1.3
Private Sector	otato o milou o anty	"		-		. = ()	1.0
1111410 000101	Water I Itility	#	_	2	2	2-2 (1)	2.0
	,		_	-	-		2.0
			-		_		
		#	-	-	-	- (0)	-
Public Sector							
FUDIIC OCCIUI	Total Daraannal (par 10,000 pap'a)	4		100.77	20 E6	0.46 100.77 (17)	14.9
			-				23.9
			-	43.70	43.7		
			-	100	-		0
B1 + B +	Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
Private Sector	T					aa aa (4)	
			-	30.96	30.96	()	30.96
	Operations and Maintenance		-		-		-
		Unit	City Value	Top Value	Top Quartile	Range	Average
Number of Laws on Sanitation	n						
	National	#	-	4	3	1-4 (18)	1.9
	Local	#	-	3	1	1-3 (15)	1.2
Year Enacted							
	Oldest	vear	-	2007	2000	1947-2007 (23)	1985
			-				1993
Sanitation Service Charges	Europe	your		2007	2000	1000 2001 (20)	1000
oanation ou vice onarges	Low on Collecting Food	V/M		17		17 (05)	
					2002		1990
		Unit	City value	TOP VALUE	lop Quartile	Kange	Average
Estation Operitation Dise							
Existing Sanitation Plan						44.07	
			N				
	When Prepared	year	-	2007	2006	2006-2007 (2)	2006
New Sanitation Plan							
non oanadon nan	MUL Dave and One that an Dise	Y/N	-				
non ounation rian	Will Prepare Sanitation Plan						
	Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
		year	-	2009 395	2008 250		2008 101.25
	Preparation Year Estimated Cost	year \$	-	395	250	0.03-395.00 (7)	101.25
	Preparation Year Estimated Cost Amount per Capita	year \$ \$/capita					
	Preparation Year Estimated Cost Amount per Capita Source of Fund	year \$ \$/capita list		395	250	0.03-395.00 (7)	101.25
Sanitation Problem	Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year \$ \$/capita list list	- - -	395	250	0.03-395.00 (7)	101.25
	Preparation Year Estimated Cost Amount per Capita Source of Fund	year \$ \$/capita list	- - - -	395	250	0.03-395.00 (7)	101.25
	ent on Public Sector Private Sector Private Sector Number of Laws on Sanitatio	Central Water Supply-Communal Borehole Protected Spring/Well Rainwater Water Vendor Population Buying Bottled Water Average Water Consumption Water Teatment Facilities Local Government National Government Public Sector Private Concessionaire Private Sector Private Sector Vater Treatment Facilities Local Government Local Government Local Government Local Government Local Government Local Government Sector Private Sector Vater Utility Enterprise Nongovernment Organization Private Sector Total Personnel (per 10,000 pop'n) Planing and Monitoring Construction Operations and Maintenance Private Sector Number of Laws on Sanitation National Local Year Enacted Udest Latest Sanitation Service Charges Latest Sanitation Service Charges Latest Vear Enacted Vear Enacted	Unit Household Water Supply Source Central Water Supply-Communal % Central Water Supply-Communal % Borehole % Borehole % Protected Spring/Well % Protected Spring/Well % Aainwater % Protected Spring/Well % Average Water Consumption pcd Average Water Consumption % Private Concessionaire % Private Concessionaire % Private Concessionaire % Public Sector Water Utility Private Sector Water Utility Private Sector Water Utility Public Sector Total Personnel (per 10,000 por)n) Public Sector Total Personnel (per 10,000 por)n) Public Sector Total Personnel (per 10,000 por)n) Private Sector Water Call Private Sector <	Unit City Value Household Water Supply-Source Central Water Supply-Individual % 5.45 Central Water Supply-Communal % - Borehole % 8.52 Protected Spring/Well % - Rainwater % 19.99 Water Vendor % 9.22 Population Buying Bottled Water % 80.00 Average Water Consumption lpcd - Local Government % - Water Treatment Facilities lpcd - Private Concessionaire % - Private Concessionaire % - Public Sector National Government # - Public Sector National Government # - Private Sector Water Utility # - Private Sector Vater Utility # - Private Sector Total Personnel (per 10,000 pop'n) # - Private Sector Total Personnel (per 10,000 pop'n) # - Private Sector Total Personnel (per 10,000 pop'n) # - Private Sector Total Personnel (per 10,000 pop'n) # - Number of Laws on Sanitation Latest <td>Unit City Value Top Value Household Water Supply Source </td> <td>Unit City Value Top Quartile Household Water Supply-Individual Central Water Supply-Commal Borehole % 5.45 100.00 67.10 Central Water Supply-Commal Borehole % 5.82 60.00 37.61 Borehole % 9.93 45.52 0.10 Rainwater % 9.93 45.52 0.10 Water Vendor % 9.93 35.50 0.02 Population Buying Bottled Water % 80.00 80.00 40.00 Average Water Concessionation [pcd - 1.371.50 197.40 Local Government % - 100.00 100.00 Water Vendor % - 100.00 100.00 Private Concessionate % - 100.00 100.00 National Government # - 6 2 1 Public Sector - 100.77 20.56 2 1 Public Sector - - - - - -</td> <td>Unit City Value Top Value Top Quartile Range Household Water Supply-Individual Central Water Supply-Communal % 5.45 100.00 67.10 3.59-100.00 (27) Berthole % 5.45 100.00 77.10 3.59-100.00 (27) Berthole % 5.45 66.00 37.61 0.04-60.00 (26) Protected Spring Weil % - 86.41 20.00 0.00-45.00 (26) Protected Spring Weil % - 86.00 0.00 0.00 -0.00 (26) Population Boying Bolitel Water % 9.92 0.00 0.00 0.00 -0.00 (16) Water Treatment Facilities lpcd - 1.371.50 117.40 14.14-1.371.522) Local Government % - 100.00 100.00 0 0 -0<-00</td> -00 -0<-00	Unit City Value Top Value Household Water Supply Source	Unit City Value Top Quartile Household Water Supply-Individual Central Water Supply-Commal Borehole % 5.45 100.00 67.10 Central Water Supply-Commal Borehole % 5.82 60.00 37.61 Borehole % 9.93 45.52 0.10 Rainwater % 9.93 45.52 0.10 Water Vendor % 9.93 35.50 0.02 Population Buying Bottled Water % 80.00 80.00 40.00 Average Water Concessionation [pcd - 1.371.50 197.40 Local Government % - 100.00 100.00 Water Vendor % - 100.00 100.00 Private Concessionate % - 100.00 100.00 National Government # - 6 2 1 Public Sector - 100.77 20.56 2 1 Public Sector - - - - - -	Unit City Value Top Value Top Quartile Range Household Water Supply-Individual Central Water Supply-Communal % 5.45 100.00 67.10 3.59-100.00 (27) Berthole % 5.45 100.00 77.10 3.59-100.00 (27) Berthole % 5.45 66.00 37.61 0.04-60.00 (26) Protected Spring Weil % - 86.41 20.00 0.00-45.00 (26) Protected Spring Weil % - 86.00 0.00 0.00 -0.00 (26) Population Boying Bolitel Water % 9.92 0.00 0.00 0.00 -0.00 (16) Water Treatment Facilities lpcd - 1.371.50 117.40 14.14-1.371.522) Local Government % - 100.00 100.00 0 0 -0<-00

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Phine District, Lao	People's Democra	tic Republic			For All	Surveyed Ci	ties and Munic	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annual	A / '+-		07.0	20.5	0.5.07.0 (07)	
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fully	National Government	%	-	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Annual O&M Cost							
	Course of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	_	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Averag
Annual Revenues and Fees	0111000		onn	ony value	Top Fuluo	top quartito	nungo	monug
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	-	80	18.3	18.25-80 (5)	55.7
	Overly Test Destuded 5	Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Drivete	¢/CT		100	00	4 400 (40)	47.0
		Private Government	\$/ST \$/ST		133	30 22	4-133 (13)	47.0
	Other Fees	dovernment	\$	-	30	22	3.5–30 (13)	18.0
Environmental Situation	04101 1 000		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Water Quality and Pollution		Unit	ony value	Top Fundo	iop quartito	nungo	monug
	water duality and rollation	Water Quality Monitored	Y/N	Y				
	Sources of Water Pollution		.,					
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	15	100	60	0-100 (24)	50.8
		Industrial Waste	%	-	38	10	0-38 (22)	9.4
		Commercial Waste	%	-	35	15	0-35 (22)	8.8
		Hospital Waste	%	-	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Y				
	Current Wastewater Disposa							
		Own Treatment Plant	%	-	100	2	0-100 (19)	14.6
		Central Sewer System	%	-	30	11	0-30 (19)	6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	%	-	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Sedon River				
		Basin Area	ha	-				
	Adjoining Town	City Location	u,m,d	-				
	Aujoining town	Pollution Load	vhvl	Medium				
		Sanitation Work/Plan	i/c	modiam				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Water Quality						J	
	Surface Water							
		Total Coliform	#/ml	<1				
		BOD	mg/l	5	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Sanitation-Related Diseases							
	Reported Cases (per 10,000		4		5044	170.40	0.6 604 1 (10)	110.0
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma Acute Lower Respiratory Infection	#	-	305.47 1,559.01	294.55 507.79	0.00-305.47 (9) 0.36-1,559.01 (11)	67.1 420.5
		Measles	#	-	4.45	2.29	0.36-1,559.01 (11) 0.00-4.45 (9)	420.5
		Malaria	#	-	4.40	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year		17		_	5.07	3.03-20.31 (10)	5.0
	_ saar (simaton andor o yoar	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Acuto Lower Heapiratory Infection	π					
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007

Sayabouly Distric	ct, Lao People's Democ	ratic Republic			For All	Surveyed C	ities and Munici	palities
articipating City								
oordinator	Mr. Laksana Keosenghoth, Office I	Manager						
ffice	Water Supply							
ddress	Sayabouly Water Supply State Ent	ernrise						
		erprise						
ax	74211056							
Telephone	74211056							
-mail address	cvijaya.k@gmail.com							
)emographics			Unit	City Value	Top Value	Top Quartile	Range	Average
oniog. apinoo	D 1 (1 (0007)			-		-		
	Population (2007)		#(000)	74.41	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	2.10	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	12.66	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	5.88	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	-	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	27.49	46.36	31.12	0.00-46.36 (24)	18.4
							1.5-2,101.2 (27)	154
	City Area		ha (000)	391.60	2,101.20	90.30		
	Urban Core		%	10.00	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	0.79	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	14.99	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	74.20	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	0.20	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	6.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	4.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	3.00	282.00	113.00	3–282.0 (12)	64.8
	Peri–Urban		#/ha	2.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
	Area Coverage							
	Central Sewerage System		%	10	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	30	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	17.8	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	18.8	99.7.0	84.80	3.6-99.7 (26)	57.7
Ponitation Facility			11mit	City Value	Ten Volue			
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System		%	17.8	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	13.3	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank		%	-	20.0	0.8	0.0-20.0 (13)	4.4
			%			22.2		
	IV. Pit Latrine			29.6	43.6		0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	-	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	-	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	13	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	87	100.0	87.0	0-100 (15)	75.5
			%	20	100.0			69.5
	Type II					100.0	0-100 (21)	
	Type IIa		%	80	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type Illa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	92	100.0	86.0	0-100 (18)	66.4
			%	8				66.9
	Type IVa			8	100.0	99.0	0-100 (18)	
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
reatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
roatmont racility	Weste Weter Tradition Di		Unit	ony value	iop value	iop quai tile	nanye	Average
	Waste Water Treatment Plant				000.0	004.0	0.1.000.0 (00)	05.0
	Capacity (10,000 population)		m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
		vider						
	Loc	al Government	%	-	100.0	100.0	0-100 (20)	49.8
	Nati	onal Government	%	-	100.0	100.0	0-100 (20)	45.0
	Priv		%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant				100.0	0	0 .00 (20)	0.0
							50.044.00	
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
	Pro	vider						
		al Government	%	-	100.0	100.0	0-100 (15)	66.7
		onal Government	%	_	100.0	0	0-100 (15)	20.0
			%	_				
	Priv	alt	70	-	100.0	0	0-100 (15)	13.3
	Desludging Services							
	Frequency		year	-	12.0	10.0	2-12 (4)	7.3
		vider						
		ernment	%	_	100.0	50.0	0-100 (13)	53.0
	Cou							
	Gov Priv		%	_	100.0	50.0	0-100 (13)	47

= number, ha = hectare, m³/d = cubic meter per day.

Sayaboury District	, Lao People's Dem				FOT All	Surveyed Ch	ties and Munic	panties
Nater Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply Sor	Irce						
		Central Water Supply–Individual	%	18.83	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0.02	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	26.89	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	12.47	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	30.34	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	11.46	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	80.00	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	/o lpcd	80.00	160.00	135.00	40–160 (20)	97.10
		Water Treatment Facilities	lpcd	00.00	1,371.50	197.40		11.80
				-			14.0-1,371.5(22)	
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
rganizational Arrangem	ent		Unit	City Value	Top Value	Top Quartile	Range	Averag
stitutions Involved in Sanitati								
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
umber of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	0.4	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	_	10.70	-	0	0
		Operations and Maintenance	%	_	100	100	76.60–100.00 (4)	87.1
	Private Sector	Operations and Maintenance	70	-	100	100	70.00-100.00 (4)	07.1
	FIIVALE DEGLUI	Tatal Desegnation (new 10,000 peaks)	#		30.96	30.96	20.00 (1)	30.96
		Total Personnel (per 10,000 pop'n)		-	30.90	30.96	30.96 (1)	30.90
		Operations and Maintenance	%	-		-	- (0)	-
egal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
egal Mandate of Sanitation								
	Number of Laws on Sanitation	n						
		National	#	-	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	2007	2007	2000	1947-2007 (23)	1985
		Latest	year	2007	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	N	17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
lanning			Unit	City Value	Top Value	Top Quartile	Range	Average
trategic Sanitation Plan			onit	ony value	TOP Value	iop quarine	nunge	Average
u alegic Sanitation Pian	Existing Capitation Day							
	Existing Sanitation Plan	With Constation Dia-	V/M	81	- 11		11.07	
		With Sanitation Plan	Y/N	N	11	0000	11-27	0000
	New Oscillation Dise	When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan							
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list					
	Sanitation Problem	Major Sanitation Problem Future Programs/Projects	list	-				
	Sanitation Problem	Major Sanitation Problem Future Programs/Projects Funding Amount	list list \$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Sayabouly District	, Lao People's Den	nocratic Republic			For All	Surveyed Ci	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%		80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	_	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	ance Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	Notice of Occurrent	0/		17.0	0	0 47 (47)	0.4
		National Government Local Government	%	-	47.0	0 100.00	0-47 (17) 0-100 (17)	3.4 57.6
		Loans	%	_	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			•	ony raido	Top Talao	top quartito	inango	
Total Revenue			\$/cap	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges		-, sup					0.0
		Connection Charge	\$/connection	2	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Drivete	\$ (OT	40	400	00	1 100 (10)	47.0
		Private Government	\$/ST \$/ST	18	133 30	30 22	4-133 (13)	47.0 18.0
	Other Fees	dovernment	\$	-	30	22	3.5–30 (13)	10.0
Environmental Situation	041011000		Unit	City Value	Top Value	Top Quartile	Range	Average
	Weber Origination of Della dise		Unit	Gity value	TOP Value	Top Quartile	Range	Average
	Water Quality and Pollution	Water Quality Monitored	V/N	Y	20			
	Sources of Water Pollution	water quality wontored	Y/N	T	20			
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	15	100	60	0-100 (24)	50.8
		Industrial Waste	%	-	38	10	0-38 (22)	9.4
		Commercial Waste	%	-	35	15	0-35 (22)	8.8
		Hospital Waste	%	-	17	5	0-17 (22)	3.2
	Polluter to Treat Own Waster		Y/N					
	Current Wastewater Disposa		0/		100	0	0 100 (10)	14.0
		Own Treatment Plant Central Sewer System	%	-	100 30	2 11	0–100 (19) 0–30 (19)	14.6 6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	%	-	50	1	0-50 (19)	10.3
		Description	list	-			()	
	Within River Basin		Y/N					
		River Basin/Major River Name	name	-				
		Basin Area	ha	-				
	Adjoining Town	City Location	u,m,d	-				
	Adjoining Town	Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		Unit	ony value	TOP Value	iop Quartite	nanye	Average
	Surface Water							
	Juliaco Water	Total Coliform	#/ml	10				
		BOD	mg/l	5	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	1.8	261	200	1-261	109.7
		Heavy Metals	mg/l	0	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000							
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#	-	1,559.01 4.45	507.79 2.29	0.36-1,559.01 (11) 0.00-4.45 (9)	420.5 1.1
		Malaria	#	_	4.40	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year		7	-	_	5.07	0.00-20.01 (10)	5.0
	you	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#		0.07	0.04	0.00-0.07 (6)	0.1

Xieng Ngeun Dis	trict, Lao People's Dem	ocratic Republic			For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	Mr. Kongsine Soulith, Toilet and W	ater Provider						
Office	District Public Health							
ddress	Xieng Ngeun District, Lao People's	s Democratic Republic						
ax								
Telephone	+856071253589							
-mail address	cvijaya.k@gmail.com							
	onjujune ginamoon			0.1 1/1				
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	33.64	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	2.90	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	5.52	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	6.09	7.04	5.10	3–7.04 (27)	4.9
	Floating Population		%	0.00	724.90	30.00	1.7–724.9 (19)	53.5
	Urban Poor		%	30.01	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	121.00	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		11a (000) %	121.00				
	Urban Core		70		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	4.13	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	2.48	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	86.80	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	0.30	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	8.00	3,166.00	163.00		230.2
							6.0-3,166.0 (24)	
	Secondary Urban Core		#/ha	8.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	5.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage			•		•		
	Central Sewerage System		%	2.5	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	6.6	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage		70	0.0	100.0	00.00	0.0 100 (20)	00.0
	Central Sewerage System		%	27.4	100.0	55.00	0 100 0 (1)	29.0
	• •						0-100.0 (1)	
	Central Water Supply System		%	17.4	99.7.0	84.80	3.6-99.7 (26)	57.7
anitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System		%	27	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	2	100.0	62.0		47.7
							0.0-100.0 (27)	
	III. Communal with Septic Tank		%	0.5	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	27.4	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0.3	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	1	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	99	100.0	87.0	0-100 (15)	75.5
	Type II		%	16	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	84	100.0	100.0	0-100 (21)	85.4
	Type III		%	20	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	80	100.0	100.0	0-100 (14)	87.8
	Type IV		%	79	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	21	100.0	99.0	0-100 (18)	66.9
	Type V		%	33	100.0	82.0	33-100 (2)	66.7
	Type Va		%	67	67.0	80.0	0-67 (23)	66.7
	Type VI & Vla		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
reatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
outmont racinty	Waste Water Treatment Diant		Unit	ony value	TOP Value	iop duartife	nunge	Averag
	Waste Water Treatment Plant Capacity (10,000 population)		m³/d		962.2	664.9	2.1-962.2 (22)	65.0
			IIIº/U	-	902.2	004.9	2.1-902.2 (22)	05.0
		vider					0.405.555	
		al Government	%	-	100.0	100.0	0-100 (20)	49.8
		onal Government	%	-	100.0	100.0	0-100 (20)	45.0
	Priv	ate	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.0
		vider						
		al Government	%	_	100.0	100.0	0-100 (15)	66.3
		ional Government	%	-	100.0		0-100 (15)	
				-		0	· /	20.0
	Priv	die	%	-	100.0	0	0-100 (15)	13.
	Desludging Services							
					12.0	10.0	2-12 (4)	7.3
	Frequency		year	-	12.0	10.0	2 12 (4)	
		vider	year	-	12.0	10.0	2 12 (1)	
	Pro	vider rernment	year %	-	100.0	50.0	0-100 (13)	53.0

= number, ha = hectare, m^3/d = cubic meter per day.

Aleng Ngeun Dist	rict, Lao People's D				FOR All	Surveyed Ch	ties and Munic	ipanties
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Household Water Supply So	urce						
		Central Water Supply-Individual	%	17.21	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0.14	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0.04	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	52.62	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	20.00	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	10.00	35.00	0.02	0.00-35.00 (26)	2.80
			%			40.00		20.70
		Population Buying Bottled Water		70.00	80.00		0-80 (18)	
		Average Water Consumption	lpcd	80.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	-	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
Organizational Arranger	nent		Unit	City Value	Top Value	Top Quartile	Range	Averag
nstitutions Involved in Sanita	tion							
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1-2 (11)	1.3
	Private Sector						()	
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	_
Number of Personnel		nongoronninin organization					(0)	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	100.77	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	15.6	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-	10.10	-	0	(
		Operations and Maintenance	%	84.4	100	100	76.60-100.00 (4)	87.1
	Private Sector	operations and maintenance	70	P.F	100	100	70.00-100.00 (4)	07.1
	1114410 000101	Total Personnel (per 10,000 pop'n)	#	_	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	_	50.50	50.50	- (0)	00.00
		operations and maintenance				-		
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag
Legal Mandate of Sanitation								
	Number of Laws on Sanitation							
		National	#	-	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	-	2007	2000	1947-2007 (23)	1985
		Latest	year	-	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	N	17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Averag
Strategic Sanitation Plan				,				
our acogio our manon i ran	Existing Sanitation Plan							
	Estating ourination r fait	With Sanitation Plan	Y/N	Y	11		11–27	
				2007	2007	2006	2006–2007 (2)	2006
	New Sanitation Plan	When Prepared	year	2007	2007	2000	2000-2007 (2)	2000
	NEW Salillation Fidit	Will Propage Capitation Dian	Y/N	2007				
		Will Prepare Sanitation Plan		2007	0000	0000	0000 0000 (0)	0000
		Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.2
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.5
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list					
		Future Programs/Projects	list	null				
				null –	1.79	1.79	0.96-1.79 (2)	1.37

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Xieng Ngeun Disti	rict, Lao People's D	emocratic Republic			For All	Surveyed Ci	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	¢/copito		07.0	00.5	0 5 07 0 (07)	0.00
	Source of Fund	Annual Announc	\$/capita	-	27.9	22.5	0.5–27.9 (27)	8.20
	oouloo ol rulla	National Government	%	70	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	30	100.0	Ő	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	ance Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost					• •		
		Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund						· · /	
		National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	Services		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees								
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	8	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Diata	A (CT	00 (4000)				
		Private	\$/ST	30 (100%)	133	30	4-133 (13)	47.0
	Other Free	Government	\$/ST	18 (0%)	30	22	3.5-30 (13)	18.0
	Other Fees		\$	0.11				
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N		20			
	Sources of Water Pollution							
		Household Solid Waste	%	50	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	20	100	60	0-100 (24)	50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	10	17	5	0-17 (22)	3.2
	Polluter to Treat Own Waster		Y/N					
	Current Wastewater Disposa		%		100	0	0 100 (10)	14.0
		Own Treatment Plant		-	100 30	2 11	0-100 (19)	14.6
		Central Sewer System	%	-			0-30 (19)	6.5
		No Treatment Others	%	-	100 50	100 1	0-100 (19)	68.6
		Description	list		50	1	0–50 (19)	10.3
	Within River Basin	Description	Y/N	_				
		River Basin/Major River Name	name	_				
		Basin Area	ha	-				
		City Location	u,m,d					
	Adjoining Town	ony coordion	ajirija					
		Pollution Load	vh-vl	Medium				
		Sanitation Work/Plan	i/c	Individual				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		onn	ony value	TOP FUILIO	Top quartito	mango	monage
	Surface Water							
		Total Coliform	#/ml	1				
		BOD	mg/l	5	180	30	2.4-180	28.7
		COD	mg/l	50	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
noutin otanistitis	Sanitation-Related Diseases		Unit	ony value	Top value	iop quartile	nanyc	AVEIAYE
	Reported Cases (per 10,000							
	1000 100 00305 (pci 10,000	Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#		53.88	6.86		8.8
		Trachoma	#	_	305.47	294.55	0.00-53.88 (10) 0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36–1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	420.3
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 yea					0.01		0.0
	,	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma		-				0
		Trachoma	#	-	0		0-0 (6)	0
				-		0.01		0 0.2 0.007

Bharatpur, Nepal				For All	Surveyed C	ities and Munici	palities
Participating City				-			
Coordinator	Nereyes Dressed Lauderi, Casties Haad						
	Narayan Prasad Laudari, Section Head	0///					
Office	Social Welfare Section/Bharatpur Municipality	Unice					
Address	Bharatpur–10, Chitwan, Nepal						
Fax	97756520014						
Telephone	97756520167						
E–mail address	bmc@ntc.net.np						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Average
Somographico	Deputation (0007)				-		
	Population (2007)	#(000)	89.32	11,000.00	959.10	21.14–11,000.00 (27)	1,273.7
	Growth Rate	%	7.10	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	19.92	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.48	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%		724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	9.46	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	7.70	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
			01.00				
	Secondary Urban Core	%	21.99	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	3.23	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban	%	58.20	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	5.56	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	11.60	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	30.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	14.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	4.90	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	6.90	110.00	29.00	0.34–110.0 (17)	19.9
	Slum Area	#/ha	18.00	3,858.00	627.00	18-3,858.0 (11)	525.2
	Siulii Alea						
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Average
	Area Coverage						
	Central Sewerage System	%	7.8	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	58.2	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage					()	
	Central Sewerage System	%	_	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	56.2	99.7.0	84.80	3.6–99.7 (26)	57.7
	Gential Water Supply System					3.0-33.7 (20)	
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	75	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0.2	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	20.1	43.6	22.2	0.0-43.6 (18)	17.1
		%	0				
	V. Eco Sanitation			0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	5	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia	%	-	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	0	100.0	83.0	0-100 (14)	57.7
	Type Illa	%	100	100.0	100.0	0-100 (14)	87.8
		%	100	100.0	86.0		66.4
	Type IV					0-100 (18)	
	Type IVa	%	0	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	100	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	0	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Average
•	Waste Water Treatment Plant		•		•		
	Capacity (10,000 population)	m³/d	_	962.2	664.9	2.1-962.2 (22)	65.0
	Provider	1170		002.2	301.0	L.1 002.2 (22)	00.0
	Local Governme	ent %		100.0	100.0	0-100 (20)	49.8
			-				
	National Govern		-	100.0	100.0	0-100 (20)	45.0
	Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant						
	Capacity	m³/d	-	814.0	110.0	50-814 (5)	227.8
	Provider						
	Local Governme	ent %	_	100.0	100.0	0-100 (15)	66.7
	National Govern		-	100.0	0	0-100 (15)	20.0
	Private	%		100.0	0	0-100 (15)	13.3
		70	-	100.0	U	0-100 (13)	13.3
	Desludging Services					0.10.11	
	Frequency	year	-	12.0	10.0	2-12 (4)	7.3
	Provider						
	Government	%	-	100.0	50.0	0-100 (13)	53.0

= number, ha = hectare, m³/d = cubic meter per day.

