WATER SERVICE PROVIDERS DATA BOOK, 2069 – 2070
(2012 - 2013)

Sector Efficiency Improvement Unit (SEIU)
Ministry of Urban Development

January 2014

FOREWORD

The Ministry of Urban Development (MoUD), as the lead WASH sector agency, established the Sector Efficiency Improvement Unit (SEIU) under the Water and Environment Division of the MoUD in 2009 and institutionalized it as a permanent unit in June 2012. SEIU aims to contribute to the Nepal WASH sector objective formulated by the Government of Nepal (NPC 2010) as "to improve public health and increase living standard of the people by providing safe, reliable and sustainable drinking water and sanitation services".

The Government of Nepal (GoN), through MoUD, has received grant financing from the Asian Development Bank (ADB) toward the cost of providing consultancy support to the SEIU. The grant is part of the ADB financing for the Second Small Towns Water Supply and Sanitation Project (SSTWSSP). The SEIU Consultancy (SEIUC) component will deliver the following major outputs in raising effectiveness and equity of service delivery, through:

- Assisting SEIU in drafting a comprehensive WASH Act, refining policies in water supply and sanitation sector and facilitating implementation and compliance. This will include support for sector assessment, implementation of water safety plans, development and testing of guidelines on output-based aid, and standards and policies for waste water management;

- Efficiency improvement of water supply and sanitation service providers (mostly in small towns) through (capacity development) for benchmarking, performance improvement planning and developing business plans. The key performance indicators will focus on consumer satisfaction, water resources, revenue collection and human resources.

- Contribution to sector coordination and harmonization of implementation procedures through a Sector-wide Approach (SWAP) for all sector agencies, development partners and NGOs.

A Benchmarking and Performance Assessment of Service Providers Program has been initiated in early 2013 by SEIU with the help of SEIUC. The program aims to develop capacity for monitoring functionality and performance of Nepal's water supply service providers as an instrument for improving the service delivery and performance of the urban water supply sector. A Benchmarking Unit (BMU) was established composed of representatives of major sector stakeholders involved in supporting the provision of water supply and sanitation services in Nepal such as the Ministry of Urban Development, Department of Water Supply and Sewerage, Nepal Water Supply Corporation, KUKL (Kathmandu Water and Sanitation Company) and academia with coordination support from SEIU. A first round of orientation workshops for the BMU and water service providers (WSPs) was conducted in February and March 2013 to commence the collection and analysis of performance data from WSPs. Data from 32 WSPs have been collected, verified and validated in consultation with the WSPs.

The Nepal Water Service Providers Data Book, 2069 – 2070 (2012 – 2013) provides data from 32 water utilities mostly from small towns and village development committees. It has a wealth of information that can be used by different stakeholders in their quest for trying to improve the delivery of water supply services to the people of Nepal's growing towns and cities. The main beneficiaries of such information are the water service providers themselves who can search for examples of good practices that they can emulate from among the participating water supply users committees and associations. The government can look at the state of service delivery through the performance indicators, analyze these with individual service providers and find ways of incrementally improving performance. Regulators can now look at a set of indicators that they can use in protecting the interest of consumers of receiving adequate, reliable and safe water and sanitation services in their homes. The same set of indicators will help to agree on business plans that will raise the viability of service providers to provide water to consumers in the home, institutions and business establishments.

Altogether over 70 water supply service providers have sent staff for initial orientation, of which some 60 are currently active in the programme. This initial effort of collecting, analyzing and disseminating performance data will be used to work with participating service providers to design medium term performance improvement plans and will be expanded during 2014 to include some 60 towns and water users committee. This should enable SEIU to produce a next data book by the end of 2014, covering the 2013 - 2014 fiscal year . As ADB has learned in its Water Utilities Data Books for the Asia and the Pacific Region in 1993 and 1997 where Kathmandu was one of the participating cities, there is a demand for reliable data that continues to be used by water utilities in the region. Such information are now being used as a tool for initiating water operators partnerships among water utilities in helping one another in improve their operational performance.

MoUD would like to acknowledge the work done by the water service providers that readily provided the information, and by the SEIU team and its consultants in producing and validating the data needed to prepare this data book. The support of the ADB in financing the effort and facilitating printing of this document is equally acknowledged.

Lastly, MoUD welcomes other water service providers to come forward and provide their data for inclusion in the next issues of the Nepal Water Service Providers Data Book.

Abadh Kishore Mishra
Joint Secretary (Water Supply and Environment Division)
Ministry of Urban Development

ACKNOWLEDGMENTS

The Ministry of Urban Development (MoUD), Sector Efficiency Improvement Unit (SEIU) and the Asian Development Bank (ADB) wish to thank the following water service providers for their cooperation in providing the information that made the publication of this data book possible.

VDC/Town	Water Service Provider
Baglung	Baglung Urban Water and Sanitation Users Association
Belbari	Belbari Small Town Water and Sanitation Users Committee
Beni	Beni Small Town Water Supply and Sanitation Users Association
Bhimad	Bhimad Water and Sanitation Users Committee
Chandragadhi	Water Users and Sanitation Committee, Chandragadhi
Damak	Damak Water and Sanitation Users Association
Damauli	Damauli Water Supply and Sanitation Users Association
Duhabi	Duhabi Water Supply Project Main Users Committee
Galyang	Galyang Water Supply and Sanitation Users Association
Gauradaha	Gauradaha Water and Sanitation Users Committee
Haraicha	Haraicha Water Supply and Sanitation Users Committee
Hetauda	Hetauda Water Supply Management Board
Itahari	Itahari Small Town Water Supply and Sanitation Users Association
Kakarvitta	Kakarvitta Water Supply and Sanitation Users Association
Karmaiya	Karmaiya Water and Sanitation Users Committee
Khairenitar	Khairenitar Small Town Water Supply Users Committee
Lakhanpur	Lakhanpur Water and Sanitation Users Committee
Leknath	Lekhnath Small Town Water Supply and Sanitation User Committee
Mangadh	Mangadh Water Supply and Sanitation Users Committee
Nayagaun	Nayagaun Water Supply Users and Sanitation Association
Parsa	Parsa Small Town Water Supply and Sanitation Consumers' Association
Pathari	Pathari Water Supply Users and Sanitation Association
Prithvinarayan	Prithvinarayan Small Town Drinking Water and Sanitation Users' Committee
Ratnanagar	Ratnanagar Small Town Water Supply and Sanitation Users Association
Salakpur	Salakpur Water Supply and Sanitation Users Committee
Shanischare	Shanischare-Arjundhara Water Supply and Sanitation Users Committee
Shankarnagar	Shankarnagar Water Users and Sanitation Association
Shivalaya	Shivalaya Small Town Water Supply and Sanitation Users Association
Sunwal	Sunwal Water Users and Sanitation Organization
Surunga	Surunga Water Supply and Sanitation Users Association
Tankisinwari	Tankisinwari Water Users and Sanitation Committee
Urlabari	Urlabari Water Supply Users and Sanitation Association

Funding for the project and for the preparation of the Data Book was provided by the Asian Development Bank. However, the views and analyses expressed here do not necessarily reflect those of the MoUD, SEIU and ADB. The Nepal Water Service Providers Data Book, 2069 – 2070 (2012 – 2013) was prepared by the SEIU team led by Nanda B. Khanal (Senior Divisional Engineer), and supported by Dinesh Adhikary (Engineer, SEIU), Cesar E. Yñiguez (Service Providers Benchmarking and Efficiency Improvement Expert), Krishna Rana (Water Supply and Sewerage Engineer) and Han Heijnen, SEIUC Team Leader and Senior Sector Policy Analyst. The support of Lahmeyer IDP Inc. of Manila and of Total Management Services (TMS) Pvt. Ltd. In publishing the Data Book is gratefully acknowledged.

DISCLAIMER

ABBREVIATIONS

Abbreviations and Acronyms

ADB	Asian Development Bank
BSTWSSUA	Beni Small Town Water Supply and Sanitation Users Association
BSTWSUC	Belbari Small Town Water and Sanitation Users Committee
BUWSUA	Baglung Urban Water and Sanitation Users Association
BWUSC	Bhimad Water and Sanitation Users Committee
DDC	district development committee
DWSPMUS	Duhabi Water Supply Project Main Users Committee
DWSS	Department of Water Supply and Sewerage
DWSSUA	Damauli Water Supply and Sanitation Users Association
DWSUA	Damak Water and Sanitation Users Association
GWSUA	Galyang Water Supply and Sanitation Users Association
GWSUC	Gauradaha Water and Sanitation Users Committee
HWSMB	Hetauda Water Supply Management Board
HWSSUC	Haraicha Water Supply and Sanitation Users Committee
IWSSUA	Itahari Small Town Water Supply and Sanitation Users Association
JICA	Japan International Cooperation Agency
KSTWSUC	Khairenitar Small Town Water Supply Users Committee
KWSSUA	Kakarvitta Water Supply and Sanitation Users Association
KWSUC	Karmaiya Water and Sanitation Users Committee
LSTWSSUC	Lekhnath Small Town Water Supply and Sanitation User Committee
LWSUC	Lakhanpur Water and Sanitation Users Committee
MoUD	Ministry of Urban Development
MWSSUC	Mangadh Water Supply and Sanitation Users Committee
NRs	Nepalese rupee
NRW	non revenue water
NWSUSA	Nayagaun Water Supply Users and Sanitation Association
O&M	operation and maintenance
PNSTDWSUC	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee
PWSSCA	Parsa Small Town Water Supply and Sanitation Consumers' Association
PWSUSA	Pathari Water Supply Users and Sanitation Association
RSTWSSUA	Ratnanagar Small Town Water Supply and Sanitation Users Association
SAWSSUC	Shanischare-Arjundhara Water Supply and Sanitation Users Committee
SEIU	Sector Efficiency Unit
SEIUC	SEIU Consultants
SWSSUA	Shivalaya Small Town Water Supply and Sanitation Users Association
SWSSUA	Surunga Water Supply and Sanitation Users Association
SWSSUC	Salakpur Water Supply and Sanitation Users Committee
SWUSA	Shankarnagar Water Users and Sanitation Association

SWUSO	Sunwal Water Users and Sanitation Organization
TWUSC	Tankisinwari Water Users and Sanitation Committee
UWSUSA	Urlabari Water Supply Users and Sanitation Association
VDC	village development committee
WSSDO	Water Supply and Sewerage District Office
WUSC	water users and sanitation committee
WUSC Chandragadhi	Water Users and Sanitation Committee, Chandragadhi

Measurement Units and Symbols

km	kilometer
km^2	square kilometer
lpcd or l/c/d	liter per capita per day
m	meter
m^3	cubic meter
m^3/d	cubic meter per day
$m^3/d/c$	cubic meter per day per capita
%	percent

METHODOLOGY

The *Nepal Water Service Providers Data Book, 2069 – 2070 (2012 – 2013)* presents the performance indicators and analysis of the performance of water service providers in 32 VDCs and towns in Nepal. The information contained in this data book is based on the collection of 2069 – 2070 fiscal year data from each of the participating water service providers. Data were collected using the questionnaire and guide developed by the Sector Efficiency Improvement Unit (SEIU) of MoUD and verified in consultation with WSPs.

The water service providers that provided data are water supply users committees or associations and water supply management boards. For purposes of presentation and discussions, the name of the VDC or municipality/town served by the service provider is used instead of the service provider name, for example, Baglung instead of Baglung Urban Water and Sanitation Users Association, Khairenitar instead of Khairenitar Small Town Water Supply Users Committee, and Hetauda instead of Hetauda Water Supply Management Board.

Performance indicators were derived using basic data provided by the water service providers and following various computations using the formulas given below. Almost all the data used in comparing the indicators in the tables, graphs, charts, and figures are found in each utility and area profile, hence, exact values can be extracted. *The term utility and water service provider are used interchangeably in this data book.*

Clarifications were sought on the data provided especially for consistency between the data and indicators so that the data finally presented are the best that could be obtained under the circumstances. These clarifications were done through the exchange of emails, SMS messages and telephone calls between the service providers and the SEIU team. Hence, SEIU is conscious that not all data are 100% reliable. In some instances, estimates were given in the absence of available measures, such as in cases where there is no complete metering of production and consumption. In such cases indirect measurements and estimates were used. This makes non-revenue water or daily per capita consumption data estimates at best. If there are doubts on the reliability of some data presented, the reader is advised to verify the information from the water utility whose contact details are provided in its utility profile.

The information presented in this book was either taken from the water utility questionnaire or was based on computations using data from the questionnaire. The formulas used for the computations are shown below.

1. Water supply coverage (%)
   = [population served with water supply] x 100 ÷ [total population in the area of responsibility]

2. Per capita consumption (lpcd)
   = [total annual volume of water sold (m^3) x 1,000/365] ÷ [number of people served]

3. Production/population (m^3/day/c)
   = [annual production volume (m^3) /365] ÷ [number of people served]

4. Non revenue water (%)
   = [total annual production (m^3) - total billed consumption (m^3)] x 100 ÷ [total annual production (m^3)]

5. Average tariff (NRs/m^3)
   = [total annual billing (NRs)] ÷ [total annual consumption (m^3)]

6. Unit production cost (NRs/m^3)
   = [annual O&M cost (NRs)] ÷ [total annual production (m^3)]

7. Operating ratio
   = [total annual O&M cost (NRs)] ÷ [total annual billing (NRs)]

8. Accounts receivable equivalent (months)
= [accounts receivable (NRs) at end of the fiscal year] ÷ [total annual revenue (NRs)/12]

9. Revenue collection efficiency (%)
= [total annual collection (NRs)] ÷ [total annual billings (NRs)] x 100

10. Staff/1,000 water connections ratio
= [number of utility staff] ÷ [number of utility connections/1,000]

Some water service providers may have collection efficiency higher than 100% which may indicate that the total collections for the one-year period included payment of bills for the previous period. Most of the service providers have no meter for measuring annual production prior to distribution and annual consumption or billing at the distribution ends, hence, the service providers gave best estimates.