					For All	Surveyed Cit	ies and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
,	Household Water Supply So	IFCO		,				
		Central Water Supply–Individual	%	35.14	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	21.08	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	21.00	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	43.78	96.41	20.00	0.00-96.41 (25)	14.50
			%	43.70		0.10	· · · ·	
		Rainwater	%		45.52		0.00-45.52 (26)	5.98
		Water Vendor		0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	50.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	17.60	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangem	nent		Unit	City Value	Top Value	Top Quartile	Range	Averag
nstitutions Involved in Sanitat								
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	2	2	1	1-2 (11)	1.3
	Private Sector	-					. ,	
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	_
Number of Personnel		Hongo torminone organization	"				(0)	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	5.15	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	0.10	43.70	43.7	12.7-43.70 (4)	23.9
			%	-	43.70	40.7	0	23.5
		Construction		-	400	-	-	
	Diate Orates	Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector		"		00.00	00.00	00.00 (4)	00.00
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag
a seal Manual she and O surface in a								
Legal Mandate of Sanitation								
Legal Mandate of Sanitation	Number of Laws on Sanitation	n						
Legai mandate of Sanitation	Number of Laws on Sanitation	on National	#	1	4	3	1-4 (18)	1.9
Legal Mandate of Sanitation	Number of Laws on Sanitation		#	1	4 3	3 1	1-4 (18) 1-3 (15)	
egai Mandate of Sanitation	Number of Laws on Sanitatio	National		1 -				
Legai Mandate of Sanitation		National Local	#	-	3	1	1–3 (15)	1.2
Legal Mandate of Sanitation		National Local Oldest	# year	- 1996	3 2007	1 2000	1–3 (15) 1947–2007 (23)	1.2 1985
Legal Mandate of Sanitation	Year Enacted	National Local	#	-	3	1	1–3 (15)	1.2 1985
Legai Mandate of Sanitation		National Local Oldest Latest	# year year	- 1996 1996	3 2007 2007	1 2000	1–3 (15) 1947–2007 (23) 1956–2007 (23)	1.2 1985
Legai Mandate di Sanitation	Year Enacted	National Local Oldest Latest Law on Collecting Fees	# year year Y/N	- 1996 1996 Y	3 2007 2007 17	1 2000 2005	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25)	1.9 1.2 1985 1993
	Year Enacted	National Local Oldest Latest	# year year Y/N year	– 1996 1996 Y 1999	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990
Planning	Year Enacted	National Local Oldest Latest Law on Collecting Fees	# year year Y/N	- 1996 1996 Y	3 2007 2007 17	1 2000 2005	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25)	1.2 1985 1993
Legai Mandate di Sanitation Planning Strategic Sanitation Plan	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees	# year year Y/N year	– 1996 1996 Y 1999	3 2007 2007 17 2007	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990
Planning	Year Enacted	National Local Oldest Latest Law on Collecting Fees Year Enacted	# year year Y/N year Unit	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range	1.2 1985 1993 1990
Planning	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	# year year Y/N year Unit	– 1996 1996 Y 1999	3 2007 2007 17 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.2 1985 1993 1990 Averag
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted	# year year Y/N year Unit	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value	1 2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range	1.2 1985 1993 1990
Planning	Year Enacted Sanitation Service Charges	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	# year year Y/N year Unit	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11	1 2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.2 1985 1993 1990 Averag
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	# year year Y/N year Y/N year Y/N	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007	1 2000 2005 2003 Top Quartile 2006	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1.2 1985 1993 1990 Averag 2006
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	# year Y/N year Unit Y/N year Y/N year	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1.2 1985 1993 1990 Averag 2006 2008
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	# year Y/N year Unit Y/N year Y/N year \$	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009	1 2000 2005 2003 Top Quartile 2006 2008	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1.2 1995 1990 Averag 2006 2006 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	# year year Y/N year Unit Y/N year Y/N year \$ \$/capita list	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.2 1995 1990 Averag 2006 2006 101.25
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	# year Y/N year Unit Y/N year \$ \$/capita	– 1996 1996 Y 1999 City Value	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.2 1988 1990 Averag 2006 2006
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	# year year Y/N year Unit Y/N year Y/N year \$ \$/capita list	 1996 1999 Y 1999 City Value N - - - - - - - - - - - - - - - - -	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.2 1988 1990 Averag 2006 2006
Planning	Year Enacted Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	National Local Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	# year Y/N year Unit Y/N year Y/N year \$ \$/capita list list	 1996 19996 Y 1999 City Value N Lack of sanitary urban facilities	3 2007 2007 17 2007 Top Value 11 2007 2009 395	1 2000 2005 2003 Top Quartile 2006 2008 250	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1.2 1985 1993 Averag 2006

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Bharatpur, Nepal					For All	Surveyed Ci	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment		A / 11					
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5–27.9 (27)	8.20
		National Government	%	8	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	62	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	30	80.0	Ő	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost					-	-	
	Courses of Fund	Annual Amount	\$/capita	0.7	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	50	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	50	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Powenues and Ecco for S	awiego	oulers						
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
0	Sewered Area Charges		φισαρπα		15	0.1	0.1-10.0 (4)	0.5
		Connection Charge	\$/connection	4,200	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	1	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST		133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	-	30	22	3.5-30 (13)	18.0
Environmental Situation	041011000		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		Unit	Ulty value	Top value	iop Quartite	nanye	Average
	water quality and Foliotion	Water Quality Monitored	Y/N	Y	20			
	Sources of Water Pollution	That a during momento	.,		20			
		Household Solid Waste	%	50	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	50	100	60	0-100 (24)	50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Ň			()	
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Narayani				
		Basin Area	ha	-				
	Addate Terra	City Location	u,m,d	Midstream				
	Adjoining Town	Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
Livitolinicital otatistics	Water Quality		Unit	Uny value	Top value	iop quartite	nango	Avoluge
	Surface Water							
		Total Coliform	#/ml	-				
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD	mg/l	-	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases						-	
	Reported Cases (per 10,000							
		Diarrhea	#	594.14	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	39.16	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	452.48	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
	Death (abilda da E	Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year		11		0.47		0.0.0.5 (7)	0.1
		Diarrhea Hepatitis A & E	#	-	0.47	0.1	0.0-0.5 (7) 0.0-1.2 (10)	0.1
		Trachoma	#	-	1.18	0	0.0–1.2 (10) 0–0 (6)	1.2
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
			#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles Malaria	#	-	0.03	0.03	0.00-0.07 (6)	0.007

Hetauda, Nepal				For All	Surveyed C	ities and Munici	palities
Participating City							
Coordinator	Mr. Dhurba Bahadur Bhujel, Section Officer						
Office	Social Welfare Hetauda Municipality						
Address	Hetauda Municipality, Hetauda Makawanpur, Nepal						
Fax	57520044						
Telephone	57520433						
E–mail address	Drb-bhu62@yahoo.com						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
• •	Population (2007)	#(000)	68.43	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	4.51	7.10	4.50	0.4–7.1 (27)	2.8
	Number of Household	#(000)	14.27	2,301.30	152.00	4.2–2,301.3 (27)	269.8
	Average Household Size	# (000)	4.80	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	2.00	724.90	30.00	1.7–724.9 (19)	53.5
	Urban Poor	%	14.61	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	4.60	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%	4.00	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	10.99	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	54.84	99.75	20.15	0.00-99.75 (22)	19.8
	Peri-Urban	%	25.00	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	2.20	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	15.00	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	72.30	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	36.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	3.80	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	7.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	100.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage						
	Central Sewerage System	%	4.4	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	11	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage	70		100.0	00.00	0.0 100 (20)	00.0
	Central Sewerage System	%	_	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	35.2	99.7.0	84.80	3.6–99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	80	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	1.4	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	0.7	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	18	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia	%	-	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	0	100.0	83.0	0-100 (14)	57.7
	Type IIIa	%	100	100.0	100.0	0-100 (14)	87.8
	Type IV	%	0	100.0	86.0	0-100 (14)	66.4
	Type IVa	%	100	100.0	99.0	0-100 (18)	66.9
	Туре V	%	-	100.0	82.0	33–100 (13)	66.7
		%	-				66.7
	Type Va	%		67.0	80.0	0-67 (23)	
	Type VI & VIa Type VIb	%	100 0	100.0	100.0 0	0-100 (14)	100.0 13.9
	1900 10					0-100 (14)	
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant						
	Capacity (10,000 population)	m³/d	63.86	962.2	664.9	2.1-962.2 (22)	65.0
	Provider						
	Local Government	%	0	100.0	100.0	0-100 (20)	49.8
	National Government	%	100	100.0	100.0	0-100 (20)	45.0
	Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant						
	Capacity	m³/d	-	814.0	110.0	50-814 (5)	227.8
	Provider						
	Local Government	%	-	100.0	100.0	0-100 (15)	66.7
	National Government	%	-	100.0	0	0-100 (15)	20.0
	Private	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services	70		100.0	Ū	0 100 (10)	10.0
	Frequency	year	_	12.0	10.0	2-12 (4)	7.3
	Provider	yeai	_	12.0	10.0	2-12 (4)	7.3
		۵/		100.0	50.0	0 100 (12)	50.0
	Government	%	-	100.0	50.0	0-100 (13)	53.0
	Private	%		100.0	50.0	0-100 (13)	47.0

= number, ha = hectare, m^3/d = cubic meter per day.

Hetauda, Nepal					For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply Sou	Irce						
		Central Water Supply-Individual	%	35.04	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0.15	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	1.60	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	63.21	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	40.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	14.00	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangeme	ent		Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanitatio			•	ony func	iop tuito		inango	
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	1	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel		· ·					.,	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		_	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector		,,,		100	100	10.00 100.00 (1)	07.11
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-	00.00	-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
	Number of Laws on Sanitation							
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	1993	2007	2000	1947-2007 (23)	1985
		Latest	year	1993	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	1999	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	N	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan							
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
		Estimated Cost	s	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	_	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	Poor cannot afford basic sanitation				
				services				
		Future Dreaman /Dreisate	list	null				
		Future Programs/Projects	1151	nun				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Hetauda, Nepal					For All	Surveyed Cit	ies and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	\$/capita	_	27.9	22.5	0.5–27.9 (27)	8.20
	Source of Fund	Annual Annunit	φ/ σαμπα	-	21.9	22.0	0.3-27.9 (27)	0.20
		National Government	%	8	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	62	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	30	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue Others	%	0	0 100.0	0 100	0-0 (17)	0 27.65
Operations and Maintena	nce Evnenditures	Ouldis	Unit	City Value	Top Value	Top Quartile	0.0–100.0 (17) Range	Average
	Annual O&M Cost		OIII	ony value	TOP Value		nanye	Average
		Annual Amount	\$/capita	0.9	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	Notice of Occurrent	0/	0	17.0		0.17.(17)	
		National Government Local Government	%	0 50	47.0 100.0	0 100.00	0-47 (17) 0-100 (17)	3.4 57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	50	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Innual Revenues and Fees								
otal Revenue	Sewered Area Charges		\$/capita	-	15	0.1	0.1–15.0 (4)	6.9
	Sewereu Area Griaryes	Connection Charge	\$/connection	22	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	1	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST		133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	-	30	22	3.5-30 (13)	18.0
Environmental Situation	001011003		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		onit	ony value	TOP Value	iop quartite	nunyo	Average
	·	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution							
		Household Solid Waste	%	30	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	60	100	60	0-100 (24)	50.8
		Industrial Waste	%	10	38	10	0-38 (22)	9.4
		Commercial Waste Hospital Waste	%	0	35 17	15 5	0-35 (22)	8.8 3.2
	Polluter to Treat Own Wastew		7º Y/N	N	17	5	0-17 (22)	3.Z
	Current Wastewater Disposal	atti	1/11	N				
	ourrone master and proposal	Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	95	100	100	0-100 (19)	68.6
		Others	%	5	50	1	0-50 (19)	10.3
		Description	list	Hetauda Industrial				
				Area has a small				
				wastewater tre				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Rapti and Karra				
		Basin Area City Location	ha u,m,d	 Downstream				
	Adjoining Town	City Location	u,iii,u	Downstream				
	Adjoining town	Pollution Load	vh-vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			-			-	
	Ground Water							
		Total Coliform	CFU/ml	65				
		Mercury Lead	mg/l mg/l	0.001 0.01				
		Copper	mg/l	0.01				
		Arsenic	mg/l	0.005				
		Others	%	-				
	Surface Water	7.1.0 //						
		Total Coliform	#/ml	-				
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD Total Suspended Solids	mg/l mg/l	-	973 261	80 200	7.1–973 1–261	122.5 109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases			,				
	Reported Cases (per 10,000							
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles Malaria	# #	-	4.45	2.29 9.07	0.00-4.45 (9) 0.09-28.91 (10)	1.1 5.0
	Death (children under 5 years		#	-	-	9.07	0.09-20.91 (10)	5.0
	South (onitation under 5 years	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
								1.2
		Hepatitis A & E	#	-	1.18	U	0.0 - 1.2(10)	
		Hepatitis A & E Trachoma	# #	-	1.18 0	0	0.0-1.2 (10) 0-0 (6)	0
				-		0.01		
		Trachoma	#	-	0		0-0 (6)	0

Kathmandu, Nepa	al				For All	Surveyed C	ities and Munici	palities
						.,		
Participating City								
Coordinator	Rabin Man Shresta, Chief							
Office	Environment Management Depa	artment						
Address	Kha 1–916, Old Baneswor, Kath	imandu, Nepal						
ax	97714268509							
Telephone	97714242148							
E–mail address	rms916@hotmail.com							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
2 onnographiloo	D 1 11 (0007)			-	-			
	Population (2007)		#(000)	671.80	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	4.53	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	152.16	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	4.42	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	7.40	724.90	30.00	1.7-724.9 (19)	53.5
				7.40				
	Urban Poor		%	-	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	5.10	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Casandary Urban Care		0/	14.10	70.00	01.00		10.0
	Secondary Urban Core		%	14.19	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	43.69	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	36.70	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	132.60	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	426.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	138.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	113.00	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	110.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha		3,858.00	627.00	18-3,858.0 (11)	525.2
	olulii Alca						10-0,000.0 (11)	
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
	Area Coverage							
			0/	00	400.0	04.00	0.0.400.0	05.0
	Central Sewerage System		%	92	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	100	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	67.1	100.0	55.00	0-100.0 (1)	29.0
			%	100	99.7.0	84.80	()	
	Central Water Supply System		70	100	99.7.0	04.00	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
•	I. Central Sewerage System		%	67	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	33	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank		%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
			%	0	61.0	13.0		17.0
	VI. Open Defecation		70	U	01.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	0	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	100	100.0	87.0	0-100 (15)	75.5
	Type II		%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	0	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
								66.9
	Type IVa		%	-	100.0	99.0	0-100 (18)	
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
	····				-			
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plant							
	Capacity (10,000 population)		m³/d	20000	962.2	664.9	2.1-962.2 (22)	65.0
			III?/U	20000	902.2	004.9	2.1-902.2 (22)	0.00
		rovider						
	L	ocal Government	%	0	100.0	100.0	0-100 (20)	49.8
	N	ational Government	%	100	100.0	100.0	0-100 (20)	45.0
		rivate	%	0	100.0	0	0-100 (20)	5.3
		11440	/0	U	100.0	U	0-100 (20)	5.5
	Septage Treatment Plant							
	Capacity		m³/d	50	814.0	110.0	50-814 (5)	227.8
		rovider						
		ocal Government	%	0	100.0	100.0	0-100 (15)	66.7
		ational Government	%	100	100.0	0	0-100 (15)	20.0
	Р	rivate	%	0	100.0	0	0-100 (15)	13.3
	Desludging Services						. ,	
					10.0	10.0	0 10 (4)	7.0
	Frequency		year	-	12.0	10.0	2-12 (4)	7.3
		rovider						
				20	100.0	50.0	0-100 (13)	53.0
	G	iovernment	%	30				
		rivate	%	30 70	100.0	50.0	0-100 (13)	47.0

= number, ha = hectare, m^3/d = cubic meter per day.

Kathmandu, Ne	pal				For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						-
		Central Water Supply–Individual	%	100	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
				0				
		Rainwater	%		45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	40	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	90	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	270.9	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrang	ement		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in San			onn	ony value		Top Quartito	Trango	monuge
Isuluions mvoiveu in oan	Public Sector							
		National Government	#	2	6	2	1-6 (5)	2.8
				-				
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2–2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	0.46	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%		40.10	40.1	0	0
			%	-	100	100	-	87.1
	Private Sector	Operations and Maintenance	70	-	100	100	76.60-100.00 (4)	07.1
	Private Sector		"		00.00	00.00	00.00 (4)	00.00
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation	n							
	Number of Laws on Sanitation	n						
		National	#	4	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted						. ,	
		Oldest	year	1987	2007	2000	1947-2007 (23)	1985
		Latest	year	1999	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges	Latost	yoai	1333	2007	2005	1330-2007 (23)	1000
	Sanitation Service Charges	Law on Collecting Fees	Y/N	Y	17		17 (25)	
						0000		1000
		Year Enacted	year	1990	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	N	11		11-27	
		When Prepared	year	_	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan	initian roparda	Joui		2001	2000	2000 2007 (2)	2000
		Will Prepare Sanitation Plan	Y/N	_				
		Preparation Year	vear	-	2009	2008	2008-2009 (8)	2008
				-				
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	Wastewater directly discharged into the river.				
		E dans Deserver (Descharte	list					
		Future Programs/Projects			1 70	1 70	0.06_1.70.(2)	1 27
		Funding Amount Funding Source	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Kathmandu, Nepal					For All	Surveyed Ci	ties and Munic	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
•	Annual Capital Investment					•		
		Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	0/		90.0	0	0.0. 00.0 (17)	22.70
		Local Government	%	-	80.0 100.0	0	0.0-80.0 (17) 0.0-100.0 (17)	23.70 32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	Ő	0-0 (17)	0
		Others	%	-	100.0	100	0.0–100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Occurrent	0/		17.0		0.47.47	
		National Government Local Government	%	-	47.0	0 100.00	0-47 (17)	3.4 57.6
		Loans	%	-	100.0 53.0	50.00	0-100 (17) 0-53 (17)	57.6 9.0
		Tariff Revenue	%	_	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	arvices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees	111000		Unit	ony value	Top value	Top Quartife	nanye	Average
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
	Cantia Tank Destruistan 7	Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Private	\$/ST	30 (70%)	133	30	4 100 (10)	47.0
		Government	\$/ST	20 (30%)	30	22	4-133 (13) 3.5-30 (13)	47.0
	Other Fees	Coronalist	\$	20 (00%)	00	22	0.0 00 (10)	10.0
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	Y	20			
	Sources of Water Pollution	Users de al de l'al Marcha	01	00	07	45	0.07(04)	00.0
		Household Solid Waste	%	20 80	67 100	45 60	0-67 (24) 0-100 (24)	20.8 50.8
		Household Liquid Waste Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	Ő	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N	Ŷ		Ū	0 11 (22)	0.2
	Current Wastewater Disposal							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others Description	% list	0	50	1	0-50 (19)	10.3
	Within River Basin	Description	Y/N	- Y				
	within the Dabin	River Basin/Major River Name	name	Bagmati, Bishnumati,				
		niver basin, major niver name	namo	Dhobikhola				
		Basin Area	ha	-				
		City Location	u,m,d	Midstream				
	Adjoining Town							
		Pollution Load	vh-vl	Heavy				
		Sanitation Work/Plan	i/c	Individual			_	
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water	Total Coliform	#/ml	2400000				
		BOD	mg/l	36	180	30	2.4-180	28.7
		COD	mg/l	207	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	0.05	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000							
		Diarrhea	#	142.23	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	23.79	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	0.01	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#	567.15 2.45	1,559.01 4.45	507.79 2.29	0.36-1,559.01 (11) 0.00-4.45 (9)	420.5 1.1
		Malaria	#	7.56	4.40	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years		77	1.00	_	3.01	3.00 20.01 (10)	5.0
		Diarrhea	#	2	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	1598	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	0	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	0	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	1	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	5	0.07	0.04	0.00-0.07 (6)	0.1

Lekhnath Munici	pality, Nepal				For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	Shaligram Paudel, Chairperson							
Office	Lekhnath Water Supply & Sanitatio	Users Committee						
ddress	Lekhnath Chowk 3, Kashki, Nepal							
ax	сокинал опочк о, казикі, кера							
	0770050000177							
Telephone	9779856022177							
E–mail address	lekhnathws@fewanet.com.np							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	41.37	11,000.00	959.10	21.14–11,000.00 (27)	1,273.7
	Growth Rate		%	3.23	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	9.36	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	4.42	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	0	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	2.81	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	7.90	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%	1.00	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	23.43	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	0	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	0	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	35.96	35.96	7.74	0.00-35.96 (22)	4.0
				5.20				
	Average City Density		#/ha		305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	10.50	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	4.20	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	_	3,858.00	627.00	18–3,858.0 (11)	525.2
Constation Coverage				City Volue				
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage							
	Central Sewerage System		%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	65.1	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	_	100.0	55.00	0-100.0 (1)	29.0
				-				
	Central Water Supply System		%	71.8	99.7.0	84.80	3.6-99.7 (26)	57.7
anitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
	L Central Sewerage System		%	0	100.0	55.0	0.0-100.0 (27)	50.3
	I. Central Sewerage System II. Individual with Septic Tank		%	50	100.0			47.7
						62.0	0.0-100.0 (27)	
	III. Communal with Septic Tank		%	0.1	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	22.2	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	28	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						. ,	
	Type I		%		100.0	99.0	0-100 (15)	68.4
				-				
	Type Ia		%	-	100.0	87.0	0-100 (15)	75.5
	Type II		%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	100	100.0	100.0	0-100 (21)	85.4
	Type III		%	0	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	100	100.0	100.0	0-100 (14)	87.8
	Type IV		%	0	100.0	86.0	0-100 (14)	66.4
	Type IVa		%	100	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	100	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	0	100.0	0	0-100 (14)	13.9
reatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
. outmont I donity	Weste Weter Trading to Di		Unit	ony value	isp value	iop quaime	nungo	Avorage
	Waste Water Treatment Plant				000.0	004.0	0.1.000.0.(00)	05.0
	Capacity (10,000 population)		m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
	Prov							
	Loca	Government	%	-	100.0	100.0	0-100 (20)	49.8
	Natio	nal Government	%	-	100.0	100.0	0-100 (20)	45.0
	Priva		%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant					-		-10
			m3/d		014.0	110.0	50 914 (E)	007.0
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
	Prov							
	Loca	Government	%	-	100.0	100.0	0-100 (15)	66.7
		nal Government	%	-	100.0	0	0-100 (15)	20.0
								13.3
	Natio		%	_				
	Natio Priva		%	-	100.0	0	0-100 (15)	10.0
	Natio Priva Desludging Services			-				
	Natio Priva Desludging Services Frequency	ie	% year	-	100.0	10.0	2-12 (4)	7.3
	Natio Prive Desludging Services Frequency Prov	le der		-	12.0	10.0	2–12 (4)	7.3
	Natio Prive Desludging Services Frequency Prov	ie		-				

= number, ha = hectare, m^3/d = cubic meter per day.

Lekhnath Municipa	ality, Nepal				For All	Surveyed Cit	ties and Munic	ipalities
Nater Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						-
		Central Water Supply-Individual	%	65.47	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	6.36	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0.30	60.00	37.61	0.04-60.00 (26)	16.80
			%	27.46				
		Protected Spring/Well			96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	40.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	120.90	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0		0		
		Private Concessionaire			100.00		0-100 (22)	5.30
rganizational Arrangem	ent		Unit	City Value	Top Value	Top Quartile	Range	Average
stitutions Involved in Sanitati								
	Public Sector	National Government	#		6	0	1.6.(5)	2.8
				-	-	2	1-6 (5)	
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	1	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	_	_	-	- (0)	-
lumber of Personnel		get Striftont Organization					(0)	
	Public Sector							
	PUDIIC SECIUI	Tabl Dan and (and 10,000 and b)	,,	0.44	400.77	00.50	0.40.400.77.(47)	44.0
		Total Personnel (per 10,000 pop'n)	#	3.14	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	_	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	_	00.00	-	- (0)	
egal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
egal Mandate of Sanitation			Unit	ony value		Top quartito	nungo	monugo
egai manuale of Sanitation	Number of Laws on Sanitation	n						
	NUTIDEI OF LAWS OF Satillaut		,,	4		0	4 4 (40)	4.0
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1–3 (15)	1.2
	Year Enacted							
		Oldest	year	1993	2007	2000	1947-2007 (23)	1985
		Latest	year	1993	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges		,				/	
	ounation our noo onargos	Law on Collecting Fees	Y/N	Y	17		17 (25)	
		-		1999	2007	2002		1000
		Year Enacted	year			2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
trategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Ν	11		11-27	
		When Prepared	year	_	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan		your		2001	2000	2000 2001 (2)	2000
	NGW SannauUII Fidii	Will Drepare Capitation Disc	VA					
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	2008	2009	2008	2008-2009 (8)	2008
		Estimated Cost	\$	0.0	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	0.6	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	Pokhara Valley			. /	
				Town Dev Com and Lekhnath Municipal				
	Sanitation Problem	Major Sanitation Problem	liet					
	Sanitation Problem	iviajur odfillation Mobieni	list	No sewer and waste water treatment				
				facilities				
		Future Programs/Projects	list	null				
		Future Programs/Projects Funding Amount	list \$/capita		1.79	1.79	0.96-1.79 (2)	1.37

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Lekhnath Municipa	ality, Nepal				For All	Surveyed Cit	ies and Munic	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annual	A /2		07.0		0.5.07.0 (07)	
	Source of Fund	Annual Amount	\$/capita	1	27.9	22.5	0.5-27.9 (27)	8.20
		National Government	%	80	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	20	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Source of Fund	Annual Amount	\$/capita	0.2	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	60	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	40	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees				•		•		
Total Revenue	Coworod Aros Oberres		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	595	00	10.0	19.05 00 (5)	CC 7
		Tariff Rate	\$/connection \$/m ³	333	80 90	18.3 6.0	18.25-80 (5) 1-90 (5)	55.7 37.6
	Septic Tank Desludging Fee	ianni nallo	Ø/111	-	50	0.0	1-50 (5)	57.0
	Sopulo Tarine Debiluuging 166	Private	\$/ST	33 (100%)	133	30	4-133 (13)	47.0
		Government	\$/ST	0	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
	Sources of Water Pollution	Water Quality Monitored	Y/N	N	20			
	Sources of water Follotion	Household Solid Waste	%	50	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	50	100	60	0-100 (24)	50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew	vater	Y/N	N				
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others Description	⁷⁶ list	0	50	1	0-50 (19)	10.3
	Within River Basin	Description	Y/N	- Y				
	Within Theor Dabin	River Basin/Major River Name	name	Seti Gandakii				
		Basin Area	ha	-				
		City Location	u,m,d	Upstream				
	Adjoining Town							
		Pollution Load	vh–vl	Heavy				
		Sanitation Work/Plan	i/c	Individual				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water	Total Caliform	#/ml					
		Total Coliform BOD	#/ml	-	180	30	2.4-180	28.7
		COD	mg/l mg/l		973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases		Ç.M	ony raido	.op fuluo	.op quartito		
	Reported Cases (per 10,000							
		Diarrhea	#	194.11	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	0	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	95.98	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles Malaria	#	0.12	4.45	2.29	0.00-4.45 (9)	1.1
	Death (children under 5 year		#	0	-	9.07	0.09-28.91 (10)	5.0
	Boath (Grindren under 5 year	Diarrhea	#	0	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	0	1.18	0.1	0.0-1.2 (10)	1.2
		Trachoma	#	0	0	v	0-0 (6)	0
		Acute Lower Respiratory Infection	#	0	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	0	0.03	0.03	0.00-0.03 (6)	0.007
		IVICASICS	#	0	0.00	0.00	0.00-0.00 (0)	0.007

Pokhara, Nepal				For All	Surveyed C	ities and Munici	oalities
Participating City							
	Cushil Daudal Engineer						
Coordinator	Sushil Poudel, Engineer						
Office	Planning / Environment						
Address	Pokhara Sub Metropolitan City Office, Pokhara,	lepal					
ax	97761520600						
Telephone	97761693003						
E-mail address	destinies25@yahoo.com						
	destines25@yanot.com						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)	#(000)	214.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
		%	4.95			0.4-7.1 (27)	2.8
	Growth Rate			7.10	4.50	()	
	Number of Household	#(000)	44.51	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.81	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	30.00	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	25.00	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	5.60	2,101.20	90.30	1.5-2,101.2 (27)	154
			5.00				
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	35.01	76.23	21.99	0.79-76.23 (22)	18.0
		%	20.00	99.75	20.15		19.8
	Urban Fringe					0.00-99.75 (22)	
	Peri-Urban	%	15.00	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	10.01	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	38.50	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	67.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	33.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	29.00	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	26.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	39.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Dango	Average
Samanum Goverage		Unit	Gity value	TOP Value	TOP QUALITIE	Range	Average
	Area Coverage						
	Central Sewerage System	%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	70	100.0	85.88	0.3-100 (25)	50.3
		70	10	100.0	00.00	0.0 100 (20)	00.0
	Population Coverage			(00.0	55.00		
	Central Sewerage System	%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	62.4	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Average
Samation Facility			-				
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	100	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%		100.0	99.0	0-100 (15)	68.4
			_				
	Type la	%	-	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	_	100.0	83.0	0-100 (14)	57.7
	Type Illa	%	-	100.0	100.0	0-100 (14)	87.8
	Type IV	%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	-	100.0	99.0	0-100 (18)	66.9
	Туре V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	_	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	-	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Average
,	Waste Water Treatment Plant		,				
		2/1				0.4.000.0.000	
	Capacity (10,000 population)	m³/d	45	962.2	664.9	2.1-962.2 (22)	65.0
	Provider						
	Local Governmen	. %	100	100.0	100.0	0-100 (20)	49.8
	National Governmen			100.0	100.0	0-100 (20)	45.0
			-				
	Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant						
	Capacity	m³/d	75	814.0	110.0	50-814 (5)	227.8
	Provider					(-7	
		0/	400	100.0	100.0	0 100 (10)	00 7
	Local Governmen		100	100.0	100.0	0-100 (15)	66.7
	National Governme	ent %	0	100.0	0	0-100 (15)	20.0
	Private	%	0	100.0	0	0-100 (15)	13.3
	Desludging Services		-		-	(/	
				10.5		0.40.00	
	Frequency	year	-	12.0	10.0	2-12 (4)	7.3
	Provider						
	Government	%	-	100.0	50.0	0-100 (13)	53.0
	Private	%		100.0	50.0	0-100 (13)	47.0

= number, ha = hectare, m³/d = cubic meter per day.

Pokhara, Nepal					For All	Surveyed Ci	ties and Munic	ipalities
Nater Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce						-
		Central Water Supply-Individual	%	54.57	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	7.82	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	37.61	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	90.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	-	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
)rganizational Arrangeme	nt		Unit	City Value	Top Value	Top Quartile	Range	Average
stitutions Involved in Sanitatio	n					-		
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
lumber of Personnel							(-)	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	6.26	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	0.20	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-	43.70	43.7	0	23.9
			%	-	100	100	0	87.1
	Drivete Center	Operations and Maintenance	70	-	100	100	76.60-100.00 (4)	07.1
	Private Sector	T. I.D					00.00.(1)	
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
egal Mandate of Sanitation	Number of Levis on Occilent							
	Number of Laws on Sanitation							
		National	#	-	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	-	2007	2000	1947-2007 (23)	1985
		Latest	year	-	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N		17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
trategic Sanitation Plan							•	
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	N	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan						()	
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	_	2009	2008	2008-2009 (8)	2008
		Estimated Cost	yeai \$		395	250	0.03-395.00 (7)	101.25
				-				
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list					
		Future Programs/Projects	list	null				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Pokhara, Nepal					For All	Surveyed Ci	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
•	Annual Capital Investment					•		
	0	Annual Amount	\$/capita	0.5	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	100	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	Ő	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Amount	¢/oopito	0.1	0.0	2.66	0.00 0.04 (11)	1.0
	Source of Fund	Annual Annuali	\$/capita	0.1	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			¢ (a a a ita		45	0.1	0.1 15.0 (4)	0.0
Total Revenue	Sewered Area Charges		\$/capita	_	15	0.1	0.1-15.0 (4)	6.9
		Connection Charge	\$/connection	3,480	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Defende	\$ (OT	00	100			17.0
		Private Government	\$/ST \$/ST	32 23	133 30	30 22	4-133 (13)	47.0 18.0
	Other Fees	Government	φ/31 \$	23	30	22	3.5–30 (13)	10.0
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	Y	20			
	Sources of Water Pollution						0.07 (0.0)	
		Household Solid Waste	%	-	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	-	100	60	0-100 (24)	50.8
		Industrial Waste	%	-	38	10	0-38 (22)	9.4
		Commercial Waste	%	-	35	15	0-35 (22)	8.8
	Polluter to Treat Own Wastev	Hospital Waste	% Y/N	N	17	5	0-17 (22)	3.2
	Current Wastewater Disposa		T/IN	IN				
	ourient wastewater Disposa	Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-	50	1	0-30 (13)	10.5
	Within River Basin	Description	Y/N	Y				
	Within Third Dubin	River Basin/Major River Name	name	Seti Gandakii				
		Basin Area	ha	-				
		City Location	u,m,d					
	Adjoining Town	Pollution Load	ub ul	Varulau				
		Pollution Load Sanitation Work/Plan	vh–vl i/c	Very Low				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			,				
	Surface Water							
		Total Coliform	CFU/100ml	291				
		BOD	mg/l	22.5	180	30	2.4-180	28.7
		COD	mg/l	95	973	80	7.1-973	122.5
		Total Suspended Solids Heavy Metals	mg/l	61	261 0.3	200 0.25	1–261 0.001–0.3	109.7 0.17
Health Statistics		nouty mould	Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases		Unit	ony value	TOP Value	Top quartite	nango	Average
	Reported Cases (per 10,000	population)						
		Diarrhea	#	179.49	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	53.88	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	97.31	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	409.58	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	1.78	4.45	2.29	0.00-4.45 (9)	1.1
	Death (abilder and a F	Malaria	#	0.23	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year	s) (per 10,000 population) Diarrhea	4		0.47	0.1	0.0.0.5.(7)	0.1
		Diarrhea Hepatitis A & E	#	- 1150	0.47	0.1	0.0-0.5 (7)	0.1
		Trachoma	#	1153	1.18 0	0	0.0-1.2 (10) 0-0 (6)	1.2
							0-0 (0)	0
				-		0.01	0.00-0.27 (6)	0.2
		Acute Lower Respiratory Infection Measles	#	-	0.27	0.01 0.03	0.00-0.27 (6) 0.00-0.03 (6)	0.2 0.007

Calbayog, Philip	pines			For All	Surveyed C	ities and Munici	palities
Participating City	-						
Coordinator	Oscar M. Hugo, City Engineer						
Dffice	City Engineering Office						
Address	City Hall, JD Avelino St., Calbayog City	Philippines					
Fax	63552091725	1 milliphilos					
rax Telephone	63552094478						
E–mail address	omhugo_linaw@yahoo.com						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)	#(000)	150.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	"(000) %	1.79	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	28.91	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	5.01	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	1.70	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	4.18	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	90.30	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	46.63	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	0	99.75	20.15	0.00-99.75 (22)	19.8
	-						
	Peri–Urban	%	2.00	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	0.01	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	1.70	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	11.20	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	6.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	1.20	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	627.00	3,858.00	627.00	18-3,858.0 (11)	525.2
)	olamitada						
anitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage						
	Central Sewerage System	%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	0.5	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						
	Central Sewerage System	%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	72.6	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	39	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	0.1	43.6	22.2	0.0-43.6 (18)	17.1
		%	0.1	0.9			
	V. Eco Sanitation				0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	61	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia	%	-	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	0	100.0	83.0	0-100 (14)	57.7
	Type IIIa	%	100	100.0	100.0	0-100 (14)	87.8
	Type IV	%	88	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	13	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	100	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	0	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Plant	om	eng raido	.op taluo	top quartito		·····uy
				000.0	004.0	0 1 000 0 (00)	05.0
	Capacity (10,000 population)	m³/d	-	962.2	664.9	2.1-962.2 (22)	65.0
	Provide						
		vernment %	100	100.0	100.0	0-100 (20)	49.8
	National	Government %	-	100.0	100.0	0-100 (20)	45.0
	Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant					. ,	
	Capacity	m³/d	90	814.0	110.0	50-814 (5)	227.8
	Provide		50	014.0	110.0	00 014 (0)	221.0
			100	100.0		0 400 (15)	
		vernment %	100	100.0	100.0	0-100 (15)	66.7
		Government %	0	100.0	0	0-100 (15)	20.0
	Private	%	0	100.0	0	0-100 (15)	13.3
	Desludging Services						
	Frequency	year	10	12.0	10.0	2-12 (4)	7.3
	Provide		10	12.0	10.0	(1)	1.0
				100.0	50.0	0 100 (10)	50.0
	Governn	ient %	-	100.0	50.0	0-100 (13)	53.0
	Private	%		100.0	50.0	0-100 (13)	47.0

= number, ha = hectare, m³/d = cubic meter per day.

Calbayog, Philipp	ines				For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						
		Central Water Supply-Individual	%	25.95	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	46.65	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	30.55	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0.03	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0.02	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	10.00	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	75.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	14.70	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	95.00	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	5.00	100.00	0	0-100 (22)	5.30
Organizational Arrangen	nent		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in Sanitat								
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	3	4	2	1-4 (21)	1.7
		State-Owned Utility	#	_	2	- 1	1-2 (11)	1.3
	Private Sector				2		(,	
		Water Utility	#	_	2	2	2–2 (1)	2.0
		,	#		L	2		2.0
		Enterprise		-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	9.8	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector	oporadono and mantonanoo	,,,			100	10.00 100.00 (1)	01.11
		Total Personnel (ner 10.000 non'a)	#		30.96	30.96	30.96 (1)	30.96
		Total Personnel (per 10,000 pop'n) Operations and Maintenance	# %	-	30.90	30.90		30.90
		Operations and Maintenance		-		-	- (0)	
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
egal Mandate of Sanitation								
	Number of Laws on Sanitation							
		National	#	2	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	2000	2007	2000	1947-2007 (23)	1985
		Latest	year	2002	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges		your	2002	2007	2000		1000
	cantation of vice onalyes	Law on Collecting Face	V/M	N	17		17 (05)	
		Law on Collecting Fees	Y/N	N	17	0000	17 (25)	4000
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
trategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	N	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan						. ,	
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	2009	2009	2008	2008-2009 (8)	2008
		Estimated Cost	\$	0.1	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	0.7	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	General Fund, City Government				
			list	Pollution of bodies				
	Sanitation Problem	Major Sanitation Problem	1151					
	Sanitation Problem	Major Sanitation Problem	1151	of water (e.g. rivers,				
	Sanitation Problem	Major Sanitation Problem	1151					
	Sanitation Problem	Major Sanitation Problem	list	sea, swamps) of				
	Sanitation Problem							
	Sanitation Problem	Future Programs/Projects	list	sea, swamps) of	4 70	4 70	0.06 1.70 (0)	4 07
	Sanitation Problem			sea, swamps) of	1.79	1.79	0.96–1.79 (2)	1.37

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Calbayog, Philippi	nes				For All	Surveyed Ci	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annual	A /2		07.0		0.5.07.0 (07)	
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
		National Government	%	-	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100	0.0–100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Amount	\$/capita	_	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund		φ/σαρπα		0.5	5.00	0.00=0.04 (11)	1.5
		National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			A ()t		45	0.4	04 45 0 (4)	0.0
Total Revenue	Sewered Area Charges		\$/capita	-	15	0.1	0.1–15.0 (4)	6.9
	Sewereu Area Griarges	Connection Charge	\$/connection	13,488	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/connection \$/m ³	-	90	6.0	1–90 (5)	37.6
	Septic Tank Desludging Fee					0.0		01.0
		Private	\$/ST		133	30	4-133 (13)	47.0
		Government	\$/ST	-	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution	Water Quality Manitarad	V/M	Y	00			
	Sources of Water Pollution	Water Quality Monitored	Y/N	ř	20			
	Sources of water Pollution	Household Solid Waste	%	45	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	35	100	60	0-100 (24)	50.8
		Industrial Waste	%	2	38	10	0-38 (22)	9.4
		Commercial Waste	%	15	35	15	0-35 (22)	8.8
		Hospital Waste	%	3	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastewa		Y/N	0		0	0 11 (22)	0.2
	Current Wastewater Disposal							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	99	100	100	0-100 (19)	68.6
		Others	%	1	50	1	0-50 (19)	10.3
		Description	list	Anaerobic baffled				
				reactor				
	Within River Basin		Y/N	N				
		River Basin/Major River Name	name	-				
		Basin Area	ha	-				
	Adjoining Town	City Location	u,m,d					
	Aujoining town	Pollution Load	vhvl	Medium				
		Sanitation Work/Plan	i/c	modulari				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			,				
	Surface Water							
		Total Coliform		-				
		BOD	mg/l	168	180	30	2.4-180	28.7
		COD	mg/l	973	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	75	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000			07.07	504.4	470.40	0.0.5044 (46)	440.0
		Diarrhea	#	27.67	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	0 32.34	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#		1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Malaria	#	0	4.45	2.29 9.07	0.00-4.45 (9) 0.09-28.91 (10)	1.1 5.0
	Death (children under 5 years		#	U	-	9.07	0.09-20.91 (10)	5.0
	Douan (onligion anglor o years	Diarrhea	#	7	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	0	1.18	0.1	0.0-1.2 (10)	1.2
		Trachoma	#	0	0	0	0-0 (6)	0
		Acute Lower Respiratory Infection	#	4	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	0	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	0	0.07	0.04	0.00-0.07 (6)	0.1

Makati, Philippine	es				For All	Surveyed C	ities and Munici	palities
Participating City								
	Ma Laurdea D. Calud MC	MDU Otto Uselik Officer						
Coordinator), MPH , City Health Officer						
Office	Makati Health Department							
Address	7/F Makati City Hall, New	Bldg, JP Rizal St., Makati City, Ph	nilippines					
ax	6328958916							
Telephone	6328958962							
E–mail address	health@makati.gov							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
oniog. apinoo	Dopulation (2007)		#(000)	510.38	11,000.00	959.10		1,273.7
	Population (2007)						21.14–11,000.00 (27)	
	Growth Rate		%	1.91	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	113.42	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	4.50	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	724.90	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%					
				0.34	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	2.70	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	20.58	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	62.50	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	0	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0.33	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	186.50	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	115.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	438.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	282.00	282.00	113.00	3-282.0 (12)	64.8
				202.00				
	Peri–Urban		#/ha	-	110.00	29.00	0.34–110.0 (17)	19.9
	Slum Area		#/ha	3,858.00	3,858.00	627.00	18–3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
	Area Coverage							
	Central Sewerage System		%	21.5	100.0	31.00	0.0-100.0	35.2
	Central Water Supply Syster	n	%	100	100.0	85.88	0.3-100 (25)	50.3
		11	70	100	100.0	00.00	0.3-100 (23)	00.5
	Population Coverage							
	Central Sewerage System		%	22.5	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply Syster	n	%	99.7	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility			Unit	City Value	Top Value	Top Quartile		
Samanun Facinty	Sanitation System Type			-	-		Range	Average
	I. Central Sewerage System		%	23	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tan	k	%	77	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Ta	ank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Туре I		%	51	100.0	99.0	0-100 (15)	68.4
			%	49				
	Type la				100.0	87.0	0-100 (15)	75.5
	Type II		%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	0	100.0	100.0	0-100 (21)	85.4
	Type III		%	_	100.0	83.0	0-100 (14)	57.7
				-				
	Type IIIa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	-	100.0	99.0	0-100 (18)	66.9
	Type V		%		100.0	82.0	33–100 (2)	66.7
				-				
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Pla	ant						
	Capacity (10,000 population		m³/d	41451	962.2	664.9	2.1-962.2 (22)	65.0
		Provider	, a		002.2	501.0		00.0
			0/	0	100.0	100.0	0 100 (00)	10.0
		Local Government	%	0	100.0	100.0	0-100 (20)	49.8
		National Government	%	0	100.0	100.0	0-100 (20)	45.0
		Private	%	100	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
				044	044.0	110.0	E0. 044 (E)	007.0
	Capacity		m³/d	814	814.0	110.0	50-814 (5)	227.8
		Provider						
		Local Government	%	0	100.0	100.0	0-100 (15)	66.7
		National Government	0/					
			%	0	100.0	0	0-100 (15)	20.0
				99	100.0	0	0-100 (15)	13.3
		Private	%					
	Desludging Services	Private	70					
		Private			12.0	10.0	2-12 (4)	7.2
	Desludging Services Frequency		% year	5	12.0	10.0	2-12 (4)	7.3
		Provider	year					
					12.0	10.0	2–12 (4) 0–100 (13)	7.3

= number, ha = hectare, m³/d = cubic meter per day.