Operating ratio is based on annual billing/sales to find out whether tariff revenues are sufficient to cover the O&M expenses. Other revenues like interests from bank deposits and subsidies from government were not included in the computation.

The numbers of people served were based on the data and explanations given by the water service providers. In addition to people served by house connections and public taps, they included people residing in institutions, commercial and other establishments connected to the water supply systems.

The map of Nepal indicates the service areas from which the 32 participating water service providers come.
Eastern Nepal, in Morang and Jhapa districts, counts for 50% of the number of participating WUSCs.
Other participating WUSC are scattered in Central and Western Nepal.
A next round of recruitment of participants in the bench marking process will include WSPs from Mid Western and Far-Western Nepal.

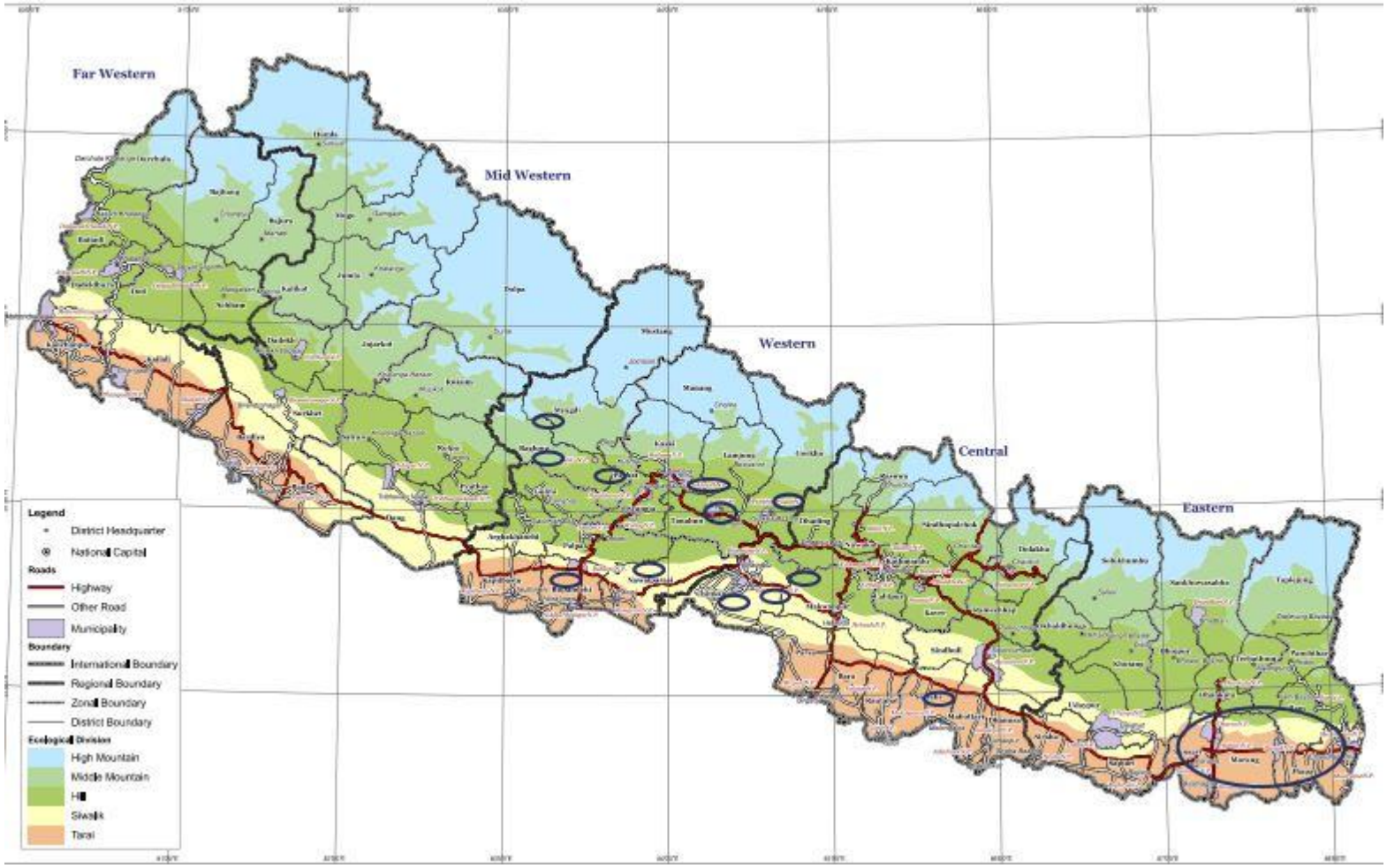


TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

TABLES

FIGURES

PART I

SUMMARY OF FINDINGS

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Baglung	Belbari	Beni	Bhimad	Chandragadhi	Damak	Average (32)
Water Coverage (%)	60.0	18.5	83.3	100.0	83.0	58.0	**63.6**
Water Availability (hours)*	2.5	6.0	18.0	1.5	12.0	18.0	**12.8**
Consumption/Capita (lpcd)	50.0	60.0	74.0	67.0	98.0	104.0	**73.0**
Production/Population (m^3/day/c)	0.052	0.082	0.083	0.069	0.173	0.118	**0.090**
Non Revenue Water (%)	4.0	26.2	10.7	1.9	43.3	11.8	**17.4**
Connections Metered (%)	99.9	100.0	100.0	99.0	99.9	100.0	**98.5**
Operating Ratio	1.13	1.38	0.39	1.29	0.88	0.74	**0.93**
Accounts Receivable (months)	-	1.9	0.3	0.5	0.5	0.5	**0.5**
Revenue Collection Efficiency (%)	100.0	100.0	97.9	96.0	95.5	95.9	**99.1**
Average Tariff (NRs/m^3)	8.10	10.63	21.29	6.90	10.50	11.70	**13.78**
New Connection Fee (NRs)	15,000	500	25,000	20,000	4,330	10,200	**11,032**
Staff/1,000 Connections (ratio)	5.4	8.0	9.1	4.6	5.4	3.9	**5.9**

*Average of dry and wet months availability

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Damauli	Duhabi	Galyang	Gauradaha	Haraicha	Average (32)
Water Coverage (%)	80.8	28.2	94.5	36.3	34.5	**63.6**
Water Availability (hours)*	6.0	9.5	1.5	24.0	20.0	**12.8**
Consumption/Capita (lpcd)	89.0	160.0	26.0	67.0	90.0	**73.0**
Production/Population (m^3/day/c)	0.099	0.186	0.029	0.117	0.099	**0.090**
Non Revenue Water (%)	10.9	13.9	9.1	42.6	8.5	**17.4**
Connections Metered (%)	100.0	100.0	82.0	100.0	100.0	**98.5**
Operating Ratio	0.81	0.81	0.95	1.81	1.37	**0.93**
Accounts Receivable (months)	0.5	0.4	1.7	0.0	0.0	**0.5**
Revenue Collection Efficiency (%)	100.0	96.4	85.5	100.0	100.0	**99.1**
Average Tariff (NRs/m^3)	8.26	10.54	5.50	15.19	4.67	**13.78**
New Connection Fee (NRs)	10,125	5,400	17,600	6,000	8,000	**11,032**
Staff/1,000 Connections (ratio)	5.4	6.8	10.9	5.4	6.0	**5.9**

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Hetauda	Itahari	Kakarvitta	Karmaiya	Khairenitar	Lakhanpur	Average (32)
Water Coverage (%)	92.9	50.0	78.6	75.0	100.0	31.1	**63.6**
Water Availability (hours)*	3.5	10.0	20.5	5.0	7.0	17.0	**12.8**
Consumption/Capita (lpcd)	85.0	77.0	95.0	30.0	91.0	52.0	**73.0**
Production/Population (m^3/day/c)	0.114	0.090	0.105	0.037	0.096	0.065	**0.090**
Non Revenue Water (%)	25.7	15.0	9.1	18.1	4.7	20.0	**17.4**
Connections Metered (%)	83.0	100.0	100.0	100.0	100.0	100.0	**98.5**
Operating Ratio	1.00	0.68	0.99	1.25	0.60	0.98	**0.93**
Accounts Receivable (months)	0.7	0.0	0.0	1.3	0.1	0.0	**0.5**
Revenue Collection Efficiency (%)	94.3	100.0	100.0	89.1	99.2	100.0	**99.1**
Average Tariff (NRs/m^3)	10.38	11.75	16.01	12.72	17.77	11.15	**13.78**
New Connection Fee (NRs)	7,365	10,525	8,500	5,130	15,000	6,000	**11,032**
Staff/1,000 Connections (ratio)	4.2	3.6	6.4	5.0	8.2	3.2	**5.9**

*Average of dry and wet months availability

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Leknath	Mangadh	Nayagaun	Parsa	Pathari	Average (32)
Water Coverage (%)	69.0	43.3	54.8	86.8	26.7	**63.6**
Water Availability (hours)*	14.0	10.0	24.0	24.0	3.0	**12.8**
Consumption/Capita (lpcd)	62.0	57.0	143.0	47.0	38.0	**73.0**
Production/Population (m^3/day/c)	0.103	0.070	0.158	0.056	0.043	**0.090**
Non Revenue Water (%)	38.0	18.4	10.0	16.4	11.3	**17.4**
Connections Metered (%)	100.0	100.0	99.9	100.0	100.0	**98.5**
Operating Ratio	0.22	1.10	1.00	0.54	1.29	**0.93**
Accounts Receivable (months)	0.8	0.2	0.2	2.5	0.3	**0.5**
Revenue Collection Efficiency (%)	173.7	98.1	98.3	79.0	97.3	**99.1**
Average Tariff (NRs/m^3)	13.52	12.00	7.84	19.01	11.16	**13.78**
New Connection Fee (NRs)	19,075	1,250	10,000	9,550	7,775	**11,032**
Staff/1,000 Connections (ratio)	3.7	4.2	4.5	5.2	5.0	**5.9**

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Prithvinarayan	Ratnanagar	Salakpur	Shanischare	Shankarnagar	Average (32)
Water Coverage (%)	77.1	44.2	60.0	77.0	100.0	**63.6**
Water Availability (hours)*	6.5	8.0	17.0	24.0	18.0	**12.8**
Consumption/Capita (lpcd)	54.0	101.0	53.0	49.0	80.0	**73.0**
Production/Population (m^3/day/c)	0.095	0.113	0.056	0.073	0.094	**0.090**
Non Revenue Water (%)	43.1	10.5	6.1	33.3	15.0	**17.4**
Connections Metered (%)	100.0	99.4	100.0	100.0	99.9	**98.5**
Operating Ratio	1.10	0.80	0.93	0.99	0.64	**0.93**
Accounts Receivable (months)	1.0	1.0	0.0	0.0	0.0	**0.5**
Revenue Collection Efficiency (%)	91.9	92.0	100.0	100.0	100.0	**99.1**
Average Tariff (NRs/m^3)	46.00	14.27	9.84	11.85	9.13	**13.78**
New Connection Fee (NRs)	43,000	7,500	8,000	8,100	13,000	**11,032**
Staff/1,000 Connections (ratio)	11.4	2.9	4.8	6.0	3.9	**5.9**

*Average of dry and wet months availability

Table 1: Summary of Results for 32 Water Service Providers

Performance Indicator	Shivalaya	Sunwal	Surunga	Tankisinwara	Urlabari	Average (32)
Water Coverage (%)	95.2	57.5	51.1	45.9	41.1	**63.6**
Water Availability (hours)*	8.5	10.0	24.0	11.0	24.0	**12.8**
Consumption/Capita (lpcd)	97.0	31.0	63.0	64.0	81.0	**73.0**
Production/Population (m^3/day/c)	0.126	0.038	0.070	0.083	0.089	**0.090**
Non Revenue Water (%)	23.3	16.6	9.1	23.1	8.3	**17.4**
Connections Metered (%)	100.0	90.0	100.0	100.0	100.0	**98.5**
Operating Ratio	0.67	1.18	0.48	0.81	0.94	**0.93**
Accounts Receivable (months)	0.9	1.0	0.9	0.0	0.0	**0.5**
Revenue Collection Efficiency (%)	100.0	98.2	92.4	100.0	100.0	**99.1**
Average Tariff (NRs/m^3)	18.06	22.10	25.17	13.08	13.27	**13.78**
New Connection Fee (NRs)	29,500	10,100	8,500	2,000	1,000	**11,032**
Staff/1,000 Connections (ratio)	8.9	7.5	5.0	8.5	6.6	**5.9**

COMMENT AND ANALYSIS BY SERVICE PROVIDER

Baglung Urban Water and Sanitation Users Association

Baglung Urban Water and Sanitation Users Association provides water at 50 lpcd to its consumers for an average of 2 hours per day in dry months and 3 hours in wet months to 60.0% of the population in its service area. NRW of 4.0% is the second lowest with production not metered although consumption is 99.9% metered making the NRW value an estimate at best. Financial management is mixed with operating ratio at 1.13, no accounts receivable and collection efficiency of 100%. Average tariff of NRs8.10/m^3 is the fifth lowest and not enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 5.4 is just below the average. There is room to increase tariff to allow the utility to increase water availability to more than 2-3 hours and increase the amount of water provided to its consumers as well as expand service to more people through the development of additional sources of water. BUWSUA also needs to fully meter its production to have a more accurate determination of unaccounted for water.