Makati, Philippin	es				For All	Surveyed Ci	ties and Munic	palities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce		•		•	•	
	ribuschold water supply sol	Central Water Supply–Individual	%	97.65	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	2.06	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	2.00	40.00	37.61	0.04-60.00 (26)	16.80
			%	0.29	96.41	20.00		14.50
		Protected Spring/Well					0.00-96.41 (25)	
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	10.00	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	1,371.50	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	100.00	100.00	0	0-100 (22)	5.30
Organizational Arrange	ement		Unit	City Value	Top Value	Top Quartile	Range	Average
			Unit	ony value	TOP VALUE	Top Quartite	nange	Average
nstitutions Involved in Sanif								
	Public Sector	National Courses		0	0	0	1.0.00	0.0
		National Government	#	3	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	2	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel							(-)	
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#		100.77	20.56	0.46-100.77 (17)	14.9
		a i i i i i i	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Planning and Monitoring		-	43.70	43.7		
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	30.96	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation	1							
	Number of Laws on Sanitatio	n						
		National	#	4	4	3	1-4 (18)	1.9
		Local	#	-	3	1	1-3 (15)	1.2
	Year Enacted	Local	π	_	5	1	1-0 (10)	1.2
	Year Enacleu	014-14		4074	0007	0000	40.47 0007 (00)	4005
		Oldest	year	1974	2007	2000	1947-2007 (23)	1985
		Latest	year	2004	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	1997	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan				,				
Strategic Samtation Fian	Evicting Conitation Blog							
	Existing Sanitation Plan	With Oralitation Dise	N//N	V			44 07	
		With Sanitation Plan	Y/N	Ŷ	11		11–27	
			year	-	2007	2006	2006-2007 (2)	2006
		When Prepared	your					
	New Sanitation Plan							
	New Sanitation Plan	When Prepared Will Prepare Sanitation Plan	Y/N	-				
	New Sanitation Plan		Y/N year	-	2009	2008	2008–2009 (8)	2008
	New Sanitation Plan	Will Prepare Sanitation Plan	Y/N		2009 395	2008 250	2008–2009 (8) 0.03–395.00 (7)	2008 101.25
	New Sanitation Plan	Will Prepare Sanitation Plan Preparation Year Estimated Cost	Y/N year \$	- - -	395	250	0.03-395.00 (7)	101.25
	New Sanitation Plan	Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	Y/N year \$ \$/capita					
		Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	Y/N year \$ \$/capita list	- - - - - -	395	250	0.03-395.00 (7)	101.25
	New Sanitation Plan	Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	Y/N year \$ \$/capita	– – – – Lack of understanding and appreciation of local pollution laws.	395	250	0.03-395.00 (7)	101.25
		Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	Y/N year \$ \$/capita list list	and appreciation of local pollution laws.	395	250	0.03-395.00 (7)	101.25
		Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	Y/N year \$ \$/capita list	and appreciation of	395	250	0.03-395.00 (7)	101.25

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Makati, Philippines	3				For All	Surveyed Cit	ies and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment		•	ony ruito	Top Tuluo	top quartito	nungo	monago
		Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Covernment	0/	0	00.0	0	0.0.00.0 (17)	00.70
		National Government Local Government	%	0	80.0 100.0	0	0.0-80.0 (17) 0.0-100.0 (17)	23.70 32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	Ő	0	Ő	0-0 (17)	0
		Others	%	100	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Source of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	0	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	100	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			A 1 1					
Total Revenue	Sewered Area Charges		\$/capita	-	15	0.1	0.1–15.0 (4)	6.9
	oomorou nica oriaryes	Connection Charge	\$/connection	2336	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee							
		Private	\$/ST	(100%)	133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	0	30	22	3.5–30 (13)	18.0
Environmental Situation	001011003		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		Unit	ony value		Top Quartite	nungo	Average
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution							
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	70	100	60	0-100 (24)	50.8
		Industrial Waste	%	5	38	10	0-38 (22)	9.4
		Commercial Waste	%	10	35	15	0-35 (22)	8.8
	Polluter to Treat Own Wastev	Hospital Waste	% Y/N	5 N	17	5	0-17 (22)	3.2
	Current Wastewater Disposa		1/11	IN				
	ourient wastewater Disposa	Own Treatment Plant	%	88	100	2	0-100 (19)	14.6
		Central Sewer System	%	11	30	11	0-30 (19)	6.5
		No Treatment	%	1	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Pasig River				
		Basin Area	ha	-				
	Adjoining Town	City Location	u,m,d	Midstream				
	Aujoining town	Pollution Load	vh-vl	Medium				
		Sanitation Work/Plan	i/c	Cooperative				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water	T 0						
		Total Coliform	#/ml	-	400	00	0.4.400	00.7
		BOD COD	mg/l	-	180 973	30 80	2.4–180 7.1–973	28.7 122.5
		Total Suspended Solids	mg/l mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	_	0.3	0.25	0.001-0.3	0.17
Health Statistics		,	Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases			,				
	Reported Cases (per 10,000							
		Diarrhea	#	55.33	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0.16	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	0	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#	208.27	1,559.01 4.45	507.79	0.36-1,559.01 (11) 0.00-4.45 (9)	420.5
		Malaria	#	0 9.07	4.40	2.29 9.07	0.00-4.45 (9)	1.1 5.0
	Death (children under 5 year		7	3.07	_	9.07	0.05-20.91 (10)	5.0
	, ,	Diarrhea	#	5	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	8	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	0	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	0	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	0	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	2	0.07	0.04	0.00-0.07 (6)	0.1

San Fernando, La	a Union, Philippines				For All	Surveyed C	ities and Munici	painties
Participating City								
Coordinator	Valmar M. Valdez / Dr. Eduar	do Posadas, City Environment and	Natural Resources Officer					
Iffice	City Environment and Natura	Resources Office						
ddress	1st Flr, Marcos Building, City	of San Fernando, La Union, Philip	pines					
ax	630728886907							
Telephone	630728886901							
E–mail address	valmar_valdez@yahoo.com							
	vainar_vaido2@yanoo.com			0.11				
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)		#(000)	114.81	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	1.63	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	24.85	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	4.62	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	25.00	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	32.84	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	10.50	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%	10.50	69.69	23.77	0.25-69.69 (22)	
								18.5
	Secondary Urban Core		%	0	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	0	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	78.50	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	10.90	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	37.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	07.00	438.00	21.99	4.0-438.0 (17)	73.7
	,			-				
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	4.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18–3,858.0 (11)	525.2
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage							
	Central Sewerage System		%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	1	%	25.7	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	1	%	47.9	99.7	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Averag
vanitation i aonity				-	-			
	I. Central Sewerage System		%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	47	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Ta	nk	%	10.5	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	41.2	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0.9	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						. ,	
	Type I		%	_	100.0	99.0	0-100 (15)	68.4
	Type la		%		100.0	87.0	0-100 (15)	75.5
			%	0				
	Type II				100.0	100.0	0-100 (21)	69.5
	Type IIa		%	100	100.0	100.0	0-100 (21)	85.4
	Type III		%	0	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	100	100.0	100.0	0-100 (14)	87.8
	Type IV		%	81	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	19	100.0	99.0	0-100 (18)	66.9
	Type V		%	100	100.0	82.0	33-100 (2)	66.7
	Type Va		%	0	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	81	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	19	100.0	0	0-100 (14)	13.9
	1300 110							
reatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Pla	nt						
	Capacity (10,000 population)	m³/d	200	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	100	100.0	100.0	0-100 (20)	49.8
		National Government	%		100.0	100.0	0-100 (20)	45.0
		Private	%		100.0	0	0-100 (20)	45.0
	Septage Treatment Plant	r mato	/0		100.0	U	0-100 (20)	J.3
					044.0	140.0	E0.044(E)	007.0
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
		Provider						
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	-	100.0	0	0-100 (15)	20.
		Private	%	_	100.0	0	0-100 (15)	13.3
	Desludging Services		,,,			Ū		
			Voor		10.0	10.0	0 10 (4)	7 /
	Frequency	Brouidor	year	-	12.0	10.0	2–12 (4)	7.3
		Provider						
		Government	%	-	100.0	50.0	0-100 (13)	53.0
		Private	%	100	100.0	50.0	0-100 (13)	47.0

= number, ha = hectare, m^3/d = cubic meter per day.

San Fernando, La	Union, Philippines				For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce						
		Central Water Supply-Individual	%	47.89	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	49.16	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	2.96	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	_	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	-	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
Organizational Arrangem	ent		Unit	City Value	Top Value	Top Quartile	Range	Average
stitutions Involved in Sanitati			Unit	ony value	ioh sunc	TOP QUALTIC	nanye	Average
isulutions involved in Sanitati	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	- 4	4	2	1-6 (3)	2.0
		State-Owned Utility	#	4	4	2	1-2 (11)	1.7
	Private Sector	State-OWINEU Utility	#	-	2	I	1-2 (11)	1.3
	FINALE SECIOI	Water Utility	#		2	2	2-2 (1)	2.0
		Enterprise	#	-	2	2	- (0)	2.0
			#	-		-		
hand the set Demonstrate		Nongovernment Organization	#	-	-	-	- (0)	-
lumber of Personnel	Dublic Costor							
	Public Sector		,,	0.00	400 77	00.50	0.40.400.77.(47)	44.0
		Total Personnel (per 10,000 pop'n)	#	2.09	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
	Diate Ocean	Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation	Number of Louis on Oscillation							
	Number of Laws on Sanitation							
		National	#	4	4	3	1-4 (18)	1.9
		Local	#	2	3	1	1–3 (15)	1.2
	Year Enacted							
		Oldest	year	1972	2007	2000	1947-2007 (23)	1985
		Latest	year	2006	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	N	17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Y	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan							
		Will Prepare Sanitation Plan	Y/N	-				
		Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
		Estimated Cost	s	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	Contamination of				
				ground, surface, and				
				coastal water				
		Future Programs/Proiects	list	coastal water null				
		Future Programs/Projects Funding Amount	list \$/capita		1.79	1.79	0.96-1.79 (2)	1.37

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

San Fernando, La	Union, Philippines				For All	Surveyed Cit	ies and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annount	C/conito	10	07.0	00.5	0.5.07.0 (07)	0.00
	Source of Fund	Annual Amount	\$/capita	1.2	27.9	22.5	0.5–27.9 (27)	8.20
	oodroo orrand	National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	100	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Course of Fund	Annual Amount	\$/capita	0.1	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0–100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Averag
Annual Revenues and Fees								J
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
	Contin Tonk Deskudaina Fra	Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Private	\$/ST	133 (100%)	133	30	4 100 (10)	47.0
		Government	\$/ST	-0	30	22	4-133 (13) 3.5-30 (13)	18.0
	Other Fees	dovoninon	\$	Ū	50	22	0.0-00 (10)	10.0
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Water Quality and Pollution		•	0119 14.40	Top Tuluo	top daarno	itango	monug
	water quality and rollation	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Trator addity monitorod	.,		20			
		Household Solid Waste	%	-	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	-	100	60	0-100 (24)	50.8
		Industrial Waste	%	-	38	10	0-38 (22)	9.4
		Commercial Waste	%	-	35	15	0-35 (22)	8.8
	Delluter to Treat Own Wester	Hospital Waste	%	-	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev Current Wastewater Disposa		Y/N	N				
	Guitetti wastewatet Disposa	Own Treatment Plant	%	_	100	2	0-100 (19)	14.6
		Central Sewer System	%	_	30	11	0-30 (19)	6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	%	-	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	N				
		River Basin/Major River Name	name	-				
		Basin Area	ha	-				
	Adjoining Town	City Location	u,m,d	-				
	Aujoining town	Pollution Load	vhvl	Medium				
		Sanitation Work/Plan	i/c	Individual				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		onn	ony value	Top Valuo	Top quarties	nungo	nioray
	Surface Water							
	oundoo mator	Total Coliform	#/ml	-				
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD	mg/l	-	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000			50.00	50.4.1	170.10		
		Diarrhea	#	58.88	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	2.35 0	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma Acute Lower Respiratory Infection	#	134.58	305.47 1,559.01	294.55 507.79	0.00-305.47 (9) 0.36-1,559.01 (11)	67.1 420.5
		Measles	#	0.43	4.45	2.29	0.30-1,559.01 (11)	420.5
		Malaria	#	0.45		9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year			2		0.01	5.00 20.01 (10)	0.0
	,	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	27	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	_	0.07	0.04	0.00-0.07 (6)	0.1

• • •	e's Republic of China	a			FOFAIL	Surveyeu C	ities and Munici	panties
articipating City								
oordinator	Jinghong Urban Investment	Company						
ffice								
ddress	No. 35 North Gaolan Road,	Jinghong City, Yunnan, People's Re	public of China					
ax	866912123563							
elephone	866912145072							
-mail address	bnzls@yahoo.com.cn							
	bhzia@yanoo.com.cn							
lemographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	376.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	0.40	7.10	4.50	0.4–7.1 (27)	2.8
	Number of Household		#(000)	125.33	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	3.00	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	10.60	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	-	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	700.30	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
				0				
	Secondary Urban Core		%	0	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	99.75	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	0	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	0.50	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	76.70	3,166.00	163.00	6.0-3,166.0 (24)	230.2
				10.10				
	Secondary Urban Core		#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	0.30	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
anitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
uniunon ooronugo	Area Coverage		•	0.1.7 10.00	Top Tuluo	top daarmo	inango	monug
			0/	0.0	100.0	01.00	0.0.400.0	05.0
	Central Sewerage System		%	0.3	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	n	%	0.3	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	3.6	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	n	%	3.6	99.7	84.80	3.6-99.7 (26)	57.7
anitation Facility	Sanitation System Type	1	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System		%	4	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tanl	k	%	0	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Ta		%	0	20.0	0.8	0.0-20.0 (13)	4.4
		lin						
	IV. Pit Latrine		%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	100	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	0	100.0	87.0	0-100 (15)	75.5
			%	0	100.0	100.0		69.5
	Type II			-			0-100 (21)	
	Type IIa		%	-	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type Illa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	_	100.0	99.0	0-100 (18)	66.9
			%					
	Type V			-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
reatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
,	Waste Water Treatment Pla	ant						
	Capacity (10,000 population		m³/d	25000	962.2	664.9	2.1-962.2 (22)	65.0
		Provider	iii/u	20000	302.2	004.0	2.1 002.2 (22)	03.0
			01	100	100.0	400.0	0 400 (00)	
		Local Government	%	100	100.0	100.0	0-100 (20)	49.8
		National Government	%	0	100.0	100.0	0-100 (20)	45.0
		Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m³/d	_	814.0	110.0	50-814 (5)	227.8
	oupuony	Provider	iii/u		014.0	110.0	00 014 (0)	221.0
			0/		100.0	100.0	0.400.405	
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	-	100.0	0	0-100 (15)	20.0
		Private	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services							
	Frequency		year	_	12.0	10.0	2-12 (4)	7.3
	rioquolloy	Provider	yoai		12.0	10.0	2-12 (4)	1.3
		I TOVIUGI						
		0						
		Government Private	%	100 0	100.0 100.0	50.0 50.0	0-100 (13) 0-100 (13)	53.0 47.0

= number, ha = hectare, m³/d = cubic meter per day.

	s Republic of China	1			FORAL	Surveyeu Ch	ties and Munic	ipanties
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply Sou	Irce						
	,	Central Water Supply-Individual	%	3.59	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	96.41	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
			%		35.00	0.10		2.80
		Water Vendor		0			0.00-35.00 (26)	
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	133.00	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangem	ient		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in Sanitati				ony failed		iop daarmo	italigo	
Isuluuons mvoiveu m Samaa	Public Sector							
		National Government	#		6	2	1.6 (5)	2.8
		National Government	#	-			1-6 (5)	
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	2	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel		· ·						
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	9.76	100.77	20.56	0.46-100.77 (17)	14.9
			%	23.4	43.70	43.7		23.9
		Planning and Monitoring			43.70	43.7	12.7-43.70 (4)	
		Construction	%	-		-	0	0
		Operations and Maintenance	%	76.6	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
	Number of Laws on Sanitation	In						
		National	#	1	4	3	1-4 (18)	1.9
		Local						
				1	2			10
	Veer Enceted	LUCAI	#	1	3	1	1–3 (15)	1.2
	Year Enacted							
	Year Enacted	Oldest	year	1993	2007	2000	1947-2007 (23)	1985
	Year Enacted Sanitation Service Charges	Oldest Latest	year year	1993 2002	2007 2007	2000	1947–2007 (23) 1956–2007 (23)	1985
		Oldest	year	1993	2007 2007 17	2000 2005	1947-2007 (23)	1985
		Oldest Latest	year year	1993 2002	2007 2007	2000	1947–2007 (23) 1956–2007 (23)	1985
Plannino		Oldest Latest Law on Collecting Fees	year year Y/N year	1993 2002 N -	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
		Oldest Latest Law on Collecting Fees	year year Y/N	1993 2002	2007 2007 17	2000 2005	1947–2007 (23) 1956–2007 (23) 17 (25)	1985 1993
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees	year year Y/N year	1993 2002 N -	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
Planning Strategic Sanitation Plan		Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	1993 2002 N -	2007 2007 17 2007 Top Value	2000 2005 2003	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	1993 2002 N -	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Average
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	1993 2002 N -	2007 2007 17 2007 Top Value	2000 2005 2003	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	year year Y/N year Unit Y/N year	1993 2002 N -	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Average
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	1993 2002 N -	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 <u>1990</u> Average 2006
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	year year Y/N year Unit Y/N year	1993 2002 N -	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Average
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year year Y/N year Unit Y/N Y/N Y/N	1993 2002 N -	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1985 1993 1990 Average 2006
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	year year Y/N year Unit Y/N year Y/N	1993 2002 N -	2007 2007 17 2007 Top Value 11 11 2007 2009	2000 2005 2003 Top Quartile 2006 2008	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year Y/N year \$ \$/capita	1993 2002 N -	2007 2007 17 2007 Top Value 111 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1985 1993 1990 Average 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita list	1993 2002 N City Value Y 	2007 2007 17 2007 Top Value 111 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008 101.25
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year Y/N year \$ \$/capita	1993 2002 N City Value Y 	2007 2007 17 2007 Top Value 111 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year year Y/N year Unit Y/N year Y/N year \$ \$/capita list list	1993 2002 N City Value Y -	2007 2007 17 2007 Top Value 111 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita list	1993 2002 N City Value Y 	2007 2007 17 2007 Top Value 111 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Average 2006 2008 101.25

Y = yes, N = no, lcpd = liters per capita per day, pop'n = population.

Jinghong, People's	s Republic of China				For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	\$/capita		07.0	22.5	0.5.07.0.(07)	0.00
	Source of Fund	Annual Annunit	φ/σαμιτα	-	27.9	22.0	0.5–27.9 (27)	8.20
	oodroo orrand	National Government	%	-	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	Ő	0.0-100.0 (17)	32.10
		Loans	%	60	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	Netl'and Occurrent	0/		(7.0		0.47.47	
		National Government Local Government	%	-	47.0	0	0-47 (17)	3.4
		Loans	%	-	100.0 53.0	100.00 50.00	0-100 (17)	57.6 9.0
		Tariff Revenue	%	-	100.0	50.00	0–53 (17) 0–100 (17)	24.1
		Others	%	_	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	muiooo	0000		City Volue				
Annual Revenues and Fees	IVICES		Unit	City Value	Top Value	Top Quartile	Range	Average
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee		A (07					
		Private	\$/ST	0	133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	(100%)	30	22	3.5-30 (13)	18.0
Environmental Situation	Utilet rees		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		Unit	ony value	iop value	iop quartite	nanye	Average
	water duality and reliation	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution							
		Household Solid Waste	%	12	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	38	100	60	0-100 (24)	50.8
		Industrial Waste	%	34	38	10	0-38 (22)	9.4
		Commercial Waste	%	11	35	15	0-35 (22)	8.8
		Hospital Waste	%	5	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N	N				
	Current Wastewater Disposal							
		Own Treatment Plant	%	-	100	2	0-100 (19)	14.6
		Central Sewer System	%	-	30	11	0-30 (19)	6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	%	-	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Lancang River, Liusha				
				River				
		Basin Area	ha	709300				
	Adjoining Town	City Location	u,m,d	Downstream				
	Aujoining town	Pollution Load	vhvl	Medium				
		Sanitation Work/Plan	i/c	Wouldin				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		Unit	Gity Value	iop value	Top Quartine	naliye	Average
	Water Quality Surface Water							
	Sui lace Walei	Total Coliform	#/I	40				
		BOD	#/I mg/I	180	180	30	2.4-180	28.7
		COD	mg/l	360	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	250	973 261	200	1-261	122.5
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
noutili otutiotiloo	Sanitation-Related Diseases		Unit	ony value	ioh sunc	iop quartite	nunyo	Average
	Reported Cases (per 10,000	population)						
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years							
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	-	0.07	0.04	0.00-0.07 (6)	0.1

Kunming, People	's Republic of Chin	a			For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	He Xingmin, Director Gener	al						
Iffice	Kunming Municipal Environ	ment Protection Bureau						
Address	No 52 North of Xiyuan Roa	d, Kunming City, Yunnan, People's F	Republic of China					
ax	8.68714E+11							
Felephone	8.68714E+11							
E–mail address	cvijaya.k@gmail.com							
	,, _,		Unit	City Volue	Ton Volue	Top Quartila	Bonno	Averen
Demographics				City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	6,155.60	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	0.62	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	1,531.94	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	3.97	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	18.10	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	1.34	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	2,101.20	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%	0.50	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	1.01	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	0	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	98.50	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	2.90	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	163.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	24.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri-Urban		#/ha	1.90	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	1.00	3,858.00	627.00	18-3,858.0 (11)	525.2
anitatian C	σιατητικά			0.14.14.1				
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage							
	Central Sewerage System		%	0.4	100.0	31.00	0.0-100.0	35.2
	Central Water Supply Syste	m	%	0.9	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	100.0	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply Syste	m	%	90.8	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Typ	P	Unit	City Value	Top Value	Top Quartile	Range	Average
Jaintation Laointy				-	-			
	I. Central Sewerage System		%	100	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tar		%	0	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic T	ank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	100	100.0	99.0	0-100 (15)	68.4
	Type la		%	0	100.0	87.0	0-100 (15)	75.5
	Type II		%	-	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	-	100.0	100.0	0-100 (21)	85.4
	Type III		%	-	100.0	83.0	0-100 (14)	57.7
	Type IIIa		%	-	100.0	100.0	0-100 (14)	87.8
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	-	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33–100 (2)	66.7
	Type Va		%	_	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Free advances of the state	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment PI							
	Capacity (10,000 populatio	,	m³/d	962.2	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	100	100.0	100.0	0-100 (20)	49.8
		National Government	%	0	100.0	100.0	0-100 (20)	45.0
		Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
		Provider					~ / /	
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	_	100.0	0	0-100 (15)	20.0
		Private	%	_	100.0	0	0-100 (15)	13.3
	Desludging Services	111/000	/0		100.0	U	0-100 (13)	10.0
					10.0	10.0	0 10 (4)	7.0
	Frequency	Dreuider	year	-	12.0	10.0	2–12 (4)	7.3
		Provider				50.0		
		Government Private	%	100 0	100.0 100.0	50.0 50.0	0–100 (13) 0–100 (13)	53.0 47.0

= number, ha = hectare, m^3/d = cubic meter per day.

Republic of China				For All	Surveyed Cit	ties and munic	ipalities
		Unit	City Value	Top Value	Top Quartile	Range	Average
Household Water Supply So	urce						-
		%	90.80	100.00	67.10	3.59-100.00 (27)	50.50
							7.80
			0				16.80
			9.20				14.50
							5.98
							2.80
			-				20.70
							97.10
			10.74			. ,	11.80
							49.80
							45.00
	Private Concessionaire						5.30
		UIII	Gity value	Top Value	Top Quartile	Range	Average
Public Sector						1.0 (5)	
			-				2.8
							1.7
	State-Owned Utility	#	1	2	1	1–2 (11)	1.3
Private Sector							
	Water Utility	#	-	2	2	2–2 (1)	2.0
Public Sector							
	Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
	Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
	Construction	%	-		-	0	0
	Operations and Maintenance			100	100	76.60-100.00 (4)	87.1
Private Sector		#	-				
	Total Personnel (per 10,000 pop'n)			30.96	30.96	30.96 (1)	30.96
	Operations and Maintenance	#	3		-	- (0)	-
		Unit	City Value	Ton Value	Top Quartile	Banne	Average
				iop raido	top quantito	ituiigo	monugo
Number of Laws on Sanitation	מר						
NUTIDEI OF LAWS OF Satillaut		"	0	4	0	1 4 (10)	10
							1.9
	Local	#	1	3	1	1-3 (15)	1.2
Year Enacted							
	Oldest	year				1947-2007 (23)	1985
	Latest	year	2002	2007	2005	1956-2007 (23)	1993
Sanitation Service Charges							
	Law on Collecting Fees	Y/N	Y	17		17 (25)	
	Year Enacted	year	2002	2007	2003	1956-2007 (17)	1990
		Unit	City Value	Top Value	Ton Quartile		Average
				Top Talao	top daarino	ituiigo	monugo
Evicting Conitation Dian							
EXISTING SATILATION FIAM	With Conitation Dian	V/N	V	44		11 07	
			Y				
	When Prepared	year	-	2007	2006	2006-2007 (2)	2006
New Sanitation Plan							
		Y/N	-				
	Preparation Year	year	-	2009	2008	2008-2009 (8)	2008
	Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
	Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.70 (7)	185.50
	Source of Fund	list	_			.,	
Sanitation Problem	Major Sanitation Problem	list	Wastewater				
Santaton robicin			treatment can't meet				
Santation Problem			treatment can't meet requirements.				
Sanaton Prosen	Future Programs/Projects	liet	requirements.				
Gainadon Frobien	Future Programs/Projects Funding Amount	list \$/capita		1.79	1.79	0.96–1.79 (2)	1.37
	ent on Public Sector Private Sector Private Sector Private Sector	Household Water Supply Source Central Water Supply-Individual Central Water Supply-Communal Borehole Protected Spring/Well Rainwater Water Vendor Population Buying Bottled Water Average Water Consumption Water Treatment Facilities Local Government National Government Private Concessionaire ent On Public Sector Public Sector Private Sector Private Sector Total Personnel (per 10,000 pop'n) Planning and Monitoring Construction Operations and Maintenance Private Sector Private Sector Total Personnel (per 10,000 pop'n) Operations and Maintenance Private Sector Number of Laws on Sanitation Number of Laws on Sanitation Local Vear Enacted Otdest Latest Sanitation Service Charges Kear Enacted With Sanitation Plan When Prepared	Household Water Supply Source Central Water Supply-Individual % Central Water Supply-Communal % Borehole % Borehole % Protected Spring Well % Protected Spring Well % Protected Spring Well % Average Water Consumption lpcd Average Water Consumption lpcd Average Water Consumption lpcd Local Government % Private Concessionaire % Private Concessionaire % Private Sector # Public Sector # Private Sector # Number of Laws on Sanitation % Querations and Maintenance # Year	Unit City Value Household Water Supply Source Central Water Supply-Individual % 90.500 Central Water Supply-Communal % 0 Borehole % 0 Protected Spring Weil % 9.20 Rainwater % 0 Water Venfor % 0 Population Buying Bottled Water % 0 Average Water Consumption lpcd - Average Water Consumption % 0 Provate Government % 0 Private Concessionaire % 0 on State-Owned Utility # - Private Sector - - - Public Sector # 3 - Private Sector # - - Private Sector # - - Private Sector # 3 - Private Sector # 3 - Private Sector # 3 - </td <td>Unit City Value Top Value Household Water Supply-Individual % 90.80 100.00 Central Water Supply-Individual % 90.80 100.00 Borehole % 0 46.65 Borehole % 0 46.65 Perotected Spring/Well % 92.00 86.41 Perotected Spring/Well % 0 45.52 Water Vendor % 0 45.52 Water Vendor % 0 100.00 Average Water Consumption lpcd - 160.00 Mater Tammer Facilities lpcd 19.74 13.71.50 Mater Consumption % 0 100.00 Private Concessionarie % 0 100.00 Private Sector - 6 4 2 Public Sector - 100.77 2 - Public Sector - 100.77 2 - Public Sector - 100.77 2 -<!--</td--><td>Unit City Value Top Quartile Household Water Supply-Lordwidual % 90.80 100.00 67.10 Central Water Supply-Lordwidual % 90.80 146.65 11.43 Borehole % 0 66.00 37.61 Protected Spring/Vel % 9.20 66.41 20.00 Rainwater % 0 45.52 0.10 0.02 Popdation Buying Dottled Water % 0 435.00 0.02 0.02 Average Water Consumption lpcd - 180.00 130.00 190.00 190.00 100.00</td><td>Unit City Value Top Value Top Quartile Range Household Water Supply-Individual Central Water Supply-Communal Bornhole % 90.00 100.00 67.10 3.59-100.00 (27) Ortmal Water Supply-Communal Bornhole % 0 46.65 11.43 0.00-46.65 (25) Bornhole % 0 86.65 11.43 0.00-46.65 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 100.00 40-160.00 (20) 0.00.00 Water Vector % 0 100.00 100.00 0 0.00.00 (22) Water Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.</td></td>	Unit City Value Top Value Household Water Supply-Individual % 90.80 100.00 Central Water Supply-Individual % 90.80 100.00 Borehole % 0 46.65 Borehole % 0 46.65 Perotected Spring/Well % 92.00 86.41 Perotected Spring/Well % 0 45.52 Water Vendor % 0 45.52 Water Vendor % 0 100.00 Average Water Consumption lpcd - 160.00 Mater Tammer Facilities lpcd 19.74 13.71.50 Mater Consumption % 0 100.00 Private Concessionarie % 0 100.00 Private Sector - 6 4 2 Public Sector - 100.77 2 - Public Sector - 100.77 2 - Public Sector - 100.77 2 - </td <td>Unit City Value Top Quartile Household Water Supply-Lordwidual % 90.80 100.00 67.10 Central Water Supply-Lordwidual % 90.80 146.65 11.43 Borehole % 0 66.00 37.61 Protected Spring/Vel % 9.20 66.41 20.00 Rainwater % 0 45.52 0.10 0.02 Popdation Buying Dottled Water % 0 435.00 0.02 0.02 Average Water Consumption lpcd - 180.00 130.00 190.00 190.00 100.00</td> <td>Unit City Value Top Value Top Quartile Range Household Water Supply-Individual Central Water Supply-Communal Bornhole % 90.00 100.00 67.10 3.59-100.00 (27) Ortmal Water Supply-Communal Bornhole % 0 46.65 11.43 0.00-46.65 (25) Bornhole % 0 86.65 11.43 0.00-46.65 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 100.00 40-160.00 (20) 0.00.00 Water Vector % 0 100.00 100.00 0 0.00.00 (22) Water Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.</td>	Unit City Value Top Quartile Household Water Supply-Lordwidual % 90.80 100.00 67.10 Central Water Supply-Lordwidual % 90.80 146.65 11.43 Borehole % 0 66.00 37.61 Protected Spring/Vel % 9.20 66.41 20.00 Rainwater % 0 45.52 0.10 0.02 Popdation Buying Dottled Water % 0 435.00 0.02 0.02 Average Water Consumption lpcd - 180.00 130.00 190.00 190.00 100.00	Unit City Value Top Value Top Quartile Range Household Water Supply-Individual Central Water Supply-Communal Bornhole % 90.00 100.00 67.10 3.59-100.00 (27) Ortmal Water Supply-Communal Bornhole % 0 46.65 11.43 0.00-46.65 (25) Bornhole % 0 86.65 11.43 0.00-46.65 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 35.00 0.002 0.00-550 (25) Water Vector % 0 100.00 40-160.00 (20) 0.00.00 Water Vector % 0 100.00 100.00 0 0.00.00 (22) Water Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.00.00 (22) Mater Newsmethal % 0 100.00 0 0.

Y= yes, N= no, lcpd = liters per capita per day, pop'n = population.

Running, People's	Republic of China				For All	Surveyed Cil	ies and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	¢/copito		07.0	22.5	0.5.07.0.(07)	8.20
	Source of Fund	Annual Annunt	\$/capita	-	27.9	22.0	0.5–27.9 (27)	0.20
	oodroo or rund	National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	30	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	70	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Original of Freed	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Government	0/	0	47.0	0	0-47 (17)	3.4
		Local Government	%	10	100.0	100.00		57.6
		Loans	%	0	53.0	50.00	0–100 (17) 0–53 (17)	9.0
		Tariff Revenue	%	90	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0.00	0-100 (17)	5.9
Revenues and Fees for Se	ruione	Unitio	Unit					
	INCES		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees Total Revenue			\$/capita	_	15	0.1	0.1.15.0 (4)	6.9
	Sewered Area Charges		φισαμπα		15	0.1	0.1–15.0 (4)	0.9
	centroi da nata ontargoo	Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee		+,				(.)	
		Private	\$/ST	- (0)	133	30	4-133 (13)	47.0
		Government	\$/ST	- (100)	30	22	3.5-30 (13)	18.0
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution					•		
	Thator adding and I briddon	Water Quality Monitored	Y/N	Y	20			
	Sources of Water Pollution	Trator duality monitored	.,		20			
		Household Solid Waste	%	0	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	50	100	60	0-100 (24)	50.8
		Industrial Waste	%	10	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	40	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N	Y			(==)	
	Current Wastewater Disposal							
		Own Treatment Plant	%	100	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	0	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Jinsha River				
		Basin Area	ha	292000				
		City Location	u,m,d	Upstream				
	Adjoining Town							
		Pollution Load	vh–vl	Medium				
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water	Total Caliform	41					
		Total Coliform BOD	#/l	10.68	100	20	2 / 100	00 7
			mg/l		180	30	2.4-180	28.7
		COD Total Suspended Solids	mg/l	67.38	973	80	7.1-973	122.5 109.7
		Heavy Metals	mg/l	-	261 0.3	200 0.25	1-261	0.17
Health Statistics		noury words	mg/l	City Volue			0.001-0.3	
2011201STATISTICS	0.000		Unit	City Value	Top Value	Top Quartile	Range	Average
iculti otatistics	Sanitation-Related Diseases	(non-ulation)						
		0000030000	"		504.4	170.40	0.6 50/1 (10)	110.0
	Reported Cases (per 10,000			-	594.1	179.49	0.6-594.1 (12)	118.8
		Diarrhea	#			0.00	0.00 E2.00 (40)	
		Diarrhea Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Diarrhea Hepatitis A & E Trachoma	# #	-	305.47	294.55	0.00-305.47 (9)	67.1
		Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection	# # #	-	305.47 1,559.01	294.55 507.79	0.00-305.47 (9) 0.36-1,559.01 (11)	67.1 420.5
		Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles	# # #		305.47	294.55 507.79 2.29	0.00–305.47 (9) 0.36–1,559.01 (11) 0.00–4.45 (9)	67.1 420.5 1.1
	Reported Cases (per 10,000	Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria	# # #		305.47 1,559.01	294.55 507.79	0.00-305.47 (9) 0.36-1,559.01 (11)	67.1 420.5
		Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria 9 (per 10.000 population)	# # # #		305.47 1,559.01 4.45 –	294.55 507.79 2.29 9.07	0.00–305.47 ⁽⁹⁾ 0.36–1,559.01 (11) 0.00–4.45 (9) 0.09–28.91 (10)	67.1 420.5 1.1 5.0
	Reported Cases (per 10,000	Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria s) (per 10,000 population) Diarrhea	# # # #		305.47 1,559.01 4.45 - 0.47	294.55 507.79 2.29 9.07 0.1	0.00–305.47 (9) 0.36–1,559.01 (11) 0.00–4.45 (9) 0.09–28.91 (10) 0.0–0.5 (7)	67.1 420.5 1.1 5.0
	Reported Cases (per 10,000	Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria s) (per 10,000 population) Diarrhea Hepatitis A & E	# # # # #	-	305.47 1,559.01 4.45 - 0.47 1.18	294.55 507.79 2.29 9.07	0.00-305.47 (9) 0.36-1,559.01 (11) 0.00-4.45 (9) 0.09-28.91 (10) 0.0-0.5 (7) 0.0-1.2 (10)	67.1 420.5 1.1 5.0 0.1 1.2
	Reported Cases (per 10,000	Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria S (per 10,000 population) Diarrhea Hepatitis A & E Trachoma	# # # # # #	-	305.47 1,559.01 4.45 - 0.47 1.18 0	294.55 507.79 2.29 9.07 0.1 0	0.00-305.47 (9) 0.36-1,559.01 (11) 0.00-4.45 (9) 0.09-28.91 (10) 0.0-0.5 (7) 0.0-1.2 (10) 0-0 (6)	67.1 420.5 1.1 5.0 0.1 1.2 0
	Reported Cases (per 10,000	Diarrhea Hepatitis A & E Trachoma Acute Lower Respiratory Infection Measles Malaria s) (per 10,000 population) Diarrhea Hepatitis A & E	# # # # #		305.47 1,559.01 4.45 - 0.47 1.18	294.55 507.79 2.29 9.07 0.1	0.00-305.47 (9) 0.36-1,559.01 (11) 0.00-4.45 (9) 0.09-28.91 (10) 0.0-0.5 (7) 0.0-1.2 (10)	67.1 420.5 1.1 5.0 0.1 1.2

Puer, People's Re	epublic of China				For All	Surveyed C	ities and Munici	palities
articipating City						-		
oordinator	Yin Lu							
ffice	Pure Water Supply Plant							
	Ture water ouppry Franc							
ddress	0.007005							
ax	8.68792E+11							
Telephone	8.68792E+11							
-mail address	Liren.6666@yahoo.com.cr	1						
			11	Other Maders	Ten Malua	Ten Oursetille	Danna	
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	256.23	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	0.60	7.10	4.50	0.4–7.1 (27)	2.8
							()	
	Number of Household		#(000)	78.90	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	3.25	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	5.70	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	2.69	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	22.70	2,101.20	90.30	1.5-2,101.2 (27)	154
				22.70				
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	17.67	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	44.45	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	21.10	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	0	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	11.30	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	39.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	_	438.00	21.99	4.0-438.0 (17)	73.7
				-				
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Average
annauon coverage			Unit	ony value	TOP Value	Top Quartine	nanye	Average
	Area Coverage							
	Central Sewerage System		%	18.5	100.0	31.00	0.0-100.0	35.2
	Central Water Supply Syste	m	%	9.6	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage		10	0.0	100.0	00.00	0.0 100 (20)	00.0
			0/	57.0	400.0	55.00	0.400.0.(4)	00.0
	Central Sewerage System		%	57.2	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply Syste	m	%	57.2	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	ρ	Unit	City Value	Top Value	Top Quartile	Range	Average
Jaintation Facility				-	-			
	 Central Sewerage System 	1	%	57	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tar	ık	%	43	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic T		%	0.1	20.0	0.8	0.0-20.0 (13)	4.4
		unv	%					
	IV. Pit Latrine			0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	100	100.0	99.0	0-100 (15)	68.4
	Type la		%	0	100.0	87.0	0-100 (15)	75.5
	Type II		%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	0	100.0	100.0	0-100 (21)	85.4
	Type III		%	100	100.0	83.0	0-100 (14)	57.7
			%	0		100.0		87.8
	Type IIIa			U	100.0		0-100 (14)	
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	-	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	_	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Weeks Web		•	,				
	Waste Water Treatment Pl							
	Capacity (10,000 populatio		m³/d	20000	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	100	100.0	100.0	0-100 (20)	49.8
		National Government	%				· · ·	
				0	100.0	100.0	0-100 (20)	45.0
		Private	%	0	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m³/d	-	814.0	110.0	50-814 (5)	227.8
	oupuony	Provider	iii/u		011.0	110.0	00 014(0)	221.0
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	-	100.0	0	0-100 (15)	20.0
		Private	%	-	100.0	0	0-100 (15)	13.3
	Dealudaine Comisso		70	_	100.0	U	0 100 (10)	10.0
	Desludging Services							
	Frequency		year	12	12.0	10.0	2-12 (4)	7.3
		Provider						
					400.0	50.0	0 100 (10)	53.0
		Government	9/	100				
		Government Private	%	100 0	100.0	50.0 50.0	0–100 (13) 0–100 (13)	47.0

= number, ha = hectare, m^3/d = cubic meter per day.

Puer, People's Rep	bublic of China				For All	Surveyed Ci	ties and Munic	ipalities
Vater Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Household Water Supply So	Irce						
		Central Water Supply-Individual	%	57.17	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply–Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	42.83	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	· · /	2.80
			%	U			0.00-35.00 (26)	
		Population Buying Bottled Water		-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	136.60	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
rganizational Arrangem	ent		Unit	City Value	Top Value	Top Quartile	Range	Averag
stitutions Involved in Sanitati								
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	2	4	2	1-4 (21)	1.7
		State-Owned Utility	#	2	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
lumber of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	10.15	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	12.70	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	_		-	0	0
		Operations and Maintenance	%	87.30	100	100	76.60-100.00 (4)	87.1
	Private Sector		70	07.00	100	100	70.00-100.00 (4)	07.1
	1111110000001	Total Personnel (per 10,000 pop'n)	#		30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	# %	-	30.50	30.90		30.90
		Operations and Maintenance	/0				- (0)	
egal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag
egal Mandate of Sanitation								
	Number of Laws on Sanitation							
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	1994	2007	2000	1947-2007 (23)	1985
		Latest	year	2002	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	N	17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
lanning			Unit	City Value	Top Value	Top Quartile	Range	Averag
trategic Sanitation Plan								J
datiogio odination i fan	Existing Sanitation Plan							
	Existing sumation rian	With Sanitation Plan	Y/N	v	11		11-27	
		When Prepared	year	-	2007	2006	2006–2007 (2)	2006
	New Sanitation Plan	inter repared	you		2007	2000	2000-2007 (2)	2000
	New Salillation Fidit	Will Propers Capitation Plan	V/N					
		Will Prepare Sanitation Plan	Y/N	-	2009	2008	2008 2000 (0)	2008
		Preparation Year	year	-			2008-2009 (8)	
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list					
		Future Programs/Projects	list	null				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Puer, People's Rep	bublic of China				For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	\$/capita	27.9	27.9	22.5	0.5–27.9 (27)	8.20
	Source of Fund		φ/σαρπα	21.5	21.5	22.5	0.5=21.5 (21)	0.20
		National Government	%	47	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	0	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	53	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund							
		National Government	%	47	47.0	0	0-47 (17)	3.4
		Local Government	%	0	100.0	100.00	0-100 (17)	57.6
		Loans	%	53	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			¢ (oopito	2.0	15	0.1	0.1.15.0 (4)	0.0
Total Revenue	Sewered Area Charges		\$/capita	3.2	15	0.1	0.1–15.0 (4)	6.9
	convoicu nica cilaryes	Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m ³	-	90	6.0	1–90 (5)	37.6
	Septic Tank Desludging Fee	iani futo	φ/ /11		50	0.0	1 55 (5)	07.0
	copie fam booldaging foo	Private	\$/ST	0	133	30	4-133 (13)	47.0
		Government	\$/ST	(100%)	30	22	3.5-30 (13)	18.0
	Other Fees		\$	()				
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	Ν	20			
	Sources of Water Pollution							
		Household Solid Waste	%	-	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	-	100	60	0-100 (24)	50.8
		Industrial Waste	%	-	38	10	0-38 (22)	9.4
		Commercial Waste	%	-	35	15	0-35 (22)	8.8
		Hospital Waste	%	-	17	5	0-17 (22)	3.2
	Polluter to Treat Own Waster		Y/N	N				
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	29	30	11	0-30 (19)	6.5
		No Treatment	%	71	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin	·	Y/N	Y				
		River Basin/Major River Name	name	Langcang River				
		Basin Area	ha	5,000				
		City Location	u,m,d	Midstream				
	Adjoining Town							
		Pollution Load	vhvl	Medium				
		Sanitation Work/Plan	i/c	Individual	Ten Malua	Ten Ouestile	Denes	A
Environmental Statistics	Weber Overlike		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality Surface Water							
	Surface Water	Total Coliform	MPN/100 ml	_				
		BOD	mg/l	_	180	30	2.4-180	28.7
		COD	mg/l	_	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	_	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases						-	
	Reported Cases (per 10,000							
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year							
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#		0.07	0.04	0.00-0.07 (6)	0.1

Colombo, Sri Lar	ika				For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	Engr. SGVDH Gunasekera, [Director Engineering (Water Supply and	l Drainage Division)					
Office	Water Supply and Drainage	Division / Municipal Engineering						
ddress	Colombo Municipal Council	, Town Hall, Colombo–07, Sri Lanka						
ax	94112692696							
Telephone	94112674809							
E–mail address	munici@slt.lk							
	indinoi (gottini			0.1 1/ 1				
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	647.10	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	0.40	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	119.16	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	6.00	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	61.80	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	46.36	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	3.70	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%	0.10	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%		76.23	21.99	0.79-76.23 (22)	18.0
			%		99.75			19.8
	Urban Fringe Peri Urban			-		20.15	0.00-99.75 (22)	39.7
	Peri–Urban		%	-	98.52	74.23	0.00-98.52 (22)	
	Slum Area		%	-	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	173.90	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	174.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage					-		
	Central Sewerage System		%	80	100.0	31.00	0.0-100.0	35.2
	Central Water Supply Syster	m	%	100	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						. ,	
	Central Sewerage System		%	80.0	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	m	%	100	99.7.0	84.80	3.6–99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	8	Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System	l.	%	80	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tan	ık	%	0	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Ta	ank	%	18	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	2	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System		,,,	Ū	0110	10.0	0.0 01.0 (11)	
	Type I		%	0	100.0	99.0	0-100 (15)	68.4
			%	100	100.0			75.5
	Type Ia					87.0	0-100 (15)	
	Type II		%	-	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	-	100.0	100.0	0-100 (21)	85.4
	Type III		%	0	100.0	83.0	0-100 (14)	57.7
	Type Illa		%	100	100.0	100.0	0-100 (14)	87.8
	Type IV		%	0	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	100	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Waste Water Treatment Pla							
	Capacity (10,000 population		m3/d	-	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	-	100.0	100.0	0-100 (20)	49.8
		National Government	%	-	100.0	100.0	0-100 (20)	45.0
		Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant							
	Capacity		m3/d	-	814.0	110.0	50-814 (5)	227.8
	Jupuony	Provider			014.0	110.0	00 011 (0)	227.0
			0/		100.0	100.0	0 100 (15)	00.7
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	-	100.0	0	0-100 (15)	20.0
		Private	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services				10.0	10.0	0.40.(4)	7.5
	Desludging Services Frequency		year	-	12.0	10.0	2-12 (4)	1.0
		Provider	year	-	12.0	10.0	2-12 (4)	7.3
		Provider Government	year %	-	12.0	50.0	0-100 (13)	53.0

Colombo, Sri Lan	ka				For All	Surveyed Ci	ties and Munic	palities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						
		Central Water Supply–Individual	%	83.71	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply–Communal	%	16.29	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	0	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	1	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	120.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	1,052.40	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangen	nent		Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanitat						•		
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	1	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1-2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel		· ·						
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	_	100	100	76.60-100.00 (4)	87.1
	Private Sector		,0					01
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-	00.00	-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation				,				
Loga mandato or oantation	Number of Laws on Sanitation	n						
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted				-		()	
		Oldest	year	1947	2007	2000	1947-2007 (23)	1985
		Latest	year	1980	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges		you		2001	2000		
	Sumation of the onargos	Law on Collecting Fees	Y/N		17		17 (25)	
		Year Enacted	year	-	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
			UIII	Gity value	TOP Value	TOP QUALUE	naliye	Avelaye
Strategic Sanitation Plan	Evicting Conitation Dis-							
	Existing Sanitation Plan	With Constantion Dis-	VAL	V			11.07	
		With Sanitation Plan	Y/N	Y	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Conitation Disc							
	New Sanitation Plan							
	New Sanitation Plan	Will Prepare Sanitation Plan	Y/N	-			0000 0000 (5)	
	New Sanitation Plan	Preparation Year	year	-	2009	2008	2008–2009 (8)	2008
	New Sanitation Plan	Preparation Year Estimated Cost	year \$	-	395	250	0.03-395.00 (7)	101.25
	New Sanitation Plan	Preparation Year Estimated Cost Amount per Capita	year \$ \$/capita					
		Preparation Year Estimated Cost Amount per Capita Source of Fund	year \$ \$/capita list	- - - - -	395	250	0.03-395.00 (7)	101.25
	New Sanitation Plan	Preparation Year Estimated Cost Amount per Capita	year \$ \$/capita	- - - - 100-year old sewer system needs rehabilitation.	395	250	0.03-395.00 (7)	101.25
		Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year \$ \$/capita list list	system needs rehabilitation.	395	250	0.03-395.00 (7)	101.25
		Preparation Year Estimated Cost Amount per Capita Source of Fund	year \$ \$/capita list	system needs	395	250	0.03-395.00 (7)	101.25

 $\rm Y=yes,\, \rm N=no,\, lcpd=liters$ per capita per day, pop'n = population.