Belbari Small Town Water and Sanitation Users Committee

Belbari Small Town Water and Sanitation Users Committee provides water at only 60 lpcd to its consumers for an average of 4 hours per day in the dry months and 8 hours in the wet months to serving only 18.5% of the population, the lowest coverage. NRW of 26.2% is the sixth highest with both production and consumption fully metered. Financial management needs improvement with second highest operating ratio at 1.38, and also second highest accounts receivable equivalent of 1.9 months although collection efficiency is 100%. Average tariff of NRs10.63/m^3 is among the lowest one-third of the service providers and is clearly not enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 8.0 is among the highest. There is a need for the service provider to increase water availability to more than 8 hours per day, the amount of water provided its consumers and expand service to more people by developing new sources and reducing water losses. BSTWSUC also needs to collect water bills on time and lower its operating cost. It may also need to develop its staff with more training to make them more productive.

Beni Small Town Water Supply and Sanitation Users Association

Beni Small Town Water Supply and Sanitation Users Association provides water at only 74 lpcd to its consumers for an average of 12-24 hours per day for 83.3% of the population in its service area. NRW of 10.7% is just higher than the top quartile with production not metered although consumption is 100% metered making the NRW value an estimate at best. Financial management is good with the second lowest operating ratio at 0.39 and accounts receivable equivalent of 0.3 month although collection efficiency of 97.9% needs improvement. Average tariff of NRs21.29/m^3 is the fourth highest. Staff/1000 connections ratio at 9.1 is third highest. New sources should be developed for BSTWSSUA to increase water provided to its consumers and increase its coverage. The low operating ratio shows it can absorb additional expenses even with its current tariff. BSTWSSUA also needs to meter its production to have a more accurate determination of its water losses.

Bhimad Water and Sanitation Users Committee

Bhimad Water and Sanitation Users Committee provides water at only 67 lpcd to its consumers for the two lowest averages of 1 hour per day in the dry months and 1.5 hours per day in the wet months to all of the population in its service area. NRW of 1.9% is lowest but production is not metered and consumption is 99% metered making the NRW value an unreliable measure of losses. Financial management needs to be improved with operating ratio of 1.29 and collection efficiency of 96% although accounts receivable equivalent of 0.5 month is good. Average tariff of NRs6.90/m^3 is the third lowest and not enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 4.6 is better than the average. There is a need to increase tariff to allow the utility to cover its operating costs thus increasing water availability to more than 1.5 hours and increasing the amount of water provided to its consumers. BWUSC's source constraint needs to be addressed as a priority. Full metering of its production will give a more accurate determination of its losses. It may also want to consider sending its staff to training to develop their capabilities.

Water Users and Sanitation Committee (Chandragadhi)

Water Users and Sanitation Committee (Chandragadhi) provides water at 98 lpcd to its consumers for an average of 12 hours per day during both dry and wet months to 83% of the population in its service area. NRW of 43.3% is the highest with production not metered although consumption is almost totally metered at 99.9%. Financial management looks good with operating ratio of 0.88 and accounts receivable equivalent of 0.5 month although collection efficiency of 95.5% needs improvement. Average tariff of NRs10.50/m^3 is below average yet enough to cover O&M expenses. Staff/1000 connections ratio at 5.4 is a little below the average. WUSC Chandragadhi's priority should be reduction of its water losses. Additional revenues from NRW reduction can be used to expand services to more people and provide longer hours of supply. It should also meter its production to have a more accurate determination of non revenue water. The service provider should also invest on training its staff for greater productivity and efficiency.

Damak Water and Sanitation Users Association

Damak Water and Sanitation Users Association provides water at 104 lpcd to its consumers for an average of 18 hours per day during both dry and wet months but to only 58% of the population in its service area. NRW of 11.8% is lower than the average and good with both production and consumption 100% metered. Financial management is good with operating ratio at 0.74 and accounts receivable equivalent of 0.5 month although collection efficiency of 95.9% needs to be improved. Average tariff of NRs11.70/m^3 is also lower than the average and median but enough to cover O&M costs. Staff/1000 connections ratio is good at 3.9 which is the fifth lowest. A major customer service gap is the low coverage and should be improved but it may have to develop new sources which may require increasing tariff. The service provider should also try to collect all its water bills to further improve its finances.

Damauli Water Supply and Sanitation Users Association

Damauli Water Supply and Sanitation Users Association provides water at 89 lpcd to its consumers for an average of only 6 hours per day during both the dry and wet months to 80.8% of the population in its service area. NRW of 10.9% is better than average although production is not metered and consumption is fully metered making the NRW figure an estimate at best. Financial management is good with operating ratio at 0.81, accounts receivable equivalent of 0.5 month and collection efficiency of 100%. Average tariff of NRs8.26/m^3 is the sixth lowest but sufficient for revenues to cover O&M costs. Staff/1000 connections ratio at 5.4 is just below the average and at the median. The low tariff may be increased to buy a backup power generator to provide water at more than 6 hours per day. DWSSUA also needs to meter its production to have a more accurate determination of non revenue water. It may also need to invest in training its staff to increase their productivity.

Duhabi Water Supply Project Main Users Committee

Duhabi Water Supply Project Main Users Committee provides the highest amount of water at 160 lpcd to its consumers for an average of 9 hours per day in the dry months -10 hours per day in the wet months to but only 28.2% of the population in its service area, the third lowest. NRW of 13.9% is better than average and while consumption is fully metered, production is not metered making the NRW an estimate at best. Financial management is just fine with operating ratio at 0.81, accounts receivable of 0.4 month except for 96.4% collection efficiency. Average tariff of NRs10.54/m^3 is just outside the lowest quartile but is enough to cover O&M expenses. Staff/1000 connections ratio at 6.8 is higher than the average. There is a need to increase its coverage to more consumers and water availability to longer distribution hours per day. The low tariff may also be a reason for high per capita consumption. DWSPMUS has to meter production for a more accurate determination of its losses. It also has to collect all its bills from customers. Staff productivity and efficiency can be improved by investing in training of staff.

Galyang Water Supply and Sanitation Users Association

Galyang Water Supply and Sanitation Users Association provides the lowest water at only 26 lpcd to its consumers for an average of 1 hour per day in the dry months and 2 hours per day in the wet months and to 95.4% of the population in its service area. NRW of 9.1% is among the lowest but production is not metered and consumption is only 82% metered making the NRW figure an estimate at best. While operating ratio at 0.95 is fair, financial management needs improvement with accounts receivable equivalent of 1.7 months, the third highest, and collection efficiency of only 85.5%, the second lowest. Average tariff of NRs5.50/m^3 is also second lowest and is barely enough to cover O&M expenses. Staff/1000 connections ratio at 10.9 is the second highest among the service providers. There is a need to increase tariff to allow the utility to put up a backup power source to increase water availability to more than 1-2 hours per day and to develop new sources to increase per capita supply to consumers. GWSUA should put more effort in collecting all their bills and collecting them on time.

Gauradaha Water and Sanitation Users Committee

Gauradaha Water and Sanitation Users Committee provides water at 67 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to only 36.3% of the population in its service area. NRW of 42.6% is third highest with both production consumption 100% metered. While accounts are current with no accounts receivable and collection efficiency of 100%, it has the highest operating ratio of 1.81 with revenues not enough to cover O&M expenses mainly because of the high NRW. Average tariff of NRs15.19/m^3 is the eight highest but not enough to produce the necessary revenues. Staff/1000 connections ratio at 5.4 is below the average but just at the median. There is a need to reduce NRW which will allow the service provider to expand its service to more households and also to improve its finances. GWSUC can also invest in training its staff to increase their productivity and efficiency.

Haraicha Water Supply and Sanitation Users Committee

Haraicha Water Supply and Sanitation Users Committee provides water at 90 lpcd to its consumers for an average of 20 hours per day throughout the year to only 34.5% of the population in its service area. NRW of 8.5% is sixth lowest with both production and consumption 100% metered. Financial management still needs to be improved having the third highest operating ratio of 1.37 despite having no accounts receivable and collection efficiency of 100%. The service provider has the lowest average tariff of NRs4.67/m^3 that does not produce enough revenues to cover O&M expenses. Staff/1000 connections ratio at 6.0 is higher than the average. There is a need to increase tariff to allow the utility to cover its operating costs and raise capital to expand its services to more households. HWSSUC also needs to develop the capacity of its staff by sending more of them to relevant training programs.

Hetauda Water Supply Management Board

Hetauda Water Supply Management Board provides water at 85 lpcd to its consumers for an average of 3 hours per day during the dry months and 4 hours per day in the wet months and to 92.9% of the population in its service area. NRW of 25.7% is at the highest quartile. Production is fully metered although consumption is only 83% metered making the NRW an estimate at best. Financial management with accounts receivable equivalent of 0.7 month needs some improvement in operating ratio of 1.00 and collection efficiency of 94.3%. Average tariff of NRs10.38/m^3 is almost among the lowest, barely enough to cover O&M expenses. Staff/1000 connections ratio at 4.2 is in the lowest quartile. There may be a need to increase tariff to allow the utility to cover its operating costs better and also to increase water availability to more than 3-4 hours per day with backup generators as other utilities have done. HWSMB also needs to fully meter all its connections to have a more accurate determination of non revenue water and to subsequently reduce it.

Itahari Small Town Water Supply and Sanitation Users Association

Itahari Small Town Water Supply and Sanitation Users Association provides water at 77 lpcd to its consumers for an average of 10 hours per day during both dry and wet months and to only 50% of the population in its service area. NRW of 15% is at the median and lower than the average. Production is 99.7% metered and consumption is 100% metered. Financial management is good with an operating ratio of 0.68, no accounts receivable and 100% collection efficiency. Average tariff of NRs11.75/m^3 is lower than the average but enough to bring revenues to cover O&M expenses. Staff/1000 connections ratio is good at 3.6, the third lowest among the utilities. Additional investments may be needed to develop new sources and provide backup power to raise water availability to more than just 10 hours per day and to expand water services to more people. IWSSUA can further increase productivity and efficiency of its staff by sending them to appropriate training courses.

Kakarvitta Water Supply and Sanitation Users Association

Kakarvitta Water Supply and Sanitation Users Association provides water at 95 lpcd to its consumers for an average of 20.5 hours per day during both dry and wet months and to 78.6% of the population in its service area. NRW of 9.1% is in the lowest quartile. Both production and consumption are fully metered. Financial management is good with operating ratio of 0.99, no accounts receivable and 100% collection efficiency. Average tariff of NRs16.01/m^3 is just high enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 6.4 is higher than the average. The service provider is doing quite well although it could further expand its services to more people in its service area and provide water for longer hours per day. KWSSUA should consider developing the capacity of its staff by sending them to appropriate training programs to them more productive and efficient. It should also improve its operating ratio either by raising more revenues or reducing operating costs.

Karmaiya Water and Sanitation Users Committee

Karmaiya Water and Sanitation Users Committee provides water at only 30 lpcd to its consumers for an average of 4 hours per day during the dry months and 6 hours per day in the wet months and to 75% of the population in its service area. NRW of 18.1% is just above the average. However, production is not metered although consumption is fully metered making the NRW value an estimate at best. Financial management needs to be improved with the fourth highest operating ratio at 1.25, accounts receivable equivalent of 1.3 months, also fourth highest, and third lowest collection efficiency of 89.1%. Average tariff of NRs12.72/m^3 is lower than the average. Staff/1000 connections ratio at 5.0 is just below the median. The current tariff should be adjusted to raise revenues to cover operational expenses. KWSUC also needs to collect all its bill payments in a timely manner. Production needs to be metered to have a more accurate determination of non revenue water. It may have to invest in the development of new sources to be able to provide more water to consumers and for longer periods per day and in training of its staff.

Khairenitar Small Town Water Supply Users Committee

Khairenitar Small Town Water Supply Users Committee provides water at 91 lpcd to its consumers for an average of 6 hours per day during the dry season and 8 hours per day in the wet season to all of the population in its service area. NRW of 4.7% is third lowest with consumption fully metered although production is only 98% metered. Financial management is good with operating ratio at 0.6, accounts receivable equivalent of 0.1 month and collection efficiency of 99.2%. Average tariff of NRs17.77/m^3 is the seventh highest covering operating expenses well. Staff/1000 connections ratio at 8.2 is fifth highest among the utilities. There is a need to increase water availability to more than 8 hours per day by investing on a backup power supply. KSTWSUC may have to invest in training its staff to develop their capabilities and increase their productivity.

Lakhanpur Water and Sanitation Users Committee

Lakhanpur Water and Sanitation Users Committee provides water at only 52 lpcd to its consumers for an average of 16 hours per day in the dry months and 18 hours per day in the wet months to 31.1% of the population in its service area. NRW of 20% is higher than the average with production not metered although consumption is 100% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.98, collection efficiency of100% and no accounts receivable. Average tariff of NRs11.15/m^3 is lower than the average but is just enough to cover O&M expenses. Staff/1000 connections ratio at 3.2 is the second lowest showing good utilization of staff. There is a need to increase coverage to more people in its service area as well as the amount of water delivered to its customers. LWSUC may have to develop new sources to do this. It also needs to fully meter its production to have a more accurate determination of non revenue water.

Lekhnath Small Town Water Supply and Sanitation User Committee

Lekhnath Small Town Water Supply and Sanitation User Committee provides water at 62 lpcd to its consumers for an average of 14 hours per day throughout the year to 69% of the population in its service area. NRW of 38% is fourth highest with both production and consumption fully metered. Financial management is good with operating ratio at 0.22, accounts receivable equivalent of 0.8 month and collection efficiency of 173.7% suggesting collection of a large amount of past arrears during the year. Average tariff of NRs13.52/m^3 is above the average and more than enough to cover O&M expenses. Staff/1000 connections ratio is also good at 3.7 which is the fourth lowest. While financial management is good, consumers need to be provided with more water for longer hours per day. NRW also needs to be reduced which can help in providing more water per capita as well as expand to more consumers. LSTWSSUC may need to develop new sources and invest in a backup power generator to achieve these.

Mangadh Water Supply and Sanitation Users Committee

Mangadh Water Supply and Sanitation Users Committee provides water at only 57 lpcd to its consumers for an average of 10 hours per day during both dry and wet months to 43.3% of the population in its service area. NRW of 18.4% is just above average with both production and consumption fully metered. Financial management needs to be improved with operating ratio at 1.10 and collection efficiency of 98.1% although accounts receivable equivalent of 0.2 month is good. Average tariff of NRs12.00/m^3 is a little above average. Staff/1000 connections ratio at 4.2 is in the lowest quartile. There is a need for MWSSUC to lower its operating costs and collect more of its bills. MWSSUC also needs to increase its coverage, availability to more consumers and the amount of water supplied to its consumers. It will have to invest in a new source as current production will not be enough.

Nayagaun Water Supply Users and Sanitation Association

Nayagaun Water Supply Users and Sanitation Association provides water at 143 lpcd, the second highest, to its consumers for an average of 24 hours per day to 54.8% of the population in its service area. NRW of 10% is almost among the lowest. Production is fully metered with consumption at 99.9% metering. Financial management needs some improvement with operating ratio of 1.00 and collection efficiency of 98.6% although accounts receivable equivalent of 0.2 month is good. Average tariff of NRs7.84/m^3 is low with revenues raised just enough to cover operating costs. Staff/1000 connections ratio at 4.5 is almost at the lowest quartile. While customer service is good except for coverage, operating costs should be controlled and revenues increased possibly by increasing tariff to improve its finances. Higher tariff may also reduce the high per capita consumption. NWSUSA may also need to develop new sources to expand coverage. It should consider sending its staff to more training programs to increase their productivity.

Parsa Small Town Water Supply and Sanitation Consumers' Association

Parsa Small Town Water Supply and Sanitation Consumers' Association provides water at only 47 lpcd, one among the lowest, to 86.8% of the population in its service area for an average of 24 hours per day both in dry and wet months. NRW of 16.4% is just above the median with both production and consumption fully metered. While operating ratio is good at 0.54, financial management still needs to be improved with the highest accounts receivable equivalent of 2.5 months and the lowest collection efficiency of only 79%. Average tariff of NRs19.01/m^3 is the fourth highest allowing the utility to cover its O&M expenses with sufficient revenues. Staff/1000 connections ratio at 5.2 is at the median. There is a need to increase the amount of water available to consumers. PWSSCA also needs to collect all its bills in a timely manner.

Pathari Water Supply Users and Sanitation Association

Pathari Water Supply and Sanitation Users Association provides water at only 38 lpcd to its consumers for an average of 3 hours per day throughout the year to only 26.7% of the population in its service area. Production is not metered although consumption is 100% metered rendering the 11.3% NRW figure as unreliable. Financial management needs to be improved with operating ratio of 1.29 and collection efficiency of 97.3% although accounts receivable equivalent is good at 0.3 month. Average tariff of NRs11.95/m^3 is below the average. Staff/1000 connections ratio at 5.0 is also just below the median. Customer service needs to be improved by increasing the amount of water delivered to the homes, expanding the coverage and making water available to more than 3 hours per day. Production will have to be increased with a new source to achieve this. Tariff may have to be increased to raise enough revenues to cover operating expenses and the cost of developing a new source.

Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee

Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee provides water at only 54 lpcd to its consumers for an average of 5 hours per day in the dry months and 8 hours per day during the wet months to 77.1% of the population in its service area. NRW of 43.1% is second highest with production not metered although consumption is 100% metered making the NRW an estimate at best. Financial management needs to be improved with operating ratio at 1.10, accounts receivable equivalent of 1.0 month and collection efficiency of 91.9%. Average tariff of NRs46.90/m^3 is the highest yet it is not enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 11.4 is also the highest. There is a need to reduce NRW since a lot of expenses go into producing water but is eventually lost. With less losses more water can be supplied to consumers. The service provider also needs to fully meter its production to have a more accurate determination of water losses. It should send more staff to training courses to develop their capability and to make them more productive.

Ratnanagar Small Town Water Supply and Sanitation Users Association

Ratnanagar Small Town Water Supply and Sanitation Users Association provides water at 101 lpcd to its consumers for an average of 8 hours per day throughout the year to 44.2% of the population in its service area. NRW of 10.5% is lower than the median with production not metered although consumption is 99.4% metered making the NRW value an estimate at best. Financial management still needs some improvement with accounts receivable equivalent of 1.0 month and collection efficiency of 92% though operating ratio is good at 0.80. Average tariff of NRs14.27/m^3 is near the top quartile but is enough to cover operating costs. Staff/1000 connections ratio at 2.9 is the lowest among the utilities. More efforts should be made in collecting all bills in a timely manner. It should also collect its bills. RSTWSSUA needs to fully meter all its consumers and production to have a more accurate determination of water losses. While it is providing sufficient water per capita coverage must be increased as one of the service provider's priorities.

Salakpur Water Supply and Sanitation Users Committee

Salakpur Water Supply and Sanitation Users Committee provides water at only 53 lpcd to its consumers for an average of 17 hours per day throughout the year to 60% of the population in its service area. NRW of 6.1% is the fourth lowest with both production and consumption fully metered. Financial management is good with operating ratio at 0.93, no accounts receivable and collection efficiency of 100%. Average tariff of NRs9.84/m^3 is almost among the lowest but just enough to cover operating expenses. Staff/1000 connections ratio at 4.8 is lower than the average. Except for low coverage and per capita consumption, the service provider is doing quite well. The service provider may have to develop new sources since the per capita consumption is close to the limit of production. There is room for tariff increase with the present low average tariff. SWSSUC should send more staff to training courses to develop their capacity and increase their productivity.

Shanischare-Arjundhara Water Supply and Sanitation Users Committee

Shanischare-Arjundhara Water Supply and Sanitation Users Committee provides water at 49 lpcd to its consumers for an average of 24 hours per day throughout the year to 77% of the population in its service area. NRW of 33.3% is the fifth highest with production and consumption fully metered. Financial management is fine with operating ratio of 0.99, no accounts receivable and 100% collection efficiency. Average tariff of NRs11.85/m^3 is at the median and just enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 6.0 is higher than the average. There may be a need to increase tariff to allow the utility to cover its operating costs better. High NRW prevents the service provider from delivering more water per capita and has to be reduced. This can be complemented by developing additional water sources.

Shankarnagar Water Users and Sanitation Association

Shankarnagar Water Users and Sanitation Association provides water at 80 lpcd to its consumers for an average of 18 hours per day throughout the year to all of the population in its service area. NRW of 15.0% is at the median among the utilities with both production and consumption (99.9%) almost fully metered. Financial management is good with operating ratio at 0.64, no accounts receivable and collection efficiency of 100%. Average tariff of NRs9.13/m^3 is in the lowest quartile but still enough to cover operating expenses adequately. Staff/1000 connections ratio at 3.9 is fifth lowest. The service provider is doing well needing improvements in per capita water supply and availability to customers. This may require developing new sources as current production may not be sufficient to increase supply. SWUSA should send more staff to training courses to further develop their capacity and increase productivity.

Shivalaya Water Supply and Sanitation Users Association

Shivalaya Water Supply and Sanitation Users Association provides water at 97 lpcd to its consumers for an average of 8 hours per day during the dry months and 9 hours per day in the wet months to 95.2% of the population in its service area. NRW of 23.3% is in the highest quartile with consumption fully metered but only 4% of production is metered making the NRW value an estimate at best. Financial management is good with operating ratio at 0.67, accounts receivable of 0.9 month and collection efficiency of 100%. Average tariff of NRs18.06/m^3 is sixth highest which is sufficient enough to raise revenue that covers O&M expenses well. Staff/1000 connections ratio at 8.9 is fourth highest. NRW needs to be lowered with more efforts put in leak detection and repair. It should meter its production to have a better determination of its losses. SWSSUA should consider sending more staff to training courses to develop their capacity and increase their productivity. Backup generators may be considered to increase water availability per day.

Sunwal Water Users and Sanitation Organization

Sunwal Water Users and Sanitation Organization provides water at only 31 lpcd, the third lowest, to its consumers for an average of 10 hours per day throughout the year and to 57.5% of the population in its service area. NRW of 16.6% is lower than the average with consumption 90% metered and production not metered at all making the NRW value an estimate at best. Financial management needs improvement with operating ratio at 1.18, collection efficiency of 97.9% and accounts receivable equivalent of 1.0 month. Average tariff of NRs22.10/m^3 is third highest yet it is not enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 7.5 is in the highest quartile. SWUSO should provide more water for longer hours and expanding its coverage which will require new water sources. It should be more efficient in managing its finances by lowering O&M expenses. SWUSO has a difficult task of developing new sources and increasing tariff as its tariff is already among the highest.

Surunga Water Supply and Sanitation Users Association

Surunga Water Supply and Sanitation Users Association provides water at only 63 lpcd to its consumers for an average of 24 hours per day throughout the year to 51.1% of the population in its service area. NRW of 9.1% is good at the top quartile with consumption fully metered but not for

production rendering the NRW value unreliable. Operating ratio is third lowest at 0.48, accounts receivable still good at 0.9 month although collection efficiency at 92.4% is sixth lowest. Average tariff of NRs25.17/m^3 is second highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 5.0 is a little lower than the average. With a low operating ratio, SWSSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should also meter its production to have a better determination of its losses. SWSSUA should send its staff to training courses to develop their capacity and increase their productivity.

Tankisinwari Water Users and Sanitation Committee

Tankisinwari Water Users and Sanitation Committee provides water at only 64 lpcd to its consumers for an average of 11 hours per day throughout the year to 45.9% of the population in its service area. NRW of 23.1% is in the highest quartile. Both production and consumption are fully metered. Financial management is good with operating ratio at 0.81, no accounts receivable and collection efficiency of 100%. Average tariff of NRs13.08/m^3 is just below average but still enough to cover O&M costs. Staff/1000 connections ratio at 8.5 is fourth highest. TWUSC rates low in customer satisfaction and may need to develop new sources to provide more water to its customers, increase coverage and have longer water availability. This may require increasing tariff to cover development costs. Reducing NRW may help augment the needed increase in production.

Urlabari Water Supply Users and Sanitation Association

Urlabari Water Supply Users and Sanitation Association provides water at 81 lpcd to its consumers for an average of 24 hours per day throughout the year to only 41.1% of the population in its service area. NRW of 8.3% is the fifth lowest with both production and consumption fully metered. Financial management is good with operating ratio at 0.94, no accounts receivable and collection efficiency of 100%. Average tariff of NRs13.27/m^3 is just about the average just enough for revenues to cover operating costs. Staff/1000 connections ratio at 6.6 is higher than average. Except for low coverage and per capita consumption, the service provider is doing well. UWSUSA may need to develop additional sources to increase coverage and provide more water to its customers but it may also have to increase tariff to be able to finance the cost of developing new water sources and improving its finances.

COMMENT AND ANALYSIS BY PERFORMANCE INDICATOR

Water supply coverage (Average – 63.6%)

Three service providers have 100% coverage, namely Bhimad, Khairenitar and Shankarnagar. The three others with more than 90% coverage are Shivalaya (95.2%), Galyang (94.5%), and Hetauda (92.9%). About 1/3 of the service providers are serving less than 50% of the population in their respective areas of responsibility. The lowest coverage is in Belbari (18.5%), followed by Pathari (26.7%), Duhabi (28.2%), Lakhanpur (31.1%) and Haraicha (34.5%).

Water availability (Dry Months) (Average – 12.3 hours/day)

Six water service providers have 24 hours water supply during the dry months namely Gauradaha, Nayagaun, Parsa, Shanischare, Surunga and Urlabari. Nine others have 12 hours or more water supply per day. More than half of the service providers have less than 12 hours supply per day during the dry months. Supply duration of less than 24 hours pose not only a risk to health but they also affect metering and the ability to reduce NRW levels. The shortest supply duration per day belongs to Galyang (1.0 hour) followed by Bhimad (1.5 hours), Baglung (2 hours), Pathari and Hetauda (3 hours), Karmaiya and Belbari (4 hours).

Water availability (Wet Months) (Average – 13.2 hours/day)

Water availability during the wet months is a little bit better overall with 7 utilities having 24 hour water supply. These are Beni, Gauradaha, Nayagaun, Parsa, Shanischare, Surunga and Urlabari. Eight others have 12 hours or more water supply per day. The same number of service providers have less than 12 hours daily water supply in the wet months as in the dry months mostly because of their inability to provide backup power generators for pumping for both production and distribution. The shortest supply duration belongs to Bhimad (1.5 hours) followed by Galyang (2 hours), Pathari and Baglung (3 hours), Hetauda (4 hours), Karmaiya and Damauli (6 hours).

Consumption (Average – 73.0 lpcd)

The high consumption VDCs or towns are Duhabi (160 lpcd), Nayagaun (143 lpcd), Damak (104 lpcd), Ratnanagar (101 lpcd), Chandragadhi (98 lpcd) and Shivalaya (97 lpcd). Consumption of 100-120 lpcd is reasonable as it is high enough to provide for health and hygiene requirements and low enough to help conserve water resources. The low-consumptions areas are Galyang (26 lpcd), Karmaiya (30 lpcd), Sunwal (31 lpcd), Pathari (38 lpcd) and Parsa (47 lpcd). All these service providers have resource constraints considering that their NRW are all below 20%.