Colombo, Sri Lank	a				For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Annual	A / !	7.0		00.5	0.5.07.0 (07)	
	Source of Fund	Annual Amount	\$/capita	7.2	27.9	22.5	0.5-27.9 (27)	8.20
		National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	100	100.0	Ő	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	0	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Annual	A la sa ita			0.00	0.00.004 (44)	10
	Source of Fund	Annual Amount	\$/capita	8.3	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans	%	0	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	0	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Innual Revenues and Fees				•		•		
Fotal Revenue	0		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	¢/connection	10400	00	10.0	10.05 00 (5)	FF-7
		Connection Charge	\$/connection	19409	80	18.3	18.25-80 (5)	55.7 37.6
	Septic Tank Desludging Fee	Tariff Rate	\$/m3	-	90	6.0	1-90 (5)	37.0
	ocptic fails besideging fee	Private	\$/ST		133	30	4-133 (13)	47.0
		Government	\$/ST	-	30	22	3.5–30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution							
		Household Solid Waste	%	10	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	20	100	60	0-100 (24)	50.8
		Industrial Waste	%	38	38	10	0-38 (22)	9.4
		Commercial Waste	%	15	35	15	0-35 (22)	8.8
		Hospital Waste	%	17	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew	ater	Y/N	N				
	Current Wastewater Disposal	Own Treatment Plant	0/		100	0	0, 100 (10)	14.0
		Own Treatment Plant	%	-	100	2	0-100 (19)	14.6
		Central Sewer System	70	-		11	0-30 (19)	6.5
		No Treatment	%	-	100	100	0-100 (19)	68.6
		Others	% list	-	50	I	0-50 (19)	10.3
	Within River Basin	Description	Y/N	N				
	WIUIIII NIVEI DASIII	River Basin/Major River Name	name	IN				
		Basin Area	ha	-				
		City Location	u,m,d					
	Adjoining Town		ujinju					
	, , , , , , , , , , , , , , , , , , , ,	Pollution Load	vhvl	Heavy				
		Sanitation Work/Plan	i/c	Cooperative				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water							
		Total Coliform	MPN/100ml	-	107			
		BOD	mg/l	48	180	30	2.4-180	28.7
		COD Total Suspended Solids	mg/l	75 83.3	973	80	7.1-973	122.5
		Heavy Metals	mg/l mg/l	16.7	261 0.3	200 0.25	1–261 0.001–0.3	109.7 0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Conitation Delated Discourse		UIIIt	Gity value	iop value	Top Quartic	naliye	Average
	Sanitation-Related Diseases Reported Cases (per 10,000	population)						
		Diarrhea	#	0.73	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0.71	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	1.07	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years	s) (per 10,000 population)						
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	46	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	-	0.03	0.03 0.04	0.00-0.03 (6)	0.007
		Malaria	#		0.07		0.00-0.07 (6)	0.1

Negombo, Sri La	nka				For All	Surveyed Ci	ties and Munici	palities
Participating City								
Coordinator	Dr. Charles Lakshman Wijesooriya	а МОН						
Office	Health	a,						
		l anka						
Address	Municipal Council Negombo, Sri I	LdIIKd						
Fax	312222420							
Telephone	312224467							
E–mail address	negmayor@sltnet.lk							
	negriayor@siarct.ik							
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Population (2007)		#(000)	167.44	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
							,	
	Growth Rate		%	2.48	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	32.98	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	5.00	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	32.10	724.90	30.00	1.7–724.9 (19)	53.5
	Urban Poor		%	10.00	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	3.10	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%	-	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%		76.23	21.99	0.79–76.23 (22)	18.0
				-				
	Urban Fringe		%	-	99.75	20.15	0.00-99.75 (22)	19.8
	Peri–Urban		%	-	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area		%	-	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	50.40	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	3,166.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban		#/ha		110.00	29.00		19.9
				-			0.34-110.0 (17)	
	Slum Area		#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage					-		
	Central Sewerage System		%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	30	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage							
	Central Sewerage System		%	_	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System		%	30	99.7.0	84.80	3.6-99.7 (26)	57.7
	ochital water ouppiy oystern						0.0-00.1 (20)	51.1
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System		%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	60	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank		%	20	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine		%	20	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0		0.6
							0.3-0.9 (2)	
	VI. Open Defecation		%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	-	100.0	87.0	0-100 (15)	75.5
	Type II		%	100	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	0	100.0	100.0	0-100 (21)	85.4
	Type III		%	0	100.0	83.0	0-100 (14)	57.7
	Type Illa		%	100	100.0	100.0	0-100 (14)	87.8
	Type IV		%	50	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	50	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33–100 (2)	66.7
				-				
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & Vla		%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	-	100.0	0	0-100 (14)	13.9
Freatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant							
	Capacity (10,000 population)		m3/d	_	962.2	664.9	2.1-962.2 (22)	65.0
		wider	.no, a		002.2	001.0		00.0
		ovider						
	Loc	cal Government	%	-	100.0	100.0	0-100 (20)	49.8
	Nat	tional Government	%	-	100.0	100.0	0-100 (20)	45.0
		vate	%	_	100.0	0	0-100 (20)	5.3
			/0		100.0	U	0 100 (20)	0.0
	Septage Treatment Plant							
	Capacity		m3/d	-	814.0	110.0	50-814 (5)	227.8
		ovider						
			0/		100.0	100.0	0 100 (15)	00.7
		cal Government	%	-	100.0	100.0	0-100 (15)	66.7
	Nat	tional Government	%	-	100.0	0	0-100 (15)	20.0
	Priv	vate	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services		,0			, , , , , , , , , , , , , , , , , , ,		
							0.40.55	_
			year	-	12.0	10.0	2-12 (4)	7.3
	Frequency							
		ovider						
	Pro			100	100.0	50.0	0_100 (13)	52.0
	Pro	vernment vate	%	100 0	100.0 100.0	50.0 50.0	0–100 (13) 0–100 (13)	53.0 47.0

Negombo, Sri Lan	ika				For All	Surveyed Ch	ties and Munic	ipanties
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply Sou	ILCE						
		Central Water Supply-Individual	%	27.00	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	3.00	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	60.00	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	4.95	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0.10	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	4.95	35.00	0.02	0.00-35.00 (26)	2.80
			%	25.00		40.00		
		Population Buying Bottled Water		20.00	80.00		0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	131.50	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Drganizational Arrangem	nent		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in Sanitat								
	Public Sector	Net's and Oscillation 1		0			4.0 (7)	
		National Government	#	2	6	2	1-6 (5)	2.8
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								J
Logar mandato or ouritation	Number of Laws on Sanitatio	n						
	Number of Eaws on Gamaac	National	#	_	4	3	1-4 (18)	1.9
		Local		_			1-3 (15)	
	Voar Enacted	LUCAI	#	-	3	1	1-3 (13)	1.2
	Year Enacted			-				
	Year Enacted	Oldest	year	-	2007	2000	1947-2007 (23)	1985
				-				
	Year Enacted Sanitation Service Charges	Oldest Latest	year year		2007 2007	2000	1947–2007 (23) 1956–2007 (23)	1985
		Oldest Latest Law on Collecting Fees	year year Y/N	- - N	2007 2007 17	2000 2005	1947–2007 (23) 1956–2007 (23) 17 (25)	1985 1993
		Oldest Latest	year year Y/N year	-	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
•		Oldest Latest Law on Collecting Fees	year year Y/N	- - N - City Value	2007 2007 17	2000 2005	1947–2007 (23) 1956–2007 (23) 17 (25)	1985 1993
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees	year year Y/N year	-	2007 2007 17 2007	2000 2005 2003	1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1985 1993 1990
Planning Strategic Sanitation Plan		Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	- City Value	2007 2007 17 2007 Top Value	2000 2005 2003	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	-	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Averag e
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	- City Value	2007 2007 17 2007 Top Value	2000 2005 2003	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1985 1993 1990
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	year year Y/N year Unit Y/N year	- City Value	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1985 1993 1990 Average
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year year Y/N year Unit Y/N year Y/N	- City Value	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1985 1993 1990 Average 2006
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	year year Y/N year Unit Y/N year Y/N year	- City Value	2007 2007 17 2007 Top Value 11 2007 2009	2000 2005 2003 Top Quartile 2006 2008	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1985 1993 1990 Averag u 2006 2008
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year year Y/N year Unit Y/N year Y/N	- City Value	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2)	1985 1993 1990 Averag 2006 2008 101.25
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	year year Y/N year Unit Y/N year Y/N year	- City Value	2007 2007 17 2007 Top Value 11 2007 2009	2000 2005 2003 Top Quartile 2006 2008	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1985 1993 1990 Averag u 2006 2008
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	year year Y/N year Unit Y/N year Y/N year \$	- City Value	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
•	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year \$ \$/capita	- City Value	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
•	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita iist	- City Value N - - - - - - - No septage/sewage	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag 2006 2008 101.25
•	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year \$ \$/capita list list	- City Value N - - - - - - - - - - - - - No septae/sewage treatment facility.	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8) 0.03-395.00 (7)	1985 1993 1990 Averag u 2006 2008 101.25

Y= yes, N= no, lcpd = liters per capita per day, pop'n = population.

Negombo, Sri Lan	ka				For All	Surveyed Cit	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
		Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	9/.		90.0	0	0.0. 00.0 (17)	23.70
		Local Government	%	-	80.0 100.0	0	0.0-80.0 (17) 0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Source of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fullu	National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees								
Total Revenue	0		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	989	00	10.0	19.05 00 (5)	55.7
		Tariff Rate	\$/connection \$/m3	909	80 90	18.3 6.0	18.25-80 (5) 1-90 (5)	55.7 37.6
	Septic Tank Desludging Fee	ium fiato	ψηπο		50	0.0	1-30 (3)	57.0
		Private	\$/ST	0	133	30	4-133 (13)	47.0
		Government	\$/ST	10 (100%)	30	22	3.5–30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
	Courses of Water Dollution	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Household Solid Waste	%	67	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	0	100	60	0-100 (24)	50.8
		Industrial Waste	%	8	38	10	0-38 (22)	9.4
		Commercial Waste	%	25	35	15	0-35 (22)	8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N					
	Current Wastewater Disposal							
		Own Treatment Plant	%	-	100	2	0-100 (19)	14.6
		Central Sewer System No Treatment	%	-	30 100	11 100	0–30 (19) 0–100 (19)	6.5 68.6
		Others	%	-	50	100	0-50 (19)	10.3
		Description	list	-	00		0 00 (10)	10.0
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Maha Oya				
		Basin Area	ha	-				
	A distanta a Tanan	City Location	u,m,d	Downstream				
	Adjoining Town	Pollution Load	vh–vl	Medium				
		Sanitation Work/Plan	i/c	weulum				
Environmental Statistics		Canadon Wong Flan	Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		Unit	ony value	TOP Value	Top quartito	nunge	Average
	Surface Water							
		Total Coliform	MPN/100ML	10,200				
		BOD	mg/l	6	180	30	2.4-180	28.7
		COD	mg/l	22	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
Lastin Cististics		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases	nonulation)						
	Reported Cases (per 10,000	Diarrhea	#	0.64	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0.13	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	0.13	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years			0				
		Diarrhea Hepatitis A & E	#	0	0.47	0.1	0.0-0.5 (7)	0.1
			#	2	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0	0.01	0-0 (6)	0
				-		0.01		

Cam Ranh, Viet N	lam			For All	Surveyed C	ities and Munici	palities
Participating City							
Coordinator	Mr. Bui Ngoc Phuc, Director						
Office	Cam Ranh Joint Stock Urban Works Company (CADOCO)						
Address	70 Nguyen Trong Ky Str., Cam Ranh, Khanh Hoa, Viet Nam						
ax	8458855079						
Telephone	8458855079						
E–mail address	cadoco@gmail.com						
		11	City Value	Ten Value	Ten Questile	Donno	Augros
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)	#(000)	90.90	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	1.80	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	18.26	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.97	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%		724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	15.12	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	68.80	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%		76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	_	99.75	20.15	0.00-99.75 (22)	19.8
	-		-				39.7
	Peri–Urban	%	-	98.52	74.23	0.00-98.52 (22)	
	Slum Area	%	-	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	1.30	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	-	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	-	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage						-
	Central Sewerage System	%	0	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	35	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage	/6	00	100.0	00.00	0.0 100 (20)	00.0
	Central Sewerage System	%		100.0	55.00	0-100.0 (1)	29.0
			-				
	Central Water Supply System	%	35.1	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	62	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	25	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	13	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type Ia	%	-	100.0	87.0	0-100 (15)	75.5
	Type II	%	0	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	-	100.0	83.0	0-100 (14)	57.7
	Type Illa	%	-	100.0	100.0	0-100 (14)	87.8
	Type IV	%	0	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	100	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33–100 (18)	66.7
		%	-	67.0	82.0		66.7
	Type Va		_			0-67 (23)	
	Type VI & VIa	%	0 100	100.0	100.0	0-100 (14)	100.0
	Type VIb				0	0-100 (14)	13.9
freatment Facility	Wester Wester Transforment Di	Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant Capacity (10,000 population)	m3/d		962.2	664.9	2.1-962.2 (22)	65.0
		1113/U	-	902.2	004.9	2.1-902.2 (22)	05.0
	Provider						
	Local Government	%	-	100.0	100.0	0-100 (20)	49.8
	National Government	%	-	100.0	100.0	0-100 (20)	45.0
	Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant						
	Capacity	m3/d	-	814.0	110.0	50-814 (5)	227.8
	Provider					. ,	
	Local Government	%	_	100.0	100.0	0-100 (15)	66.7
	National Government	%		100.0	0	0-100 (15)	20.0
	Private	%	-	100.0	0	0-100 (15)	
		70	-	100.0	U	0-100 (15)	13.3
	Desludging Services					0.40.70	
					10.0	2 12 (1)	7.3
	Frequency	year	-	12.0	10.0	2-12 (4)	1.0
	Frequency Provider						
	Frequency	year %	- 10	100.0	50.0	0-100 (13)	53.0

Cam Ranh, Viet N	vam				For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Household Water Supply So	urce						
		Central Water Supply-Individual	%	27.14	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	8.00	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	12.91	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	5.94	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	45.52	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0.49	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	0.45	80.00	40.00	0-80 (18)	20.70
			lpcd	122.00	160.00	135.00		97.10
		Average Water Consumption					40-160 (20)	
		Water Treatment Facilities	lpcd	66.0	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Drganizational Arrange	ement		Unit	City Value	Top Value	Top Quartile	Range	Averag
nstitutions Involved in Sanit								
	Public Sector	National Covernment			0	0	1.6 (5)	2.8
		National Government	#	-	6	2	1-6 (5)	
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	1	2	1	1–2 (11)	1.3
	Private Sector	M/	"			0	0.0 (4)	
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector	T			400 77	00.50	0.40.400.77.47	
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	(
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Averag
Legal Mandate of Sanitation	l							
	Number of Laws on Sanitation							
		National	#	2	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	2003	2007	2000	1947-2007 (23)	1985
		Latest	year	2007	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges		í				. ,	
	Ū	Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	2003	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Averag
Strategic Sanitation Plan				•		•		
on alogio ou madon i han	Existing Sanitation Plan							
	Existing bandation rian	With Sanitation Plan	Y/N	N	11		11–27	
		When Prepared	year	N	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan	when riepaleu	year	-	2007	2000	2000-2007 (2)	2000
	Now Sanitation Fian	Will Prepare Sanitation Plan	Y/N					
				-	2009	2008	0000 0000 (0)	0000
		Preparation Year	year	-			2008-2009 (8)	2008
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list					
		Future Programs/Projects	list	-				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.3
		Funding Source	list					

 $Y=yes,\,N=no,\,lcpd=liters$ per capita per day, pop'n = population.

Cam Ranh, Viet Na	im				For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment	Annual Amount	¢ (a an ita		07.0	00.5	0.5.07.0 (07)	0.00
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	oouroo or rund	National Government	%	-	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost	Annual Annual	Q (a see its			0.00	0.00.0.04 (44)	10
	Source of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for Se	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees								
Total Revenue	Coursed Area Charact		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	1460	80	18.3	19.05 00 (5)	55.7
		Tariff Rate	\$/connection \$/m3	-	90	6.0	18.25-80 (5) 1-90 (5)	55.7 37.6
	Septic Tank Desludging Fee	ium nato	ψηπο		50	0.0	1-30 (3)	57.0
		Private	\$/ST	(90%)	133	30	4-133 (13)	47.0
		Government	\$/ST	22 (10%)	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Laurahald Calid Masta	0/	0	07	15	0.07(0.4)	00.0
		Household Solid Waste Household Liquid Waste	%	0 100	67	45	0-67 (24)	20.8
		Industrial Waste	%	0	100	60 10	0-100 (24)	50.8
		Commercial Waste	%	0	35	15	0-38 (22) 0-35 (22)	9.4 8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Ŷ		0	0 11 (22)	0.2
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
	Within Diver Desin	Description	list	-				
	Within River Basin	River Basin/Major River Name	Y/N name	N				
		Basin Area	ha	-				
		City Location	u,m,d					
	Adjoining Town							
		Pollution Load	vhvl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water							
		Total Coliform	#/ml	-			0.4.400	00.5
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD Total Supponded Solida	mg/l	-	973	80	7.1-973	122.5
		Total Suspended Solids Heavy Metals	mg/l mg/l	-	261 0.3	200 0.25	1–261 0.001–0.3	109.7 0.17
Health Statistics		Tiouvy Motalo	Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases		Unit	City value	TOP Value	Top Quartite	nanye	Average
	Reported Cases (per 10,000) nonulation)						
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	-	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 year		11		0.47	0.4	0.0.05(7)	
		Diarrhea Honotitic A & E	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E Trachoma	#	-	1.18	0	0.0-1.2 (10)	1.2
		Acute Lower Respiratory Infection	#	-	0	0.01	0-0 (6) 0.00-0.27 (6)	0.2
								0.2
		Measles	#	-	0.03	0.03	0.00-0.03 (6)	0.007

Ho Chi Minh, Vie	t Nam			For All	Surveyed Ci	ties and Munici	palities
Participating City							-
Coordinator	Nguyen Van Phuoc, Vice Director						
		ant					
Office	Department of Natural Resources and Enviro						
Address	63 Ly Tu Trong, District 1, Ho Chi Minh City,	t Nam					
ax	8488221870						
Telephone	8488221861						
E–mail address	piuvie1702@hcm.vnn.vn						
	piuvier/oz@ncm.viii.vii						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)	#(000)	6,651.00	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
						,	
	Growth Rate	%	3.2	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	1,602.64	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	4.12	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%	-	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	3.75	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	209.50	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%	-	69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%	0	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe	%	0	99.75	20.15	0.00-99.75 (22)	19.8
	-						
	Peri-Urban	%	76.40	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	0.16	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	31.70	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	108.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha		438.00	21.99		73.7
			-			4.0-438.0 (17)	
	Urban Fringe	#/ha	-	282.00	113.00	3-282.0 (12)	64.8
	Peri–Urban	#/ha	7.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area	#/ha	732.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	A	om	ony value	TOP Value	Top quartific	nango	Averag
	Area Coverage	0/	04	100.0	04.00	0.0.400.0	05.0
	Central Sewerage System	%	31	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	45.6	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						
	Central Sewerage System	%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	37.5	99.7.0	84.80	3.6-99.7 (26)	57.7
	Geniral Water Supply System			99.7.0	04.00	3.0-99.7 (20)	37.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	0	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type la	%	_	100.0	87.0	0-100 (15)	75.5
			_				
	Type II	%	-	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	-	100.0	100.0	0-100 (21)	85.4
	Type III	%	-	100.0	83.0	0-100 (14)	57.7
	Type Illa	%	_	100.0	100.0	0-100 (14)	87.8
			_			. ,	
	Type IV	%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	-	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	_	67.0	80.0	0-67 (23)	66.7
			_				
	Type VI & Vla	%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	-	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant						
	Capacity (10,000 population)	m3/d	141,000	962.2	664.9	2.1-962.2 (22)	65.0
	Provider						
	Local Governi	ıt %	100	100.0	100.0	0-100 (20)	49.8
			100			· · /	
	National Gove		-	100.0	100.0	0-100 (20)	45.0
	Private	%	-	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant						
	Capacity	m3/d	_	814.0	110.0	50-814 (5)	227.8
		115/0	_	014.0	110.0	30-014 (3)	221.0
	Provider						
	Local Govern	ıt %	-	100.0	100.0	0-100 (15)	66.
	National Gove		-	100.0	0	0-100 (15)	20.0
	Private	%		100.0	0	0-100 (15)	13.
		70	_	100.0	U	0-100 (10)	13.
	Desludging Services						
				12.0	10.0	2-12 (4)	7.3
	Frequency	year	-	12.0	10.0	2-12 (4)	
		year	-	12.0	10.0	2-12 (4)	
	Provider		-				
		year % %	-	100.0	50.0 50.0	0–100 (13) 0–100 (13)	53.0

Ho Chi Minh, Vie	t Nam				For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce						-
	nouconoid mater cappij con	Central Water Supply–Individual	%	37.48	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply–Communal	%	-	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	-	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	_	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	-	45.52	0.10	0.00-45.52 (26)	5.98
				-				
		Water Vendor	%	-	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	150.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	185.80	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
Organizational Arrange	ment		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in Sanit			Unit	ony value	Top Value	Top quartite	nange	Average
ISULULIONS INVOIVED IN SAME	Public Sector							
	. 3510 000101	National Government	#	6	6	2	1-6 (5)	2.8
				0	4	2		
		Local Government	#	I			1-4 (21)	1.7
		State-Owned Utility	#	-	2	1	1–2 (11)	1.3
	Private Sector							
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	-		-	- (0)	
		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	_	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%		43.70	43.7	12.7-43.70 (4)	23.9
			%	-	43.70	43.7		
		Construction		-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
	Number of Laws on Sanitation	n						
		National	#	1	4	3	1-4 (18)	1.9
		Local	#	3	3	1	1-3 (15)	1.2
	Year Enacted							
		Oldest	year	2006	2007	2000	1947-2007 (23)	1985
		Latest	year	2007	2007	2005	1956-2007 (23)	1993
	Qualitation Quality Observes	LdleSi	yeai	2007	2007	2005	1930-2007 (23)	1993
	Sanitation Service Charges		1/01	V	47		47 (05)	
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	2003	2007	2003	1956-2007 (17)	1990
						T O	Range	Average
Planning			Unit	City Value	Top Value	Top Quartile	•	monago
			Unit	City Value	Top Value	lop Quartile	•	
	Existing Sanitation Plan		Unit	City Value	Top Value	lop Quartile		ritorago
Planning Strategic Sanitation Plan	Existing Sanitation Plan	With Sanitation Plan	Unit Y/N	City Value	Top Value	lop Quartile	11-27	ittorage
	Existing Sanitation Plan	With Sanitation Plan When Prepared				2006	-	2006
			Y/N		11		11–27	
	Existing Sanitation Plan New Sanitation Plan	When Prepared	Y/N year		11		11–27	
		When Prepared Will Prepare Sanitation Plan	Y/N year Y/N		11 2007	2006	11–27 2006–2007 (2)	2006
		When Prepared Will Prepare Sanitation Plan Preparation Year	Y/N year Y/N year		11 2007 2009	2006	11–27 2006–2007 (2) 2008–2009 (8)	2006 2008
		When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	Y/N year Y/N year \$		11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
		When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	Y/N year Y/N year \$ \$/capita		11 2007 2009	2006	11–27 2006–2007 (2) 2008–2009 (8)	2006 2008
		When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	Y/N year Y/N year \$		11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
		When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	Y/N year Y/N year \$ \$/capita	Y - - - - Wastewater	11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
	New Sanitation Plan	When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	Y/N year Y/N year \$ \$/capita list	Y	11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
	New Sanitation Plan	When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	Y/N year Y/N year \$ \$/capita list	Y - - - - Wastewater	11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
	New Sanitation Plan	When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	Y/N year Y/N year \$ \$/capita list	Y - - - - - Wastewater discharged into	11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25
	New Sanitation Plan	When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	Y/N year Y/N year \$ \$/capita list list	Y - - - - Wastewater discharged into canals and rivers.	11 2007 2009 395	2006 2008 250	11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	2006 2008 101.25

 $Y=yes,\,N=no,\,lcpd=liters\,per\,capita\,per\,day,\,pop'n=population.$

Ho Chi Minh, Viet I	Nam				For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment			-			-	
	One of Faced	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%	0	00.0	0	0.0.00.0 (17)	00.70
		Local Government	%	0	80.0 100.0	0	0.0-80.0 (17) 0.0-100.0 (17)	23.70 32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	Ő	0	Ő	0-0 (17)	0
		Others	%	100	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
•	Annual O&M Cost					•		
		Annual Amount	\$/capita	0.9	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund							
		National Government	%	0	47.0	0	0-47 (17)	3.4
		Local Government	%	100	100.0	100.00	0-100 (17)	57.6
		Loans Tariff Revenue	%	0	53.0	50.00 50.00	0-53 (17)	9.0
		Others	%	0	100.0 100.0	50.00	0-100 (17) 0-100 (17)	24.1 5.9
Development and F erry (ev. 0		Guicia						
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees			01					
Total Revenue	Coward Area Charges		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	_	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/connection \$/m3	_	90	6.0	18.25-80 (5)	55.7 37.6
	Septic Tank Desludging Fee		φ, 110		50	0.0	1 30 (3)	07.0
	ooptio faint boold aging roo	Private	\$/ST		133	30	4-133 (13)	47.0
		Government	\$/ST	-	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution					•		
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution							
		Household Solid Waste	%	5	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	60	100	60	0-100 (24)	50.8
		Industrial Waste	%	25	38	10	0-38 (22)	9.4
		Commercial Waste	%	5	35	15	0-35 (22)	8.8
	Dellates to Treat Orac Western	Hospital Waste	%	5	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastew		Y/N	N				
	Current Wastewater Disposal	Own Treatment Plant	%	80	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	20	100	100	0-100 (19)	68.6
		Others	%	0	50	1	0-50 (19)	10.3
		Description	list	-				
	Within River Basin		Y/N	Y				
		River Basin/Major River Name	name	Sai Gon–Dong Nai				
		Basin Area	ha	4,826,800				
		City Location	u,m,d	Downstream				
	Adjoining Town	Dell-dise Lood						
		Pollution Load	vh–vl	Heavy				
		Sanitation Work/Plan	i/c	Individual				
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality							
	Surface Water							
		Total Coliform	MPN/100ml	22,000	400	00	0.4.400	00.7
		BOD COD	mg/l	4.5 10.83	180	30	2.4-180	28.7
		Total Suspended Solids	mg/l mg/l	261.00	973 261	80 200	7.1–973 1–261	122.5 109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Joolth Statistics		The second se		City Value				
Health Statistics			Unit	Gity value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases	a secolation)						
	Reported Cases (per 10,000	Diarrhea	#	10.1	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	0.22	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	2.96	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	15,781.92	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	0.18	4.45	2.29	0.00-4.45 (9)	1.1
		Malaria	#	0.09	-	9.07	0.09-28.91 (10)	5.0
	Death (children under 5 years	s) (per 10,000 population)						
		Diarrhea	#	1	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	149	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	0	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	8	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	0	0.03	0.03	0.00-0.03 (6)	0.007
		Malaria	#	0	0.07	0.04	0.00-0.07 (6)	0.1