Production per person (Average – 0.090 m^3/d/person)

This indicator measures overall efficiency of water resource use. The low figures of Galyang (0.029 m^3/d/c), Karmaiya (0.037 m^3/d/c), Sunwal (0.038 m^3/d/c), Pathari (0.043 m^3/d/c), Baglung (0.052 m^3/d/c) and Parsa (0.056 m^3/d/c) reflect shortages of water resources. Those with high production are Duhabi (0.186 m^3/d/c), Chandragadhi (0.173 m^3/d/c), Nayagaun (0.158 m^3/d/c), Shivalaya (0.126 m^3/d/c), Damak (0.118 m^3/d/c) and Gauradaha (0.117 m^3/d/c). Chandragadhi, Shivalaya and Gauradaha have high production to compensate for high levels of NRW.

Non revenue water (Average – 17.4%)

The best performing service providers with low NRW are Bhimad (1.9%), Baglung (4.0%), Khairenitar (4.7%), Salakpur (6.1%), Urlabari (8.3%) and Hairacha (8.5%). Ten other service providers have lower than 15% NRW. The worst performers with high NRW are Chandragadhi (43.3%), Prithvinarayan (43.1%), Gauradaha (42.6%), Leknath (38%), and Shanischare (33.3%). Metering is a critical component for determining NRW. Not all of the service providers have fully metered connections and production. About 23 service providers have 100% metering of consumption while 15 have fully metered production. About 12 of the service providers claim to have fully metered connections and production. Hence, NRW figures should be interpreted with caution without full metering. Given low coverage and low water availability in some service providers, more must be done to reduce NRW levels. This includes repair of visible leaks, elimination of illegal connections and location and repair of invisible leaks.

Connections metered (Average – 98.5%)

Metering is important to fully account for water production and consumption in reducing NRW. Consumption metering is particularly important for consumers to pay for what they are using which can help in promoting prudent use of water. There is a high level of metering among the service providers. Twenty three service providers have all their connections fully metered; seven have 90% - 99% metering while two have 82% (Galyang) and 83% (Hetauda)

metering. Consumption metering must be complemented with full production metering if losses are to be accurately determined to initiate any water loss reduction program.

Operating ratio (Average – 0.93)

A low operating ratio means revenues from tariffs (water consumption billings) cover the operation and maintenance costs comfortably. If we include debt service and depreciation, it will show whether the service provider also has the capacity to expand coverage through tariffs without the grants or subsidies given by government. A ratio above 1.0 means that the service provider does not cover O&M costs. Nine service providers have operating ratios less than 0.75 led by Leknath (0.22), followed by Beni (0.39), Surunga (0.48), Parsa (0.54), Khairenitar (0.60), Shankarnagar (0.64), Shivalaya (0.67), Itahari (0.68) and Damak (0.74). The service providers that are not able to cover their O&M costs from tariffs are Gauradaha (1.81), Belbari (1.38), Haraicha (1.37), Bhimad and Pathari (1.29) with 5 others with operating ratio above 1.00. Thirteen service providers have operating ratios between 0.75 and 1.00. The figures above do not include debt service, depreciation and revenues other than those from water consumption and service billings.

Accounts receivable (Average – 0.5 month)

This indicator is a good measure of the effectiveness of a service provider in collecting its receivables or bill payments. In this case, the receivables are expressed in equivalent of the utility's average monthly billing. This indicator is also equated to collection period. For small service providers, accounts receivable representing less than 2 months of its average billing is manageable; for larger service providers, this could be 3 months. But when it has risen to 6 months or more, it has gone out of hand. All of the service providers except Parsa (2.5 months) have accounts receivable equivalent of less than 2 months. The best performers for this indicator are 11 service providers who reported no accounts receivable; 14 others have less than one month and 6 service providers with 1 – 2 months account receivable including Belbari (1.9 months), Galyang (1.7 months), Karmaiya (1.3 months), and Prithvinarayan, Ratnanagar and Sunwal (1 month).

Revenue collection efficiency (Average – 99.1%)

This indicator, average tariff, operating ratio, and accounts receivable, have impacts on the financial health of a service provider. Fifteen service providers have collection efficiencies of 100% with Leknath showing more (173.7%) which may indicate collection of past arrears while the remaining 14 are able to collect bill payments on time. The service providers that have to improve bill collection are Parsa (79.0%), Galyang (85.5%), Karmaiya (89.1%), Prithvinarayan (91.9%), Ratnanagar (92.0%), Surunga (92.4%) and Hetauda (94.3%). These service providers should increase their collection efforts and encourage consumers to pay their bills on time.

Average tariff (Average – NRs13.78/m^3)

The average tariff is one measure of the financial discipline of a service provider and its ability to cover operational costs with revenues from tariffs with prudent expenditures. The water utilities with high average tariffs are Prithvinarayan (NRs46.00/m^3), Surunga (NRs25.17/m^3), Sunwal (NRs22.10/m^3), Beni (NRs21.29/m^3) and Parsa (NRs19.01/m^3). Those who charge the lowest tariffs are Haraicha (NRs4.67/m^3), Galyang (NRs5.50/m^3), Bhimad (NRs6.90/m^3), Nayagaun (NRs7.84/m^3) and Baglung (NRs8.10/m^3). With such low tariffs, Haraicha, Bhimad and Baglung are not able to cover O&M costs with high operating ratio.

Residential connection fee (Average – NRs11,032)

Apart from reasonable connection fee, allowing payments by installment can assist poor households to gain access to direct connection to their homes with significant benefits to their welfare. Many of the service providers surveyed allow payment of residential connection fees by installment. However, it is interesting to note that the average connection fee is 52 times the average monthly bill per connection. The lowest connection fee is charged by Belbari (NRs500) followed by Urlabari (NRs1,000), Mangadh (NRs1,250), Tankisinwari (NRs2,000), Chandragadhi (NRs4,330) and Karmaiya (NRs5,130). Eight service providers charged connection fees of NRs15,000 or more, starting with Prithvinarayan (NRs43,000), Shivalaya (NRs29,500), Beni (NRs25,000), Bhimad (NRs20,000), Leknath (NRs19,075) and Galyang (NRs17,600).

Staff per 1,000 connections ratio (Average – 5.9)

This indicator is generally used to measure the efficient use of human resources in a service provider as manifested by low staff/1,000 connection ratio. The service providers with the lowest ratio and are performing well are Ratnanagar (2.9), Lakhanpur (3.2), Itahari (3.6), Leknath (3.7), Damak and Shankarnagar both with (3.9). Those with high staff/1,000 connections ratio are Prithvinarayan (11.4), Galyang (10.9), Beni (9.1), Shivalaya (8.9) and Tankisinwari (8.5). Other than downsizing, improvement in this indicator can be done by training of staff in different aspects of

operations, such as pumping, treatment plant operations, billing and collection, leak control and management, etc. Investments in capacity building are important if efficient and sustainable operations are to be attained.

OVERALL PERFORMANCE OF NEPAL WATER SERVICE PROVIDERS

Overall performance of a water service provider can be rated in four areas of management, namely, customer satisfaction, water resources, financial, and human resources management. Table 2 shows the comparison of performance in terms of indicator averages of the 32 water service providers from Nepal with those from India (28 utilities) and the Philippines (34 utilities). Data for the Philippine utilities were for 2009, the India utilities for 2008-2009.

Table 2: Comparison of Overall Performance

Indicators	Nepal (32)	India (28)	Philippines (34)
Water Coverage (%)	63.6	66.6	76.0
Water Availability (hours/day)	12.8	3.3	22.3
Consumption/Capita (lpcd)	73.0	126.4	130.2
Non Revenue Water (%)	17.4	44.1	26.5
Connections Metered (%)	98.5	49.8	97.8
Operating Ratio	0.93	1.49	0.73
Accounts Receivable (months)	0.5	no data	1.5
Staff/1,000 Connections (ratio)	5.4	8.4	5.1

Customer Satisfaction

Customer satisfaction can be measured in terms of coverage, water availability and average daily consumption. Efficient service providers strive for 100% coverage, 24-hour availability and daily consumption of about 100-120 lpcd. Nepali service providers need some catching up with its neighboring countries in Asia especially in terms of daily consumption (73.0 lpcd) which is lower than their Indian (126.4 lpcd) and Philippine (130.2 lpcd) counterparts although these are on the high side just a bit outside the ideal range. Water availability (12.8 hours/day) is about 58% of their counterparts in the Philippines (22.3 hours/day) but much higher than in India (3.3 hours/day). The Nepali water service providers will have to increase coverage (63.6%) together with its neighbors India (66.6%) and the Philippines (76.0%) which also have low coverage.

Water Resources Management

The single most important parameter to indicate performance under water resources management is non revenue water (NRW). However, it is equally important that NRW is obtained through accurate measurement of production and consumption with no less than 100% metering of all sources of production and all service connections. Nepal service providers appear better in managing their losses with the lowest NRW average (17.4%) compared to the Philippines (26.5%) and India (44.1%). It also has the highest rate of metering (98.5%). None of the averages show 100% consumption metering but there is greater need to increase metering of both production and service connections among Indian water utilities.

Financial Management

The most important measures of financial management are operating ratio and accounts receivable. Nepal service providers compare well on operating ratio (0.93) with India (1.49) but need to catch up with its Philippine counterparts (0.73). Nepal service providers are doing very well with their accounts receivable equivalent or collection period which averages 0.5 month compared to 1.5 months in the Philippines. Overall, they are doing well in financial management but can stand some improvement in reducing their operating ratio through either increasing revenues or reducing operating expenses or both.

Human Resources Management

The most common measure for human resources management is staff/1,000 connections. Management and staff are the most important resources of a water service provider. Nepal service providers have higher staff/1000 connections average (5.4) compared to Philippines (5.1) but lower than India (8.4). Most of the urban water service providers in the Philippines have higher levels of autonomy allowing them to resist political intervention on matters of recruiting and hiring staff. Similarly, Nepal service providers are managed by local level committees and associations and manage to have some degree of autonomy from local politicians as well.

GENERAL CONCLUSIONS

Data Availability and Reliability - The data presented in this data book give a comprehensive picture of the performance of 32 water service providers in Nepal. The performance indicators were derived from information provided by the participating service providers. It should be noted that the reliability of a number of important indicators for some service providers, such as per capita consumption, NRW and financial indicators related to consumption and billing, are suspect in the absence of full metering and should be used with caution. Any performance improvement program will have to improve measurement and recording of operational information as a first step in getting a complete assessment of any water service provider's overall performance.

Performance Improvement Needs - Overall, Nepal water service providers will have to increase water availability to 24 hours, increase coverage and the supply of water to their consumers over time. A number of service providers manage to provide 24 hours supply by investing in backup power generators. Realistic assessments of NRW should be determined starting with full metering of production and consumption. Financial management is well but some improvements in operating ratio can still be done. Raising tariffs will allow the utilities to finance development of new sources to increase coverage and the amount of water supplied to its consumers. Efficiencies in the different areas of operations can be gained with skilled and qualified staff. The service providers would do well in investing in training and building the capabilities of their staff and managers. Ten service providers have no personnel trained during the year while those that sent staff for training averaged 2.2 staff per service provider led by Leknath (10), Mangadh (8) and Tankisinwari (6). DWSS can take the initiative in developing the training programs through its CHRDU.

Apart from addressing the water quantity issue, water quality should be addressed as well. About 19 water service providers have water safety plans in place. Kakarvitta, Nayagaun and Salakpur which are drawing groundwater have no water treatment at all. Of the remaining 29 that are at least chlorinating water for distribution, 12 are not taking any samples for residual chlorine test while 6 have less than 12 samples tested for the entire year.

Given the above assessment, sector stakeholders in Nepal need to start focusing on the following:

- Advocacy for more investment in the sector and greater coverage;
- 24-hour supply to all consumers;
- 100% metering of both production and consumption;
- Management of water losses by keeping NRW in check, appropriate pricing, and public awareness;
- Phasing out of public taps and other sources of free water;
- Water quality monitoring and implementation of water safety plans;
- Improved billing and collection efficiency;
- Appropriate tariffs to cover O&M costs and costs of expansion and replacements;
- Investment in capacity-building for staff and management;
- Regular monitoring of performance through appropriate management information systems; and

- Support to the urban poor through lifeline rates and installment payment of connection fees.

Institutionalization of Benchmarking and Performance Improvement – Benchmarking has been used as a tool for improving performance of water utilities in Asia as early as 1993 when ADB published the Water Utilities Data Book for the Asian and Pacific Region. This was followed by a second data book in 1997 and the Water in Asian Cities in 2003. These publications were followed by the promotion of water operators partnerships in recent years where better performing water utilities cooperate as mentors to recipient utilities. This was promoted in Asia by the ADB, the US Agency for International Development (USAID) and the International Water Association (IWA). Such partnerships have helped many Asian water utilities in improving their performance. Some national associations like PERPAMSI of Indonesia, the Philippine Association of Water Districts, the Vietnam Water and Sewerage Association have also instituted partnerships among their members. The Bangladesh Water Utilities Network has undertaken similar activities with support from the Water and Sanitation Program (WSP) of the World Bank. These are examples of how benchmarking activities have led to performance improvements starting with the collection and analysis of reliable performance information from water service providers. Sharing of good practices among members of national water associations and water utilities networks shows lessons in performance improvement among peers. There are such examples among Nepal's water service providers that can be gathered from this data book.

PART II

UTILITIES COMPARISONS

(Figures and Tables)

Table 3: Names and Locations of Water Service Providers

VDC/Town	District	Area Population	Data Year	Name of Water Service Provider
Baglung	Baglung	50,000	2011 - 2012	Baglung Urban Water and Sanitation Users Association
Belbari	Morang	20,000	2011 - 2012	Belbari Small Town Water and Sanitation Users Committee
Beni	Myagdi	12,000	2011 - 2012	Beni Small Town Water Supply & Sanitation Users Association
Bhimad	Tanahu	5,593	2011 - 2012	Bhimad Water and Sanitation Users Committee
Chandragadhi	Jhapa	18,092	2011 - 2012	Water Users and Sanitation Committee, Chandragadhi
Damak	Jhapa	40,000	2011 - 2012	Damak Water and Sanitation Users Association
Damauli	Tanahu	26,000	2011 - 2012	Damauli Water Supply and Sanitation Users Association
Duhabi	Sunwari	22,000	2011 - 2012	Duhabi Water Supply Project Main Users Committee
Galyang	Syangja	11,000	2011 - 2012	Galyang Water Supply and Sanitation Users Association
Gauradaha	Jhapa	17,966	2011 - 2012	Gauradaha Water and Sanitation Users Committee
Haraicha	Morang	11,590	2011 - 2012	Haraicha Water Supply and Sanitation Users Committee
Hetauda	Makwanpur	70,000	2011 - 2012	Hetauda Water Supply Management Board
Itahari	Sunsari	100,000	2011 - 2012	Itahari Small Town Water Supply and Sanitation Users Association
Kakarvitta	Jhapa	22,000	2011 - 2012	Kakarvitta Water Supply and Sanitation Users Association
Karmaiya	Sarlahi	20,000	2011 - 2012	Karmaiya Water and Sanitation Users Committee
Khairenitar	Tanahu	6,250	2011 - 2012	Khairenitar Small Town Water Supply Users Committee
Lakhanpur	Jhapa	19,690	2011 - 2012	Lakhanpur Water and Sanitation Users Committee
Leknath	Kaski	58,000	2011 - 2012	Lekhnath Small Town Water Supply and Sanitation User Committee
Mangadh	Morang	61,729	2011 - 2012	Mangadh Water Supply and Sanitation Users Committee
Nayagaun	Rupandehi	10,105	2011 - 2012	Nayagaun Water Supply Users and Sanitation Association
Parsa	Chitwan	29,154	2011 - 2012	Parsa Small Town Water Supply and Sanitation Consumers' Association
Pathari	Morang	37,400	2011 - 2012	Pathari Water Supply Users and Sanitation Association
Prithvinarayan	Gorkha	7,000	2011 - 2012	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee
Ratnanagar	Chitwan	52,000	2011 - 2012	Ratnanagar Small Town Water Supply and Sanitation Users Association
Salakpur	Morang	20,000	2011 - 2012	Salakpur Water Supply and Sanitation Users Committee
Shanischare	Jhapa	75,000	2011 - 2012	Shanischare-Arjundhara Water Supply and Sanitation Users Committee
Shankarnagar	Rupandehi	45,000	2011 - 2012	Shankarnagar Water Users and Sanitation Association
Shivalaya	Parbat	13,200	2011 - 2012	Shivalaya Water Supply and Sanitation Users Association
Sunwal	Nawalparasi	36,000	2011 - 2012	Sunwal Water Users and Sanitation Organization
Surunga	Jhapa	21,632	2011 - 2012	Surunga Water Supply and Sanitation Users Association
Tankisinwari	Morang	16,000	2011 - 2012	Tankisinwari Water Users and Sanitation Committee
Urlabari	Morang	43,000	2011 - 2012	Urlabari Water Supply Users and Sanitation Association

Table 4: Size of Service Providers

Service Provider	Production (m^3/day)	Service Provider	Number of Connections	Service Provider	Number of Staff	Service Provider	People Served
Hetauda	7,416	Hetauda	10,200	Hetauda	43	Hetauda	65,000
Itahari	4,515	Itahari	8,655	Itahari	31	Itahari	50,000
Shankarnagar	4,227	Leknath	6,406	Leknath	24	Shankarnagar	45,000
Leknath	4,000	Ratnanagar	4,195	Baglung	16	Leknath	40,000
Damak	2,743	Damak	3,828	Kakarvitta	16	Baglung	30,000
Ratnanagar	2,600	Shankarnagar	3,617	Shivalaya	16	Mangadh	26,716
Chandragadhi	2,592	Baglung	2,966	Damak	15	Parsa	25,300
Damauli	2,088	Mangadh	2,876	Chandragadhi	14	Damak	23,200
Mangadh	1,859	Chandragadhi	2,615	Shankarnagar	14	Ratnanagar	23,000
Kakarvitta	1,808	Parsa	2,497	Damauli	13	Damauli	21,000
Nayagaun	1,600	Kakarvitta	2,489	Parsa	13	Urlabari	17,667
Shivalaya	1,585	Damauli	2,402	Urlabari	13	Kakarvitta	17,300
Urlabari	1,565	Surunga	2,019	Mangadh	12	Chandragadhi	15,008
Baglung	1,555	Urlabari	1,963	Ratnanagar	12	Karmaiya	15,000
Parsa	1,416	Shivalaya	1,802	Sunwal	12	Shivalaya	12,566
Duhabi	1,151	Nayagaun	1,760	Khairenitar	10	Salakpur	12,000
Shanischare	842	Sunwal	1,600	Surunga	10	Shanischare	11,550
Beni	831	Salakpur	1,464	Prithvinarayan	9	Sunwal	11,500
Surunga	770	Gauradaha	1,305	Beni	8	Surunga	11,055
Gauradaha	766	Khairenitar	1,220	Duhabi	8	Galyang	10,400
Salakpur	673	Karmaiya	1,200	Nayagaun	8	Nayagaun	10,105
Tankisinwari	613	Duhabi	1,180	Gauradaha	7	Beni	10,000
Khairenitar	597	Shanischare	1,162	Salakpur	7	Pathari	10,000
Karmaiya	555	Bhimad	1,083	Shanischare	7	Tankisinwari	7,344
Prithvinarayan	514	Pathari	1,010	Tankisinwari	7	Gauradaha	6,525
Sunwal	434	Lakhanpur	938	Belbari	6	Khairenitar	6,250
Pathari	432	Beni	877	Galyang	6	Duhabi	6,200
Lakhanpur	396	Tankisinwari	828	Karmaiya	6	Lakhanpur	6,125
Haraicha	395	Prithvinarayan	787	Bhimad	5	Bhimad	5,593
Bhimad	383	Belbari	750	Pathari	5	Prithvinarayan	5,400
Belbari	302	Galyang	550	Haraicha	3	Haraicha	4,000
Galyang	301	Haraicha	500	Lakhanpur	3	Belbari	3,695

Figure 1: Production Volume

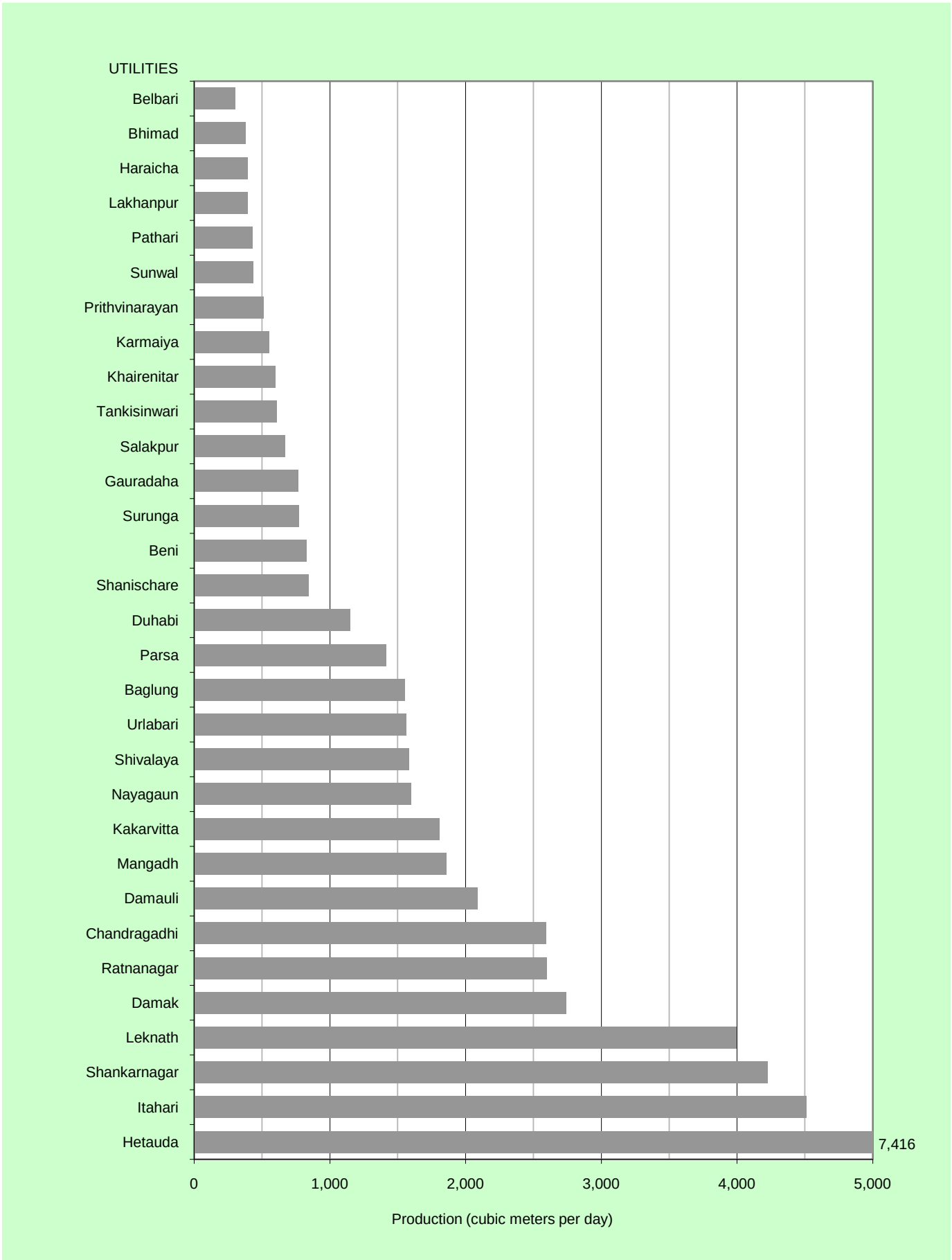
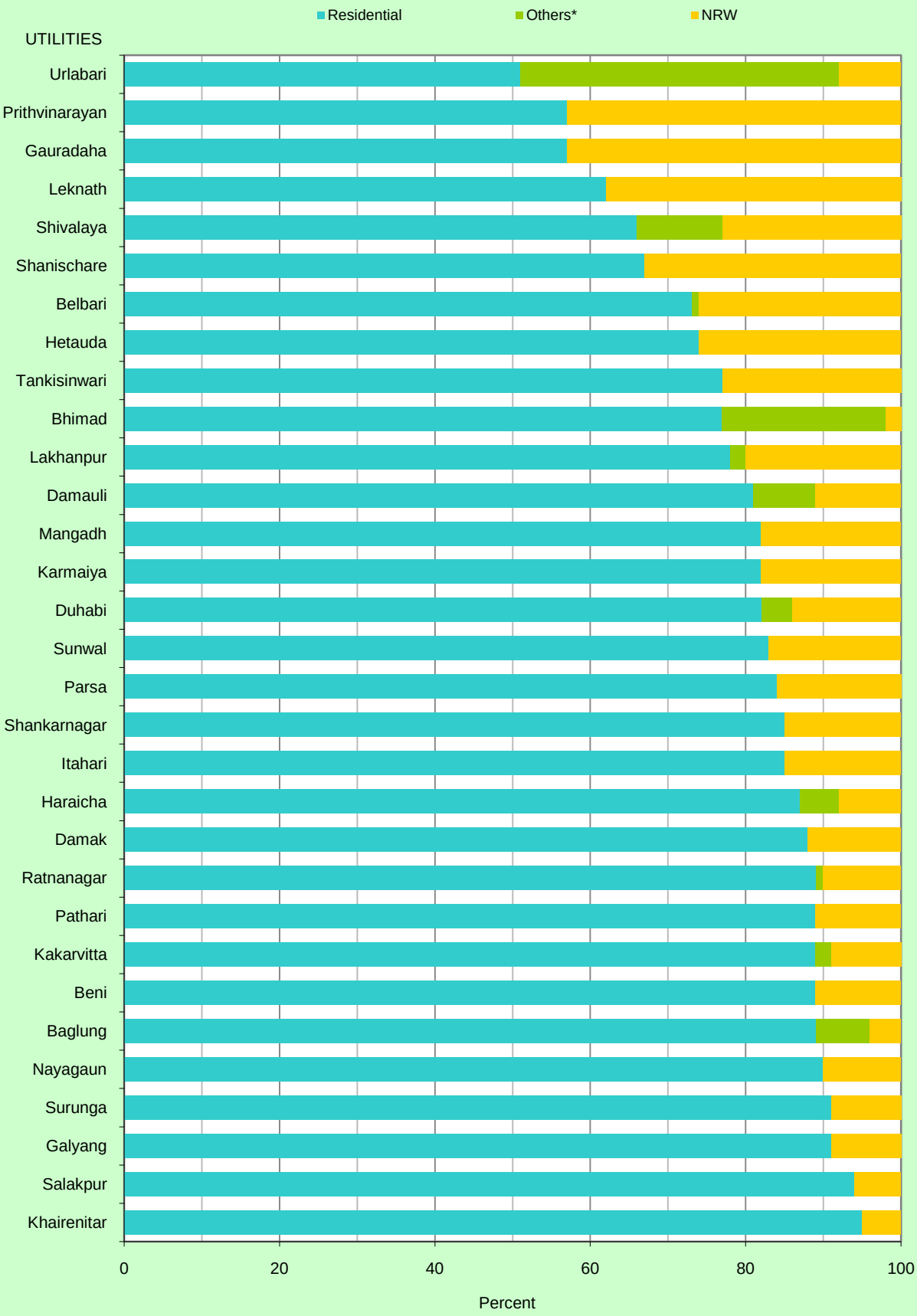


Figure 2: Water Use



* Other use includes industrial, commercial,and institutional.