Hue, Viet Nam					For All	Surveyed C	ities and Munici	palities
Participating City								
Coordinator	Nguyen Nhien, Director of BOF	A						
Office	BOFA							
Address	01 Le Hong Phong							
Fax	8454220445							
Telephone	8454220444							
E-mail address	info@doingoal.org							
			Unit	City Volue	Ton Volue	Top Quartila	Bongo	Averen
Demographics			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)		#(000)	327.80	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate		%	1.25	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household		#(000)	64.20	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size		#	5.10	7.04	5.10	3-7.04 (27)	4.9
	Floating Population		%	20.00	724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor		%	30.00	46.36	31.12	0.00-46.36 (24)	18.4
	City Area		ha (000)	7.10	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core		%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core		%	14.06	76.23	21.99	0.79-76.23 (22)	18.0
	Urban Fringe		%	9.14	99.75	20.15		19.8
							0.00-99.75 (22)	39.7
	Peri–Urban		%	6.40	98.52	74.23	0.00-98.52 (22)	
	Slum Area		%	0.70	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density		#/ha	46.10	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core		#/ha	60.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core		#/ha	50.00	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe		#/ha	20.00	282.00	113.00	3-282.0 (12)	64.8
	Peri-Urban		#/ha	30.00	110.00	29.00	0.34-110.0 (17)	19.9
	Slum Area		#/ha	40.00	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage			,				
	Central Sewerage System		%	100	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System		%	84.3	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage		,,,	0110	10010	00.00	0.0 100 (20)	00.0
	Central Sewerage System		%	49.8	100.0	55.00	0-100.0 (1)	29.0
	• ,							
	Central Water Supply System		%	98	99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type		Unit	City Value	Top Value	Top Quartile	Range	Average
	I. Central Sewerage System		%	50	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank		%	38	100.0	62.0	0.0-100.0 (27)	47.7
	III. Communal with Septic Tanl	4	%	0.1	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	,	%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation		%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation		%	12	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System							
	Type I		%	47	100.0	99.0	0-100 (15)	68.4
	Type Ia		%	53	100.0	87.0	0-100 (15)	75.5
	Type II		%	41	100.0	100.0	0-100 (21)	69.5
	Type IIa		%	59	100.0	100.0	0-100 (21)	85.4
	Type III		%	100	100.0	83.0	0-100 (21)	57.7
	Type IIIa		%	0	100.0	100.0	0-100 (14)	87.8
	Type IV		%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa		%	-	100.0	99.0	0-100 (18)	66.9
	Type V		%	-	100.0	82.0	33-100 (2)	66.7
	Type Va		%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa		%	0	100.0	100.0	0-100 (14)	100.0
	Type VIb		%	100	100.0	0	0-100 (14)	13.9
Treatment Facility			Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant	1						
	Capacity (10,000 population)		m3/d	-	962.2	664.9	2.1-962.2 (22)	65.0
		Provider						
		Local Government	%	-	100.0	100.0	0-100 (20)	49.8
		National Government	%	_	100.0	100.0	0-100 (20)	45.0
		Private	%		100.0	0	0-100 (20)	45.0
	Septage Treatment Plant	i intato	/0	-	100.0	U	0-100 (20)	J.3
					0110	110.0	E0.044.00	007
	Capacity		m3/d	-	814.0	110.0	50-814 (5)	227.8
		Provider						
		Local Government	%	-	100.0	100.0	0-100 (15)	66.7
		National Government	%	-	100.0	0	0-100 (15)	20.0
		Private	%	-	100.0	0	0-100 (15)	13.3
	Desludging Services					-		. 510
	Frequency		year	-	12.0	10.0	2-12 (4)	7.3
		Provider	ycai	-	12.0	10.0	2-12 (4)	1.3
		Covernment	0/	00				
		Government Private	%	99 1	100.0 100.0	50.0 50.0	0-100 (13) 0-100 (13)	53.0 47.0

					For All	Surveyed Cit	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						
		Central Water Supply–Individual	%	91.90	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	6.07	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	2.02	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	0	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	15.00	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	-	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	457.60	1,371.50	197.40		11.80
				407.00			14.0-1,371.5(22)	
		Local Government	%	-	100.00	100.00	100.0 (22)	49.80
		National Government	%	-	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	-	100.00	0	0-100 (22)	5.30
Organizational Arrangem			Unit	City Value	Top Value	Top Quartile	Range	Average
Institutions Involved in Sanitat								
	Public Sector	National Government	#		6	2	1-6 (5)	2.8
			#	- 1		2		
		Local Government			4		1-4 (21)	1.7
	Driveto Contor	State-Owned Utility	#	1	2	1	1–2 (11)	1.3
	Private Sector	Water Utility	#		2	2	2-2 (1)	2.0
			#	-	2	2		2.0
		Enterprise		-		-	- (0)	
Number of Descended		Nongovernment Organization	#	-	-	-	- (0)	-
Number of Personnel	Dublic Contex							
	Public Sector	7.1.0			100 77	00.50	0.40.400.77.47	
		Total Personnel (per 10,000 pop'n)	#	36.3	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	43.7	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation								
	Number of Laws on Sanitation	n						
		National	#	1	4	3	1-4 (18)	1.9
								1.5
		Local	#	-	3	1	1-3 (15)	1.5
	Year Enacted	Local	#	-	3	1		
	Year Enacted	Local Oldest	# year	- 2005	3	1 2000		
	Year Enacted			- 2005 2005			1–3 (15)	1.2
		Oldest	year		2007	2000	1–3 (15) 1947–2007 (23)	1.2 1985
	Year Enacted Sanitation Service Charges	Oldest Latest	year year		2007	2000	1–3 (15) 1947–2007 (23) 1956–2007 (23)	1.2 1985
		Oldest	year	2005	2007 2007	2000	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25)	1.2 1985
Planning		Oldest Latest Law on Collecting Fees	year year Y/N	2005 Y	2007 2007 17 2007	2000 2005	1–3 (15) 1947–2007 (23) 1956–2007 (23)	1.2 1985 1993 1990
		Oldest Latest Law on Collecting Fees	year year Y/N year	2005 Y 2007	2007 2007 17	2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993
Planning Strategic Sanitation Plan		Oldest Latest Law on Collecting Fees	year year Y/N year	2005 Y 2007	2007 2007 17 2007	2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees	year year Y/N year	2005 Y 2007	2007 2007 17 2007	2000 2005 2003	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17)	1.2 1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan	year year Y/N year Unit Y/N	2005 Y 2007 City Value	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.2 1985 1993 1990 Average
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted	year year Y/N year Unit	2005 Y 2007 City Value	2007 2007 17 2007 Top Value	2000 2005 2003	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range	1.2 1985 1993 1990
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared	year year Y/N year Unit Y/N year	2005 Y 2007 City Value	2007 2007 17 2007 Top Value 11	2000 2005 2003 Top Quartile	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27	1.2 1985 1993 1990 Average
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan	year year Y/N year Unit Y/N year Y/N	2005 Y 2007 City Value N - -	2007 2007 17 2007 Top Value 11 2007	2000 2005 2003 Top Quartile 2006	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2)	1.2 1985 1993 1990 Average 2006
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year	year year Y/N year Unit Y/N year Y/N year	2005 Y 2007 City Value N - 2008	2007 2007 17 2007 Top Value 11 11 2007 2009	2000 2005 2003 Top Quartile 2006	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1.2 1985 1993 1990 Averag 2006 2008
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost	year year Y/N year Unit Y/N year Y/N year \$	2005 Y 2007 City Value N - - 2008 250.0	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year \$/N year \$/capita	2005 Y 2007 City Value N - - 2008 2008 250.0 762.7	2007 2007 17 2007 Top Value 11 11 2007 2009	2000 2005 2003 Top Quartile 2006	1-3 (15) 1947-2007 (23) 1956-2007 (23) 17 (25) 1956-2007 (17) Range 11-27 2006-2007 (2) 2008-2009 (8)	1.2 1985 1993 1990 Averag 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita iist	2005 Y 2007 City Value N - 2008 250.0 762.7 JBIC	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008
	Sanitation Service Charges	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita	year year Y/N year Unit Y/N year \$/N year \$/capita	2005 Y 2007 City Value N - 2008 250.0 762.7 JBIC Rivers/lakes water	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund Major Sanitation Problem	year year Y/N year Unit Y/N year \$ \$/capita list list	2005 Y 2007 City Value N - 2008 250.0 762.7 JBIC Rivers/lakes water pollution	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25
	Sanitation Service Charges Existing Sanitation Plan New Sanitation Plan	Oldest Latest Law on Collecting Fees Year Enacted With Sanitation Plan When Prepared Will Prepare Sanitation Plan Preparation Year Estimated Cost Amount per Capita Source of Fund	year year Y/N year Unit Y/N year Y/N year \$ \$ \$(capita iist	2005 Y 2007 City Value N - 2008 250.0 762.7 JBIC Rivers/lakes water	2007 2007 17 2007 Top Value 11 2007 2009 395	2000 2005 2003 Top Quartile 2006 2008 250	1–3 (15) 1947–2007 (23) 1956–2007 (23) 17 (25) 1956–2007 (17) Range 11–27 2006–2007 (2) 2008–2009 (8) 0.03–395.00 (7)	1.2 1985 1993 1990 Averag 2006 2008 101.25

Y= yes, N= no, lcpd = liters per capita per day, pop'n = population.

Hue, Viet Nam					For All	Surveyed Cit	ties and Munici	palities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Source of Fund	Annual Amount	\$/capita	3.7	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fullu	National Government	%	0	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	0	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	0	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	0	0	0	0-0 (17)	0
		Others	%	100	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
		Annual Amount	\$/capita	3.7	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	National Covernment	0/	10	47.0	0	0 47 (17)	0.4
		National Government Local Government	%	10 10	47.0 100.0	0 100.00	0-47 (17) 0-100 (17)	3.4 57.6
		Loans	%	50	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	30	100.0	50.00	0-100 (17)	24.1
		Others	%	0	100.0	00.00	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees	51 11063		Unit	Gity value	iop value	iop quartite	naliye	Average
Total Revenue			\$/capita	9.2	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges		e, oupru		10	0.1	0.1 10.0 (1)	0.0
		Connection Charge	\$/connection	3898	80	18.3	18.25-80 (5)	55.7
		Tariff Rate	\$/m3	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Décete	A (CT	10				
		Private	\$/ST	4.0 (1%)	133	30	4-133 (13)	47.0
	Other Fees	Government	\$/ST \$	3.5 (99%)	30	22	3.5–30 (13)	18.0
Environmental Situation	041011000		Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution		Unit	ony value	TOP Value	iop quartite	nanye	Average
	water quality and rollution	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Thator duality monitorod	.,		20			
		Household Solid Waste	%	50	67	45	0-67 (24)	20.8
		Household Liquid Waste	%	36	100	60	0-100 (24)	50.8
		Industrial Waste	%	5	38	10	0-38 (22)	9.4
		Commercial Waste	%	5	35	15	0-35 (22)	8.8
		Hospital Waste	%	4	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	N				
	Current Wastewater Disposa		0/	7	400	0	0.400.(40)	44.0
		Own Treatment Plant	%	7	100	2	0-100 (19)	14.6
		Central Sewer System		23	30	11	0-30 (19)	6.5
		No Treatment	%	60	100	100	0-100 (19)	68.6
		Others	%	10	50	I	0-50 (19)	10.3
	Within River Basin	Description	list	- Y				
	WILIIIII RIVER BASIII	River Basin/Major River Name	Y/N name	r Perfume river				
		Basin Area	ha	5,000				
		City Location	u,m,d	Midstream				
	Adjoining Town	ony Loodion	ujinju	maotroam				
		Pollution Load	vh-vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality			•		•		
	Surface Water							
		Total Coliform	MPN/100ml	5,000				
		BOD	mg/l	15	180	30	2.4-180	28.7
		COD	mg/l	7.1	973	80	7.1-973	122.5
		Total Suspended Solids	mg/l	60	261	200	1-261	109.7
		Heavy Metals	mg/l	0.03	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000			7.00		470.10	0.0.504.4.40	
		Diarrhea	#	7.23	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	6.86	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma Acute Lower Pespiratory Infection	#	1.71	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	#	4.95	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles Malaria	#	8.96 3.54	4.45	2.29 9.07	0.00-4.45 (9) 0.09-28.91 (10)	1.1 5.0
	Death (children under 5 year		#	0.04	_	9.07	0.05-20.91 (10)	5.0
	_ call (ormation and or of your	Diarrhea	#	1	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	225	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	0	0	Ū	0-0 (6)	0
		Acute Lower Respiratory Infection	#	0	0.27	0.01	0.00-0.27 (6)	0.2
		Measles	#	1 0	0.03 0.07	0.03 0.04	0.00-0.03 (6) 0.00-0.07 (6)	0.007

Song Cau, Viet N	lam			For All	Surveyed C	ities and Munici	palities
Participating City							-
Coordinator	Mr. Nauvon Dhu, Director						
	Mr. Nguyen Phu, Director						
Office	Water Supply and Drainage One Men						
Address	National Road No. 25, Ngoc Binh Co	ne, Tuy Hoa C					
ax	8457828388						
Telephone	8457827030						
E–mail address	bqlpy@vnn.vn						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
· · J · I· · ·	Deputation (0007)		-		-		
	Population (2007)	#(000)	20.20	11,000.00	959.10	21.14-11,000.00 (27)	1,273.
	Growth Rate	%	4.67	7.10	4.50	0.4-7.1 (27)	2.
	Number of Household	#(000)	4.22	2,301.30	152.00	4.2-2,301.3 (27)	269.
	Average Household Size	#	4,79	7.04	5.10	3-7.04 (27)	4.
	Floating Population	%		724.90	30.00	1.7–724.9 (19)	53.
			04.00				
	Urban Poor	%	31.66	46.36	31.12	0.00-46.36 (24)	18
	City Area	ha (000)	1.50	2,101.20	90.30	1.5-2,101.2 (27)	15
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.
	Secondary Urban Core	%		76.23	21.99	0.79-76.23 (22)	18.
	Urban Fringe	%	-	99.75	20.15	0.00-99.75 (22)	19.
	Peri–Urban	%	-	98.52	74.23	0.00-98.52 (22)	39.
	Slum Area	%	-	35.96	7.74	0.00-35.96 (22)	4.
	Average City Density	#/ha	13.90	305.60	50.40	0.2-305.6 (0)	51.
	Urban Core	#/ha	-	3,166.00	163.00	6.0-3,166.0 (24)	230.
	Secondary Urban Core	#/ha	-	438.00	21.99	4.0-438.0 (17)	73.
	Urban Fringe	#/ha	-	282.00	113.00	3-282.0 (12)	64.
	Peri–Urban	#/ha	-	110.00	29.00	0.34–110.0 (17)	19.
	Slum Area	#/ha	-	3,858.00	627.00	18–3,858.0 (11)	525.
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Avera
	Area Coverage						
	Central Sewerage System	%	0	100.0	31.00	0.0-100.0	35.
	Central Water Supply System	%	54	100.0	85.88	0.3-100 (25)	50.3
		70	04	100.0	00.00	0.3-100 (23)	00.0
	Population Coverage						
	Central Sewerage System	%	-	100.0	55.00	0-100.0 (1)	29.0
	Central Water Supply System	%	54.1	99.7.0	84.80	3.6-99.7 (26)	57.
Operation Frankling							
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System	%	0	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	70	100.0	62.0	0.0-100.0 (27)	47.3
	III. Communal with Septic Tank	%	0	20.0	0.8	0.0-20.0 (13)	4.4
	IV. Pit Latrine	%	25	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.0
	VI. Open Defecation	%	5	61.0	13.0	0.0-61.0 (14)	17.0
		/0	J	01.0	13.0	0.0-01.0 (14)	17.5
	Toilet System						
	Type I	%	-	100.0	99.0	0-100 (15)	68.4
	Type la	%	-	100.0	87.0	0-100 (15)	75.
	Type II	%	0	100.0	100.0	0-100 (21)	69.
	Type IIa	%	100	100.0	100.0	0-100 (21)	85.4
	Type III	%	-	100.0	83.0	0-100 (14)	57.
	Type Illa	%	-	100.0	100.0	0-100 (14)	87.
		%	0				
	Type IV			100.0	86.0	0-100 (18)	66.
	Type IVa	%	100	100.0	99.0	0-100 (18)	66.9
	Type V	%	-	100.0	82.0	33-100 (2)	66.
	Type Va	%	-	67.0	80.0	0-67 (23)	66.
		%	0	100.0	100.0		
	Type VI & VIa					0-100 (14)	100.0
	Type VIb	%	100	100.0	0	0-100 (14)	13.9
Treatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant						
	Capacity (10,000 population)	m3/d	-	962.2	664.9	2.1-962.2 (22)	65.0
	Provid						
	Local	nment %	_	100.0	100.0	0-100 (20)	49.
		vernment %	-	100.0	100.0	0-100 (20)	45.
	Private	%	-	100.0	0	0-100 (20)	5.
	Septage Treatment Plant						
	Capacity	m3/d		814.0	110.0	50-814 (5)	227.
		IIIo/d	-	014.0	110.0	30-014 (3)	221.
	Provid			100.0	100.0	0-100 (15)	66.
		nment %	-				
	Provid Local		-	100.0	0	0-100 (15)	
	Provid Local (Nation	vernment %	-	100.0	0	0-100 (15)	
	Provid Local I Nation Private		-	100.0 100.0	0 0	0–100 (15) 0–100 (15)	
	Provid Local (Nation	vernment %	-		0 0		
	Provid Local Nation Private Desludging Services	vernment %	-	100.0		0-100 (15)	13.
	Provid Local Nation Private Desludging Services Frequency	vernment %	-		0 0 10.0		13.
	Provid Local I Nation Private Desludging Services Frequency Provid	vernment % % year	-	100.0	10.0	0–100 (15) 2–12 (4)	13. 7.
	Provid Local Nation Private Desludging Services Frequency	vernment % % year	-	100.0		0-100 (15)	20.0 13.3 7.3 53.0 47.0

Song Cau, Viet Na	IM				For All	Surveyed Ci	ties and Munic	ipalities
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	Irce						
		Central Water Supply-Individual	%	54.08	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply–Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	20.68	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	0	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	25.24	45.52	0.10	0.00-45.52 (26)	5.98
			%				. ,	
		Water Vendor		0	35.00	0.02	0.00-35.00 (26)	2.80
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	120.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	148.50	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	0	100.00	100.00	100.0 (22)	49.80
		National Government	%	100.00	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Drganizational Arrangen	ient		Unit	City Value	Top Value	Top Quartile	Range	Average
stitutions Involved in Sanitat	ion							-
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	1	2	1	1-2 (11)	1.3
	Private Sector						()	
		Water Utility	#	_	2	2	2-2 (1)	2.0
		Enterprise	#		2	2		2.0
			#	-		-	- (0)	
land a Change and		Nongovernment Organization	Ŧ	-	-	-	- (0)	-
Number of Personnel								
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework			Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation						-		
·	Number of Laws on Sanitation	n						
		National	#	2	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted	Local	TT TT	I	5	1	1-0 (13)	1.2
	Year Enacled	Oldert		0000	0007	0000	40.47, 0007 (00)	4005
		Oldest	year	2003	2007	2000	1947-2007 (23)	1985
		Latest	year	2007	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	2003	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Y	11		11-27	
		When Prepared	year	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan						.,	
		Will Prepare Sanitation Plan	Y/N	_				
		Preparation Year	year	_	2009	2008	2008-2009 (8)	2008
		Estimated Cost	year \$	-	395	2008	()	101.25
				-			0.03-395.00 (7)	
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	No wastewater system in the town.				
		Future Programs/Projects	list	-				
					1 70	4 70	0.00 4 70 (0)	4.07
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37

 $Y=yes,\,N=no,\,lcpd=liters$ per capita per day, pop'n = population.

Song Cau, Viet Na	m				For All	Surveyed Cit	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
		Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	Source of Fund	National Government	%		80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
		Others	%	-	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena	nce Expenditures		Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual O&M Cost							
	Source of Fund	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
		National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans	%	-	53.0	50.00	0-53 (17)	9.0
		Tariff Revenue	%	-	100.0	50.00	0-100 (17)	24.1
		Others	%	-	100.0	0	0-100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees								
Total Revenue	Owners of Arres Observes		\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges	Connection Charge	\$/connection	0	00	10.0	10 0E 00 (E)	EE 7
		Connection Charge Tariff Rate	\$/connection \$/m3	0	80 90	18.3 6.0	18.25-80 (5) 1-90 (5)	55.7 37.6
	Septic Tank Desludging Fee	iam flato	ψηΠΟ		50	0.0	1-30 (3)	57.0
		Private	\$/ST	85	133	30	4-133 (13)	47.0
		Government	\$/ST	20-	30	22	3.5-30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
	Osenses a Children Dalle d'an	Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Household Solid Waste	%	20	07	45	0.07.(04)	00.0
		Household Liquid Waste	%	80	67 100	45 60	0-67 (24) 0-100 (24)	20.8 50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	Ő	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Ŷ				
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0	30	11	0-30 (19)	6.5
		No Treatment	%	100	100	100	0-100 (19)	68.6
		Others Description	70 list	0	50	1	0-50 (19)	10.3
	Within River Basin	Description	Y/N	N				
		River Basin/Major River Name	name	-				
		Basin Area	ha	-				
		City Location	u,m,d					
	Adjoining Town							
		Pollution Load	vh–vl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality Surface Water							
	Surface water	Total Coliform	#/ml					
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD	mg/l	_	973	80	7.1–973	122.5
		Total Suspended Solids	mg/l	-	261	200	1-261	109.7
		Heavy Metals	mg/l	-	0.3	0.25	0.001-0.3	0.17
Health Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Sanitation-Related Diseases							
	Reported Cases (per 10,000	population)						
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection Measles	# #	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Malaria	#	-	4.45	2.29 9.07	0.00-4.45 (9) 0.09-28.91 (10)	1.1 5.0
	Death (children under 5 year		7		_	5.07	3.03-20.31 (10)	5.0
		Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
		Measles Malaria	#	-	0.03	0.03 0.04	0.00-0.03 (6) 0.00-0.07 (6)	0.007