Figure 3: Per Capita Consumption

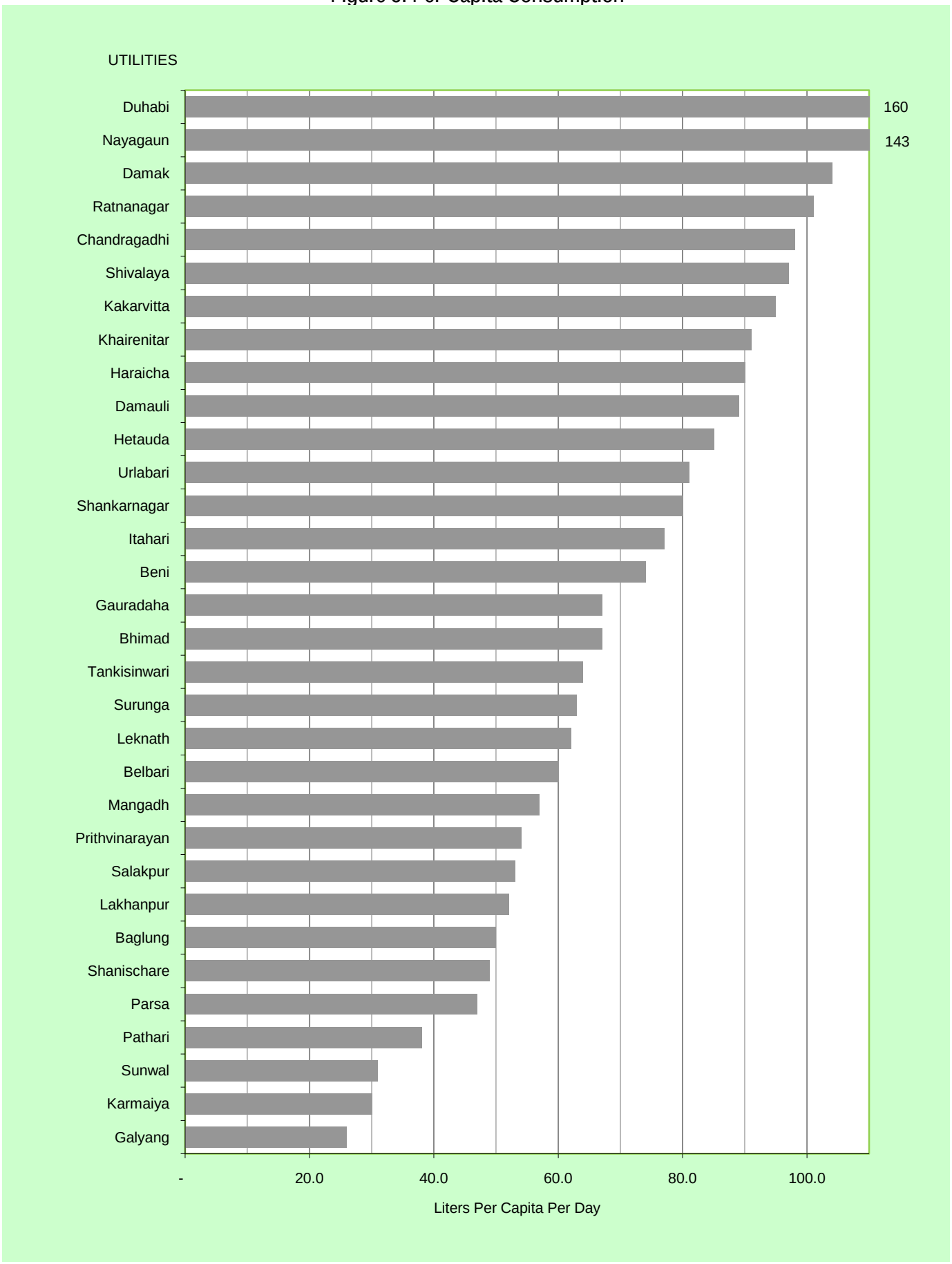


Figure 4: Monthly Consumption Per Connection

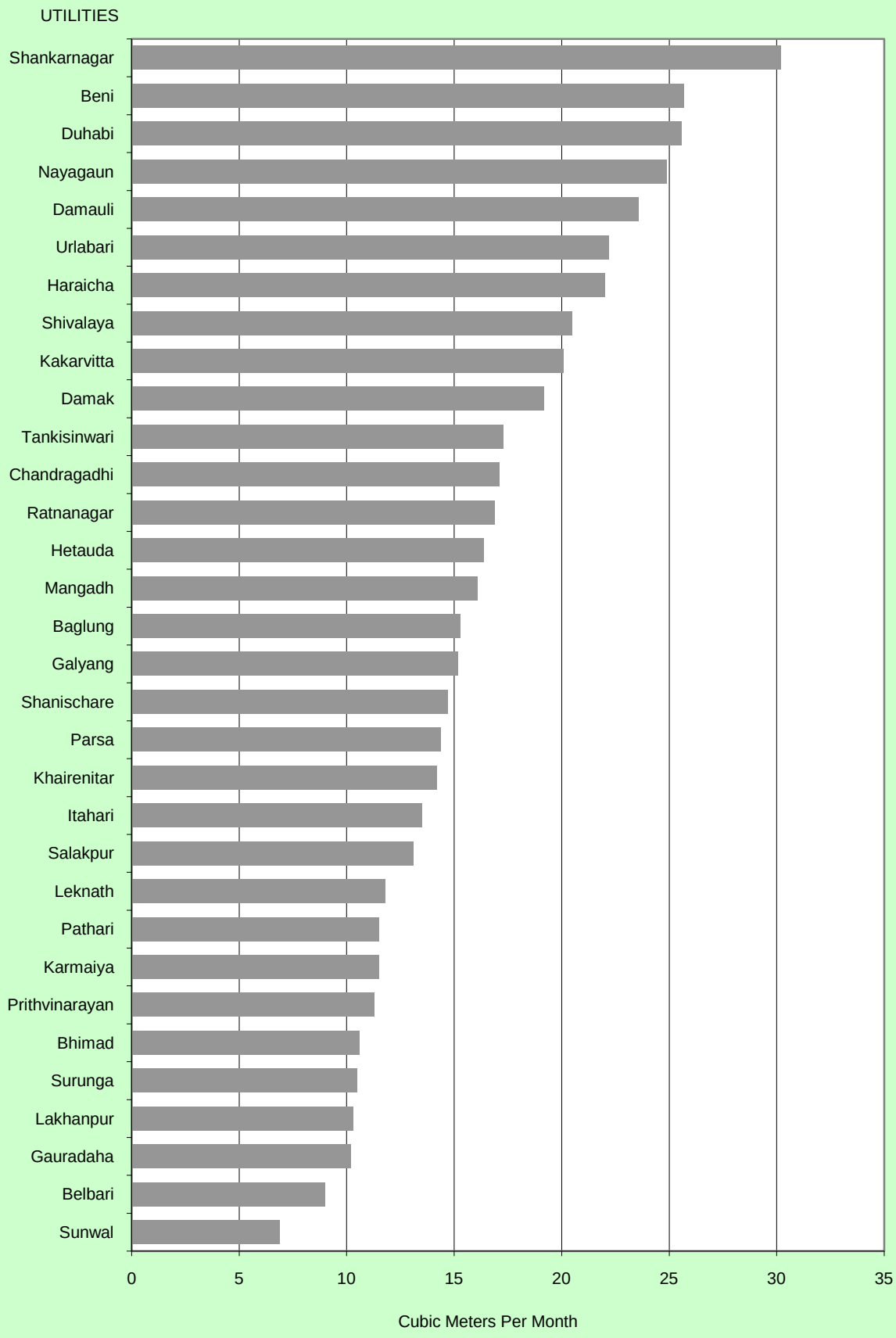


Figure 5: Non Revenue Water

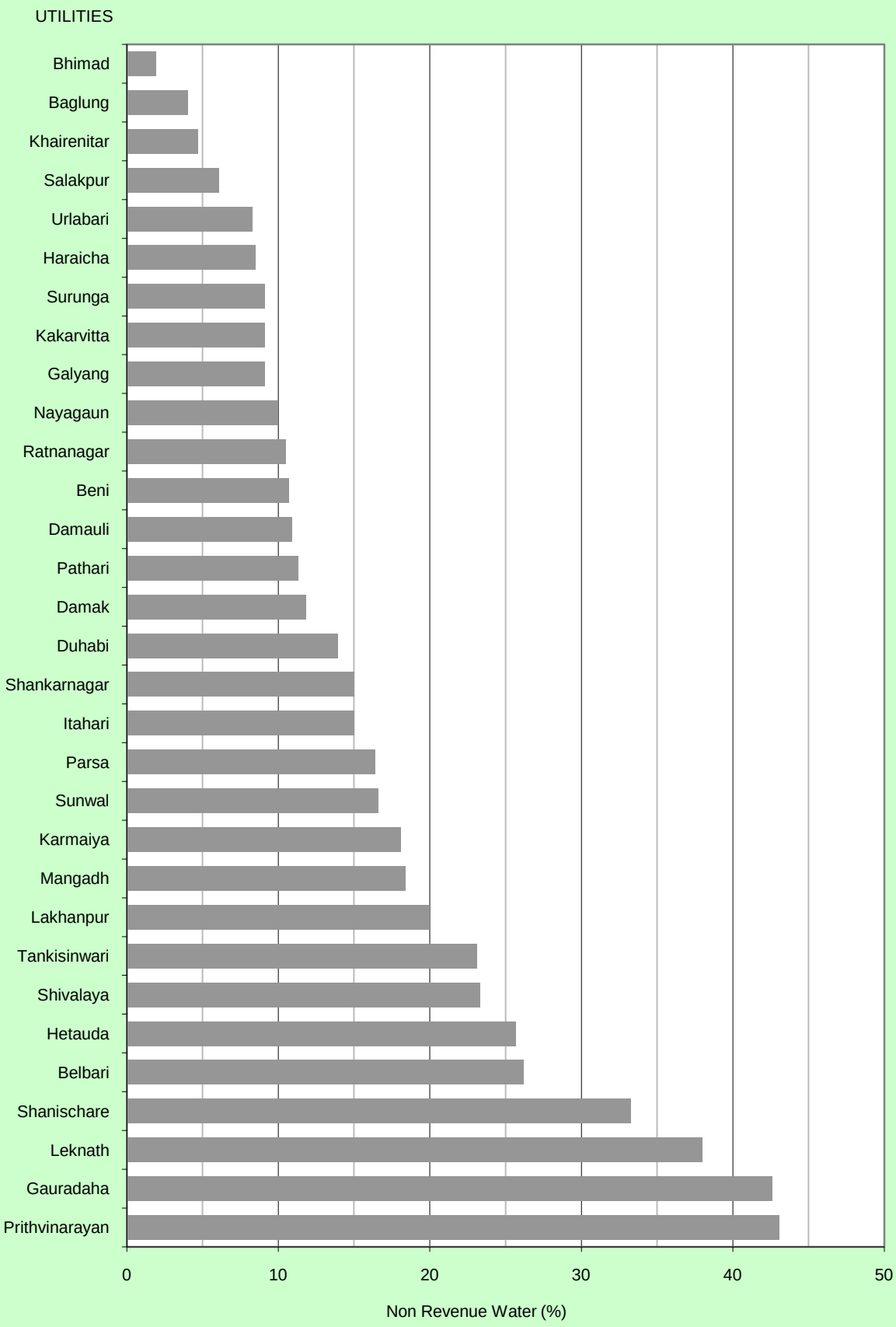


Figure 6: Consumer Metering

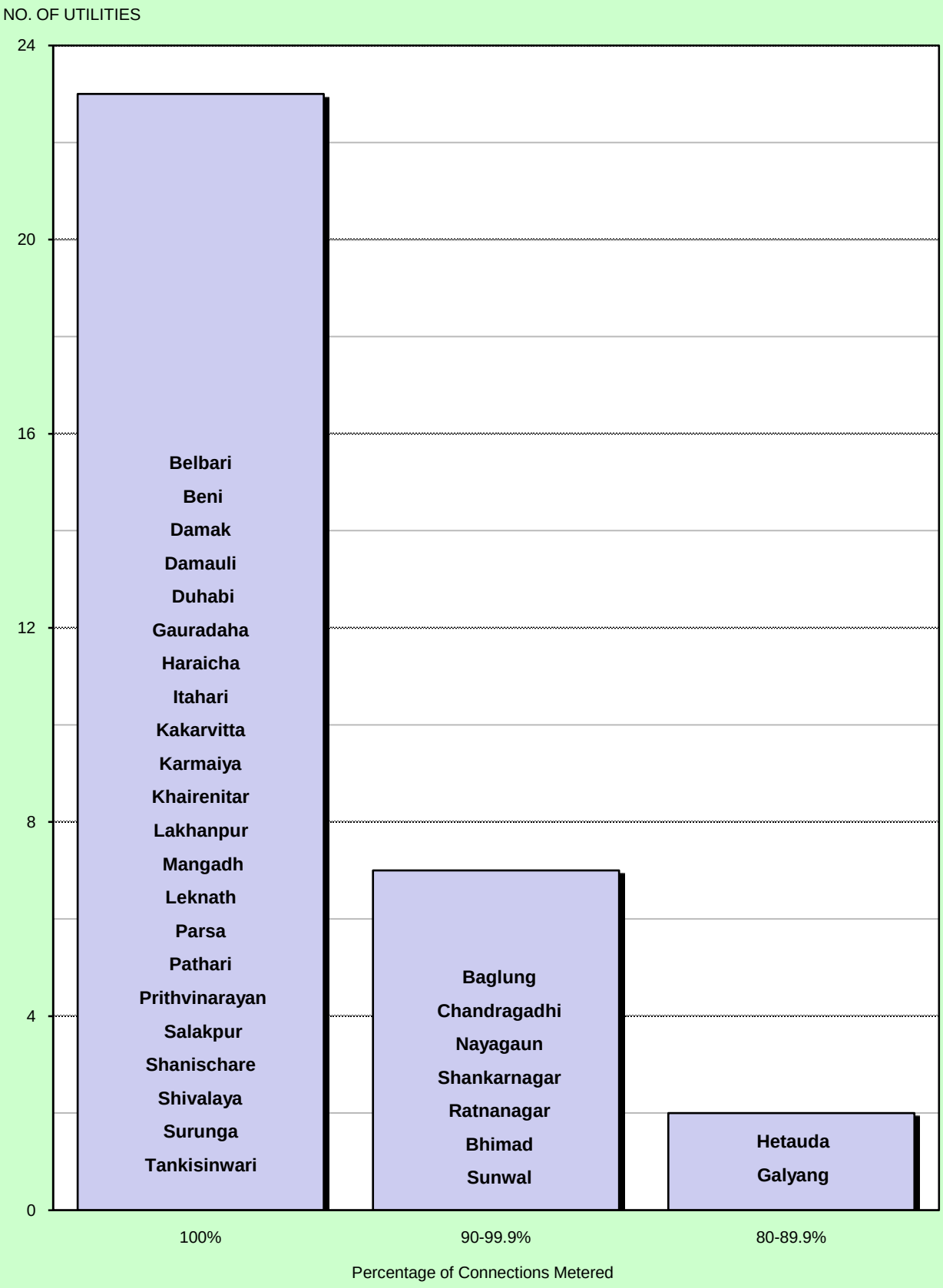