Thap Cham, Viet	Nam			For All	Surveyed C	ities and Munici	palities
Participating City							
Coordinator	Mr. Nguyen The Duong, Director						
Office	Ninh Thuan Water Supply Company of Ninh Th	an Province					
Address	23 Nguyen Trai Street, Phan Rang–Thap Cham	ity. N. Viet Nam					
ax	8468820350						
Telephone	8468824732						
E–mail address	bqldant@hcm.vnn.vn						
Demographics		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Population (2007)	#(000)	162.94	11,000.00	959.10	21.14-11,000.00 (27)	1,273.7
	Growth Rate	%	1.25	7.10	4.50	0.4-7.1 (27)	2.8
	Number of Household	#(000)	32.59	2,301.30	152.00	4.2-2,301.3 (27)	269.8
	Average Household Size	#	5.00	7.04	5.10	3-7.04 (27)	4.9
	Floating Population	%		724.90	30.00	1.7-724.9 (19)	53.5
	Urban Poor	%	-	46.36	31.12	0.00-46.36 (24)	18.4
	City Area	ha (000)	7.90	2,101.20	90.30	1.5-2,101.2 (27)	154
	Urban Core	%		69.69	23.77	0.25-69.69 (22)	18.5
	Secondary Urban Core	%		76.23	21.99	0.79-76.23 (22)	18.0
			-				
	Urban Fringe	%	_	99.75	20.15	0.00-99.75 (22)	19.8
	Peri-Urban	%	-	98.52	74.23	0.00-98.52 (22)	39.7
	Slum Area	%	-	35.96	7.74	0.00-35.96 (22)	4.0
	Average City Density	#/ha	20.50	305.60	50.40	0.2-305.6 (0)	51.4
	Urban Core	#/ha	20.00	3,166.00	163.00	6.0-3,166.0 (24)	230.2
	Secondary Urban Core	#/ha	-	438.00	21.99	4.0-438.0 (17)	73.7
	Urban Fringe	#/ha	_	282.00	113.00	3-282.0 (12)	64.8
	-			110.00	29.00		19.9
	Peri–Urban	#/ha	-			0.34-110.0 (17)	
	Slum Area	#/ha	-	3,858.00	627.00	18-3,858.0 (11)	525.2
Sanitation Coverage		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Area Coverage						
	Central Sewerage System	%	98	100.0	31.00	0.0-100.0	35.2
	Central Water Supply System	%	90	100.0	85.88	0.3-100 (25)	50.3
	Population Coverage						
	Central Sewerage System	%	100.0	100.0	55.00	0-100.0 (1)	29.0
	• •	%	67.1	99.7.0	84.80		
	Central Water Supply System			99.7.0	84.80	3.6-99.7 (26)	57.7
Sanitation Facility	Sanitation System Type	Unit	City Value	Top Value	Top Quartile	Range	Averag
	I. Central Sewerage System	%	100	100.0	55.0	0.0-100.0 (27)	50.3
	II. Individual with Septic Tank	%	0	100.0	62.0	0.0-100.0 (27)	47.7
		%	0	20.0			47.7
	III. Communal with Septic Tank				0.8	0.0-20.0 (13)	
	IV. Pit Latrine	%	0	43.6	22.2	0.0-43.6 (18)	17.1
	V. Eco Sanitation	%	0	0.9	0	0.3-0.9 (2)	0.6
	VI. Open Defecation	%	0	61.0	13.0	0.0-61.0 (14)	17.0
	Toilet System						
	Type I	%	99	100.0	99.0	0-100 (15)	68.4
	Type Ia	%	1	100.0	87.0	0-100 (15)	75.5
			I				
	Type II	%	-	100.0	100.0	0-100 (21)	69.5
	Type IIa	%	-	100.0	100.0	0-100 (21)	85.4
	Type III	%	-	100.0	83.0	0-100 (14)	57.7
	Type Illa	%	-	100.0	100.0	0-100 (14)	87.8
	Type IV	%	-	100.0	86.0	0-100 (18)	66.4
	Type IVa	%	_	100.0	99.0	0-100 (18)	66.9
		%					
	Type V		-	100.0	82.0	33-100 (2)	66.7
	Type Va	%	-	67.0	80.0	0-67 (23)	66.7
	Type VI & VIa	%	-	100.0	100.0	0-100 (14)	100.0
	Type VIb	%	-	100.0	0	0-100 (14)	13.9
Freatment Facility		Unit	City Value	Top Value	Top Quartile	Range	Averag
	Waste Water Treatment Plant			000.0		0.4.000.0.000	
	Capacity (10,000 population)	m3/d	-	962.2	664.9	2.1-962.2 (22)	65.0
	Provider						
	Local Governme	%	0	100.0	100.0	0-100 (20)	49.8
	National Governr		-	100.0	100.0	0-100 (20)	45.0
	Private	%	_	100.0	0	0-100 (20)	5.3
	Septage Treatment Plant	/0		.00.0	0		0.0
				014.0	110.0	E0. 014 (E)	007 (
	Capacity	m3/d	-	814.0	110.0	50-814 (5)	227.8
	Provider						
	Local Governme		-	100.0	100.0	0-100 (15)	66.7
	National Governr	ent %	-	100.0	0	0-100 (15)	20.0
			_	100.0	0	0-100 (15)	13.3
		%			0	0 .00 (10)	10.0
	Private	%					
	Private Desludging Services		-		10.0	0.40.45	
	Private Desludging Services Frequency	% year	2	12.0	10.0	2–12 (4)	7.3
	Private Desludging Services Frequency Provider	year	2				
	Private Desludging Services Frequency		2	12.0	10.0	2–12 (4) 0–100 (13)	7.3

Thap Cham, Viet Nam					For All Surveyed Cities and Municipalities			
Water Supply Facility			Unit	City Value	Top Value	Top Quartile	Range	Average
	Household Water Supply So	urce						
		Central Water Supply–Individual	%	67.10	100.00	67.10	3.59-100.00 (27)	50.50
		Central Water Supply-Communal	%	0	46.65	11.43	0.00-46.65 (25)	7.80
		Borehole	%	2.32	60.00	37.61	0.04-60.00 (26)	16.80
		Protected Spring/Well	%	16.33	96.41	20.00	0.00-96.41 (25)	14.50
		Rainwater	%	14.25	45.52	0.10	0.00-45.52 (26)	5.98
		Water Vendor	%	0	35.00	0.02	0.00-35.00 (26)	2.80
				U				
		Population Buying Bottled Water	%	-	80.00	40.00	0-80 (18)	20.70
		Average Water Consumption	lpcd	135.00	160.00	135.00	40-160 (20)	97.10
		Water Treatment Facilities	lpcd	319.10	1,371.50	197.40	14.0-1,371.5(22)	11.80
		Local Government	%	100.00	100.00	100.00	100.0 (22)	49.80
		National Government	%	0	100.00	100.00	0-100 (22)	45.00
		Private Concessionaire	%	0	100.00	0	0-100 (22)	5.30
Organizational Arrangen	nent		Unit	City Value	Top Value	Top Quartile	Range	Average
nstitutions Involved in Sanitat	tion			-		-		
	Public Sector							
		National Government	#	-	6	2	1-6 (5)	2.8
		Local Government	#	-	4	2	1-4 (21)	1.7
		State-Owned Utility	#	1	2	1	1-2 (11)	1.3
	Private Sector	,					. ,	
		Water Utility	#	-	2	2	2-2 (1)	2.0
		Enterprise	#	_	-	-	- (0)	2.0
		Nongovernment Organization	#	_	-	_		
Number of Descent of		Nongovernment organization	#	-	-	-	- (0)	-
Number of Personnel	Dublin October							
	Public Sector							
		Total Personnel (per 10,000 pop'n)	#	-	100.77	20.56	0.46-100.77 (17)	14.9
		Planning and Monitoring	%	-	43.70	43.7	12.7-43.70 (4)	23.9
		Construction	%	-		-	0	0
		Operations and Maintenance	%	-	100	100	76.60-100.00 (4)	87.1
	Private Sector							
		Total Personnel (per 10,000 pop'n)	#	-	30.96	30.96	30.96 (1)	30.96
		Operations and Maintenance	%	-		-	- (0)	-
Legal Framework		·	Unit	City Value	Top Value	Top Quartile	Range	Average
Legal Mandate of Sanitation			•	0.1, 14.40			inango	monugo
Logar mandato or oanitation	Number of Laws on Sanitati	n						
		National	#	2	4	3	1-4 (18)	1.9
		Local	#	1	3	1	1-3 (15)	1.2
	Year Enacted	Loodi	"	1	0		1 0 (10)	1.2
	Tear Lilacteu	Oldaat		0000	0007	0000	10.47 0007 (00)	1005
		Oldest	year	2003	2007	2000	1947-2007 (23)	1985
		Latest	year	2007	2007	2005	1956-2007 (23)	1993
	Sanitation Service Charges							
		Law on Collecting Fees	Y/N	Y	17		17 (25)	
		Year Enacted	year	2003	2007	2003	1956-2007 (17)	1990
Planning			Unit	City Value	Top Value	Top Quartile	Range	Average
Strategic Sanitation Plan								
	Existing Sanitation Plan							
		With Sanitation Plan	Y/N	Y	11		11-27	
		When Prepared	vear	-	2007	2006	2006-2007 (2)	2006
	New Sanitation Plan	·	, i					
		Will Prepare Sanitation Plan	Y/N	_				
		Preparation Year	year		2009	2008	2008-2009 (8)	2008
				-				
		Estimated Cost	\$	-	395	250	0.03-395.00 (7)	101.25
		Amount per Capita	\$/capita	-	762.7	477.6	0.6-762.7 (7)	185.50
		Source of Fund	list	-				
	Sanitation Problem	Major Sanitation Problem	list	Flooding during the rainy season.				
		Future Programs/Projects	list	-				
		Funding Amount	\$/capita	-	1.79	1.79	0.96-1.79 (2)	1.37
		Funding Source	list		1.10	1.10	0.00 0 (L)	1.07

 $Y=yes,\,N=no,\,lcpd=liters$ per capita per day, pop'n = population.

Thap Cham, Viet N	lam				For All	Surveyed Cit	ties and Munic	ipalities
Capital Investment			Unit	City Value	Top Value	Top Quartile	Range	Average
	Annual Capital Investment							
	Source of Fund	Annual Amount	\$/capita	-	27.9	22.5	0.5-27.9 (27)	8.20
	oource or rund	National Government	%	-	80.0	0	0.0-80.0 (17)	23.70
		Local Government	%	-	100.0	0	0.0-100.0 (17)	32.10
		Loans	%	-	80.0	0	0.0-80.0 (18)	18.90
		Tariff Revenue	%	-	0	0	0-0 (17)	0
Onevetiene and Maintena	nee Funendituree	Others	%	- City Value	100.0	100.0	0.0-100.0 (17)	27.65
Operations and Maintena	Annual O&M Cost		Unit	City Value	Top Value	Top Quartile	Range	Average
	Alliludi Uolvi GUSL	Annual Amount	\$/capita	-	8.3	3.66	0.08-8.34 (11)	1.9
	Source of Fund	, undar, undarie	φ/ σαρπα		0.0	0.00	0.00 0.04 (11)	1.0
		National Government	%	-	47.0	0	0-47 (17)	3.4
		Local Government	%	-	100.0	100.00	0-100 (17)	57.6
		Loans Tariff Revenue	%	-	53.0 100.0	50.00 50.00	0-53 (17)	9.0 24.1
		Others	%	-	100.0	0	0–100 (17) 0–100 (17)	5.9
Revenues and Fees for S	ervices		Unit	City Value	Top Value	Top Quartile	Range	Average
Annual Revenues and Fees	61 11063		Unit	ony value	Top value	iop quartite	nanye	Average
Total Revenue			\$/capita	-	15	0.1	0.1-15.0 (4)	6.9
	Sewered Area Charges							
		Connection Charge	\$/connection	0	80	18.3	18.25-80 (5)	55.7
	Sontio Tank Decludring Fee	Tariff Rate	\$/m3	-	90	6.0	1-90 (5)	37.6
	Septic Tank Desludging Fee	Private	\$/ST	90	133	30	4-133 (13)	47.0
		Government	\$/ST	22	30	22	3.5–30 (13)	18.0
	Other Fees		\$					
Environmental Situation			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality and Pollution							
		Water Quality Monitored	Y/N	N	20			
	Sources of Water Pollution	Household Solid Waste	%	0	07	45	0.07.(04)	00.0
		Household Liquid Waste	%	100	67 100	45 60	0-67 (24) 0-100 (24)	20.8 50.8
		Industrial Waste	%	0	38	10	0-38 (22)	9.4
		Commercial Waste	%	0	35	15	0-35 (22)	8.8
		Hospital Waste	%	0	17	5	0-17 (22)	3.2
	Polluter to Treat Own Wastev		Y/N	Y				
	Current Wastewater Disposa							
		Own Treatment Plant	%	0	100	2	0-100 (19)	14.6
		Central Sewer System	%	0 100	30	11 100	0-30 (19)	6.5
		No Treatment Others	%	0	100 50	100	0-100 (19) 0-50 (19)	68.6 10.3
		Description	list	-	50	1	0-30 (13)	10.5
	Within River Basin	Description	Y/N	Ν				
		River Basin/Major River Name	name	-				
		Basin Area	ha	-				
	Adiationa Terre	City Location	u,m,d					
	Adjoining Town	Pollution Load	vhvl					
		Sanitation Work/Plan	i/c					
Environmental Statistics			Unit	City Value	Top Value	Top Quartile	Range	Average
	Water Quality		•	0.1.9 10.000	Top Tuluo	top quartito	ituigo	monugo
	Surface Water							
		Total Coliform	#/ml	-				
		BOD	mg/l	-	180	30	2.4-180	28.7
		COD	mg/l	-	973	80	7.1-973	122.5
		Total Suspended Solids Heavy Metals	mg/l mg/l	-	261 0.3	200 0.25	1–261 0.001–0.3	109.7 0.17
Health Statistics		Ticavy Mictais	Unit	City Volue	Top Value	Top Quartile		
	Conitation Delated Diseases		UIIII	City Value	TOP Value	TOP QUALITY	Range	Average
	Sanitation-Related Diseases Reported Cases (per 10,000) population)						
		Diarrhea	#	-	594.1	179.49	0.6-594.1 (12)	118.8
		Hepatitis A & E	#	-	53.88	6.86	0.00-53.88 (10)	8.8
		Trachoma	#	-	305.47	294.55	0.00-305.47 (9)	67.1
		Acute Lower Respiratory Infection	#	-	1,559.01	507.79	0.36-1,559.01 (11)	420.5
		Measles	#	-	4.45	2.29	0.00-4.45 (9)	1.1
	Death (children under 5 year	Malaria rs) (ner 10.000 nonulation)	#	-	-	9.07	0.09-28.91 (10)	5.0
	Boath (children under 5 year	Diarrhea	#	-	0.47	0.1	0.0-0.5 (7)	0.1
		Hepatitis A & E	#	-	1.18	0.1	0.0-1.2 (10)	1.2
		Trachoma	#	-	0		0-0 (6)	0
		Acute Lower Respiratory Infection	#	-	0.27	0.01	0.00-0.27 (6)	0.2
					0.00			
		Measles Malaria	#	-	0.03 0.07	0.03 0.04	0.00-0.03 (6) 0.00-0.07 (6)	0.007

APPENDIX

SANITATION DATA BOOK FOR ASIAN CITIES

QUESTIONNAIRE

Name of City_____ Country: _____

	City Demographics		
	Land Area (ha)	Population Year	Population Density (#/ha)
	Total city area	Total population (000)	Urban core
		Growth rate (%)	Secondary urban
	City Area Breakdown:		Core
	Urban core	No. of households	Urban fringe
	Secondary urban	Average HH Size	Peri-urban
	Core		Slum area
	Urban fringe	Floating population	
ICS	Peri-urban		
DEMOGRAPHICS	Slum area	No. of urban poor	
10GF			
DEN	Note:	Note:	Note:
	 The objective of the area break- up is to determine the population density and passible technology. 	• Urban poor are those earning less than \$1 per day.	 Urban core – heavily built-up area, central business district
	density and possible technology option for each area.	Floating population – transient, day-time people visiting or	 Secondary urban core – suburbs, subdivisions
	Total of breakdown should equal total city area.	working in the city and living in another city or town	 Urban fringe – less built-up area around the core
	 It is not necessary to fill up all classes 		• Peri-urban – semi-rural areas
			 Slum area – total area even though scattered throughout the city.

= number, ha = hectare, HH = households.

	Water and Sanitation Facilities	
	Sanitation Services	Water Supply Services
	Service Area (ha)	Service Area (ha)
	Served area (central sewerage system)	Served area (central water supply system)
	Unserved area	Unserved area
	Note: Total should equal to total city area.	Note: Total should equal to total city area.
	Household Sanitation	Household Water Supply
	See Note 1 (last page) for Range of Sanitation Type	No. of households with
	No. of households with	In-house connection (central WSS)
	Individual toilet with sewered line	Community tap (central WSS)
	Type I with treatment	Borehole (individual or communal)
LITY	Type Ia without treatment	
FACI	Household Sanitation	Household Water Supply
AND	Individual toilet with septic tank	Protected spring and/or well
SANITATION COVERAGE AND FACILITY	Type II regular desludging and treated	Collected rainwater
OVEF	Type IIa desludged if full, not treated	Vendor-provided
ON C	Communal toilet with septic tank	Population buying bottled water (%)
ITATI	Type III regular desludging and treated	Average consumption (lpcd)
SAN	Type Illa desludged if full, not treated	
	Pit latrine	Water provider
	Type IV ventilated improved pit	Local government (%)
	• Type IVa ordinary	National government (%)
	Eco sanitation	Private concessionaire (%)
	Type V off-site treatment	Individual households (%)
	Type Va on-site treatment	(Total should add to 100%)
	Open defecation	
	Type VI open field	
	Type VIa body of water (hanging toilet)	
	Type VIb use of bucket	
	Note: Total should equal to No. of Households in Demographics.	Note: Total should equal to No. of Households in Demographics.

lcpd = liters per capita per day, WSS = Water Supply Services.

	Water and Sanitation Facilities	
	Treatment Facilities Capacity	Treatment Facilities Capacity
	Wastewater treatment plant (m ³ /day)	Water treatment plant (m ³ /day)
	Frequency of desludging (years)	
	Septage treatment plant (m ³ /day)	
	Eco Sanitation facility (m ³ /day)	
	Treatment Facility Provider	Treatment Facility Provider
	Local government (%)	Local government (%)
≧	National government (%)	National government (%)
ACIL	Private concessionaire (%)	Private concessionaire (%)
NDF	Individual households (%)	Individual households (%)
SANITATION COVERAGE AND FACILITY	(Total should add to 100%)	(Total should add to 100%)
VERA	Please indicate treatment technology:	Please indicate treatment technology:
N CO		
ATIO		
ANIT		
Š		

	Institutional Mandate and Set-up	ad in Car	itation			
	Agencies and/or Organizations Involv Name	Type*	Task**	Legal Mandate	No. of personnel***	
				(year enacted)	· ·	
NO						
Note: * For Type, indicate numbers as defined: 1=Government line ministry or department; 2=Governm or organization; 3=Government-owned utility; 4=Private water utility; 5=Public-private utility; specify) ** Example of tasks: planning, construction, collection, and treatment, etc					utility; 6=Others (Please	
	*** Indicates total number of pe					
	Current Laws on Sanitation			2007.		
	Name of Law		Year Enacted	Implementin	a Agency	
					·····	
	1					
	Current Sanitation Status (Note: All fig	gures are	for liquid waste only,	excluding solid waste.)		
	Does the city have a Sanitation Plan prepared? NOYES(year) Please send a copy. If NO, year planned to prepare one, estimated amount and source of fund. Year Amount (US\$) Source of fund					
Does the city have an ongoing Sanitation Information and Education Campaign? NO YES If Yes, please copies. What is the estimated annual budget? (US\$) 2006 2007					f Yes, please send sample	
ALS	Source of sanitation infrastructure cons Loans (%), Tariff revenues (%)	. Other	(please specify)	nent budget (%), Local gov is the estimated annual amount	· · · · · · · · · · · · · · · · · · ·	
FINANCIALS	2007					
FINA	Source of sanitation O&M funds: Nation revenues (%), Other (please spe (US\$) 20062	cify)	ment budget (%),	Local government budget (%) What is the	, Loans (%), Tariff estimated annual amount?	

For sewered areas: What is the sewerage connection charge? (US\$/connection). ______ What is the tariff rate? Please specify unit. (US\$/unit) (Ex. \$/m³ of water consumption) ______

 For areas with septic tank (ST): Entity providing desludging services? Indicate estimated % share.

 Private (%)
 Desludging fee (US\$/ST)
 Government (%)
 Desludging fee (US\$/ST)

	Current Sanitation Status (Note: All figures are for liquid waste only, excluding solid waste.)
	What is the estimated total revenue for providing sanitation services? (US\$/year) 2006 2007
	Legal mandate for collecting fees? Name of law and year enacted. Year Name of law
	Future Plans
	What are the target sanitation indicators? Are there sufficient funds to meet targets?
	Please give a brief description of future programs and projects, including training, procurement of equipment, formulation of own standards, etc., and sources of funds.
FINANCIAL	
	What are the cities' major sanitation problems?

	Extent of Water Pollution
	Is the city monitoring water quality? YES NO If <u>NO</u> , is the city planning to monitor in the future? NO YES (year)
	What are the major sources of water pollution? Please check types.
	Household solid waste (%)
	Household liquid waste (%)
	Industrial waste (%) Type of industry:paper mill,textile,tannery,others (Please specify).
	Commercial (%) Type of establishment:office building,restaurants,dormitories,others (Please specify)
	Hospital (%) Other sources of hazardous waste:
	Are the industries, commercial establishments, hospitals, institutions required by law to treat their wastewater? YESNO
	How are the wastewater treated now?
E	Polluter's own treatment plant (%)
TUATIONER	Central sewer system (%)
ITUA	No treatment, body of water (%)
environmental s	Others (%) Please describe:
ONM	Is the city located in a river basin? YES NO If <u>YES</u> :
VVIR	Name of river basin or major river
Ē	Basin area (hectare:)
	City location (Please check): Upstream Downstream Midstream
	Are there adjoining towns or cities around your city? YES NO
	If <u>YES</u> :
	Pollution load: Very Heavy Heavy Medium Low Very Low
	Sanitation work with adjoining areas: Individually Cooperatively How? Please describe:
	· · · · · · · · · · · · · · · ·
	Give a brief description of the city water quality and extent of pollution.

STATISTICS		Water Sources					National		
	Parameters	Ground	River 1	River 2	River n	Lake	Standard		
	Biochemical oxygen demand (BOD)								
TAT	Chemical oxygen demand (COD)								
	Suspended solids								
ENT	Coliform bacteria (#/ml)								
ENVIRONMENTAL	Polychlorinated biphenyl (PCB)								
VIR(Pesticides								
ENV	Heavy metals (specify)								
	Others (specify)								
	Note: Provide average readings for su	Note: Provide average readings for summer and rainy months. (# summer – low flow & # rainy – heavy flow)							

	Sanitation and Hygiene-Related Disea	ses			
	Year	Reported Cases	Deaths (children under five years of age)		
	Diseases directly related to poor wate	r and sanitation			
ICS	Diarrheal diseases				
STATISTICS	Hepatitis A & E				
STA'	Skin diseases				
E	Trachoma				
HEALTH	Diseases indirectly related to poor water and sanitation, via malnutrition (children under five years of age)				
	Acute lower respiratory infection				
	Measles				
	Malaria				
	Indicate source:				

Contact Details	Contact Details		
Name of city (country)			
Name of project coordinator			
Title/designation			
Department/office			
Address			
Fax			
Telephone			
Email address			

For inquiries please contact:

Francisco "Kit" Roble, Jr.

Consultant, Asian Development Bank

froble@adb.org

Please send completed forms, copies of Annual and/or Financial Report (if any) and Sanitation Plan (if available) to:

Name1	[itle			
CITYNET Secretariat, 5F, International Organizational Center, Pacifico-Yokohama				
1-1-1 Minato Mirai, Nishi-ku, Yokoham	ia, Japan			
Email: info@citynet-ap.org				

Note 1: Range of Sanitation Type

Sanitation Type	Toilet System	On-Site Treatment	On-Site Disposal/ Reuse	Collection System	Off-Site Treatment	Off-Site Disposal/ Reuse
I	Individual toilet (pour flush or tank flush)	none	none	Sewer line combined or conventional	Wastewater treatment	Agricultural use
la	Individual toilet (pour flush or tank flush)	none	none	Sewer line combined or conventional	none	Discharge to a receiving body of water
II	Individual toilet (pour flush or tank flush)	Septic tank	Overflow to drainage pipe/canal	Desludging by vacuum trucks regularly	Septage treatment	Agricultural use
lla	Individual toilet (pour flush or tank flush)	Septic tank	Overflow to drainage pipe/canal	Desludging by vacuum trucks when full	none	Body of water or burying/ dumping vacant field
Ш	Public/communal toilet (pour flush or tank flush)	Septic tank	Overflow to drainage pipe/canal	Desludging by vacuum trucks regularly	Septage treatment	Agricultural use
IIIa	Public/communal toilet (pour flush or tank flush)	Septic tank	Overflow to drainage pipe/canal	Desludging by vacuum trucks when full	none	Body of water or burying/ dumping vacant field
IV	Ventilated improved pit latrine	na	Open another pit upon filling of pit			
IVa	Pit latrine	na	Open another pit upon filling of pit			
V	EcoSanitation	Storage		Cartage	Drying/ composting/ heating	Agricultural use/biogas
Va	EcoSanitation	Hygienization by drying	Applied to garden/plants			
VI	Open defecation	na	Open field			
Vla	Hanging toilet	na	Body of water			
VIb	Use of bucket	na		Cartage		Open field or body of water

na = not applicable.

Access to sanitation may have increased significantly in Asian cities between 1990 and 2006, but roughly 2 billion people in the region still do not have basic latrines, let alone more sophisticated sanitation and sewage treatment facilities. While sanitation is a complex issue that involves many factors—including awareness, policies, and financing—the lack of complete, reliable, and grounded data aggravates the situation, hindering planners, managers, and policy makers from formulating feasible targets, prioritizing investments, and designing doable projects.

This publication is the first ever data book focusing on Asia's sanitation situation. It provides comparative sanitation statistics from 27 Asian cities and an in-depth analysis of these data. It also offers decision makers some tools and methods for processing data that they can use for their own knowledge development, advocacy, and planning.

This databook is a joint undertaking of the Asian Development Bank, CITYNET, UN-Habitat, and Veolia Environnement.

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WATER FOR ALL

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