Figure 7: Water Coverage

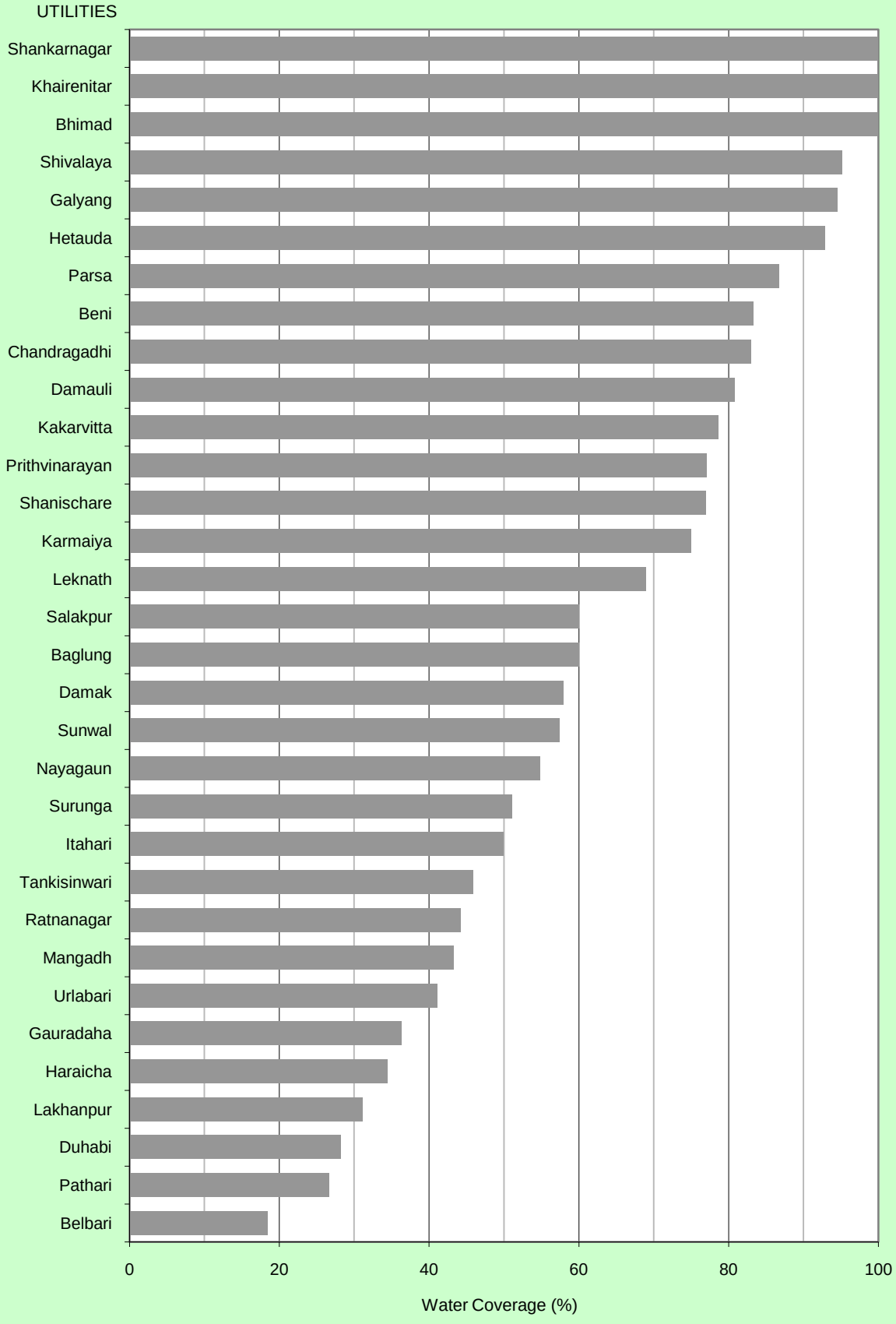


Figure 8: Water Availability (Dry Months)

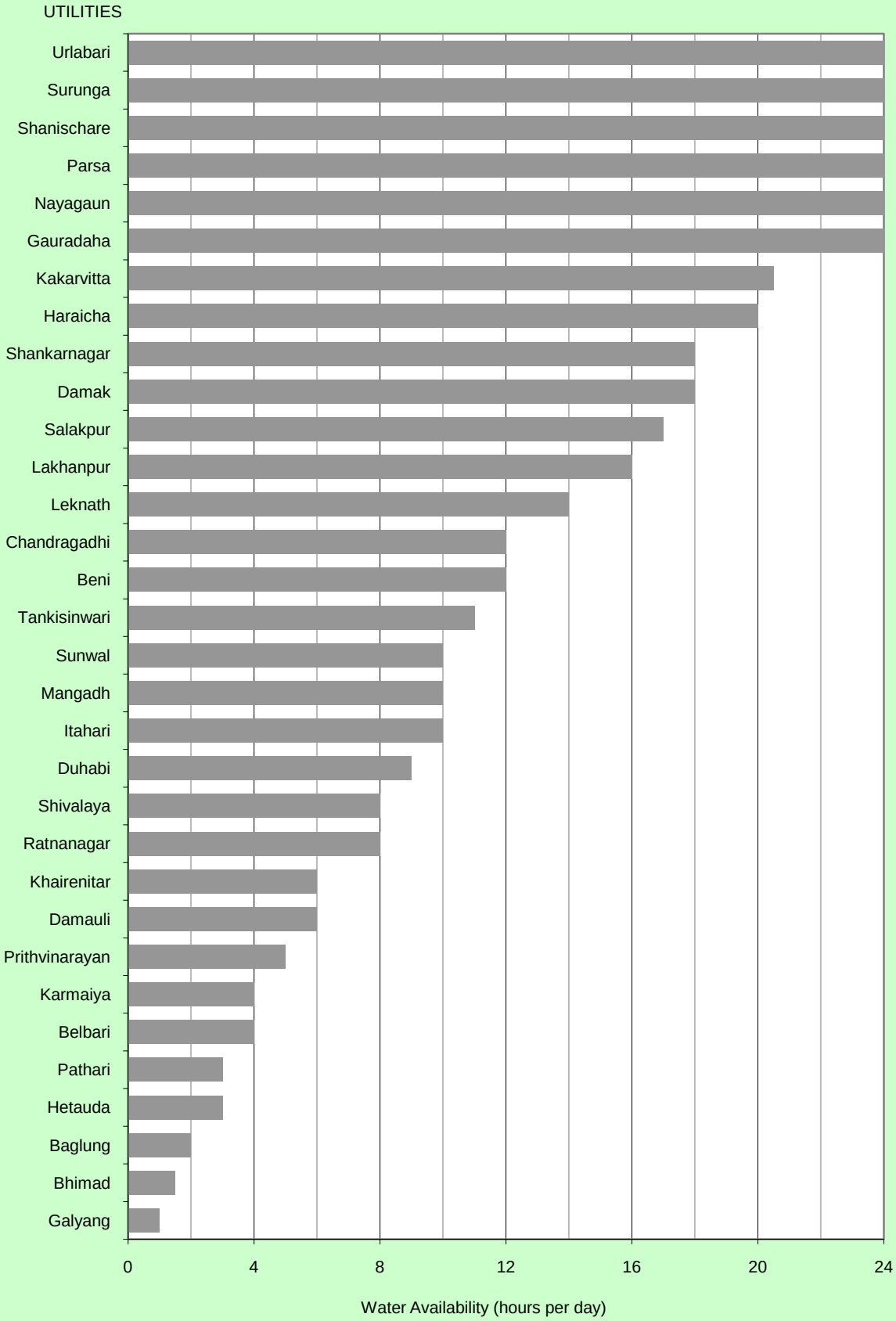


Figure 9: Water Availability (Wet Months)

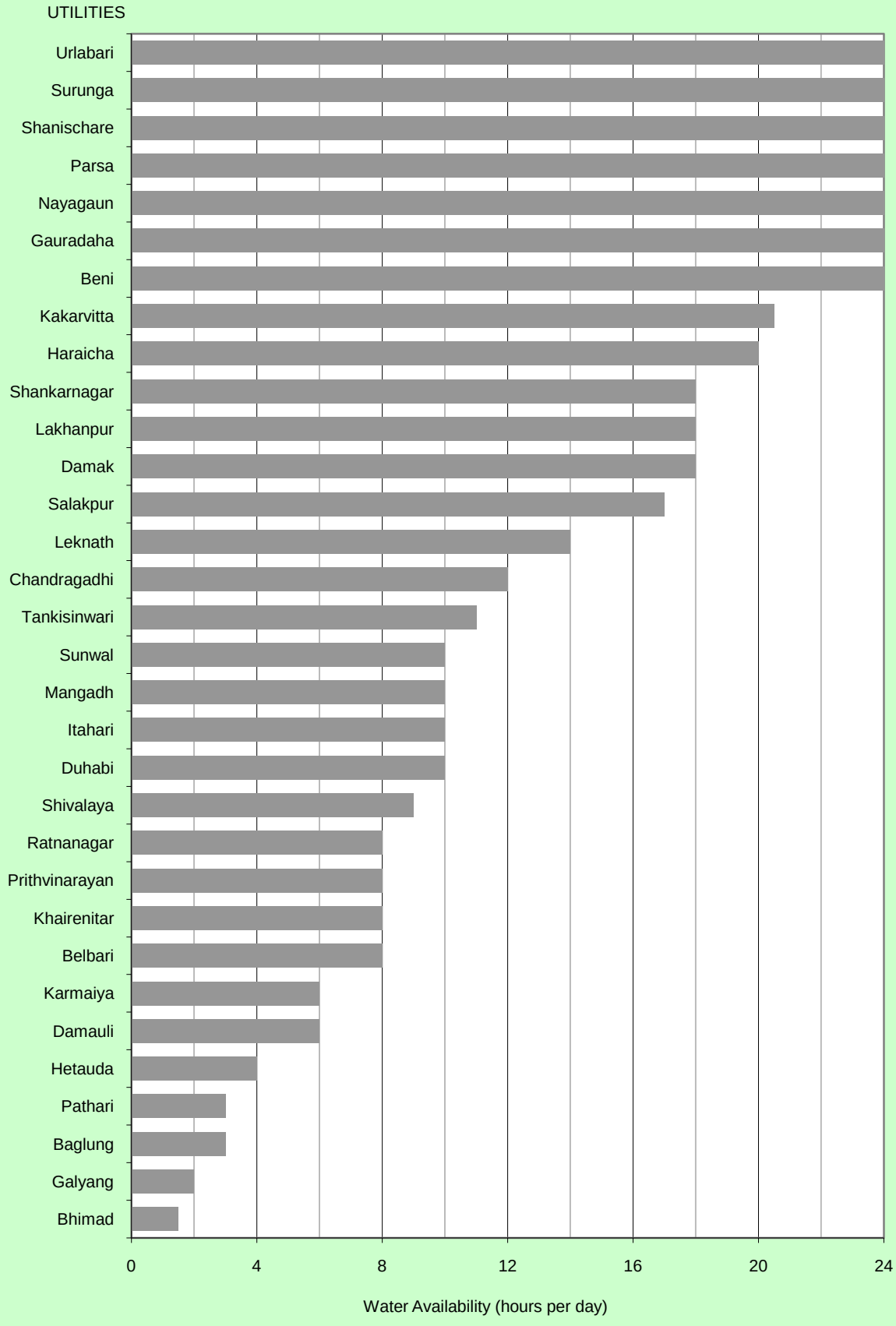


Figure 10: Average Pressure at the Tap

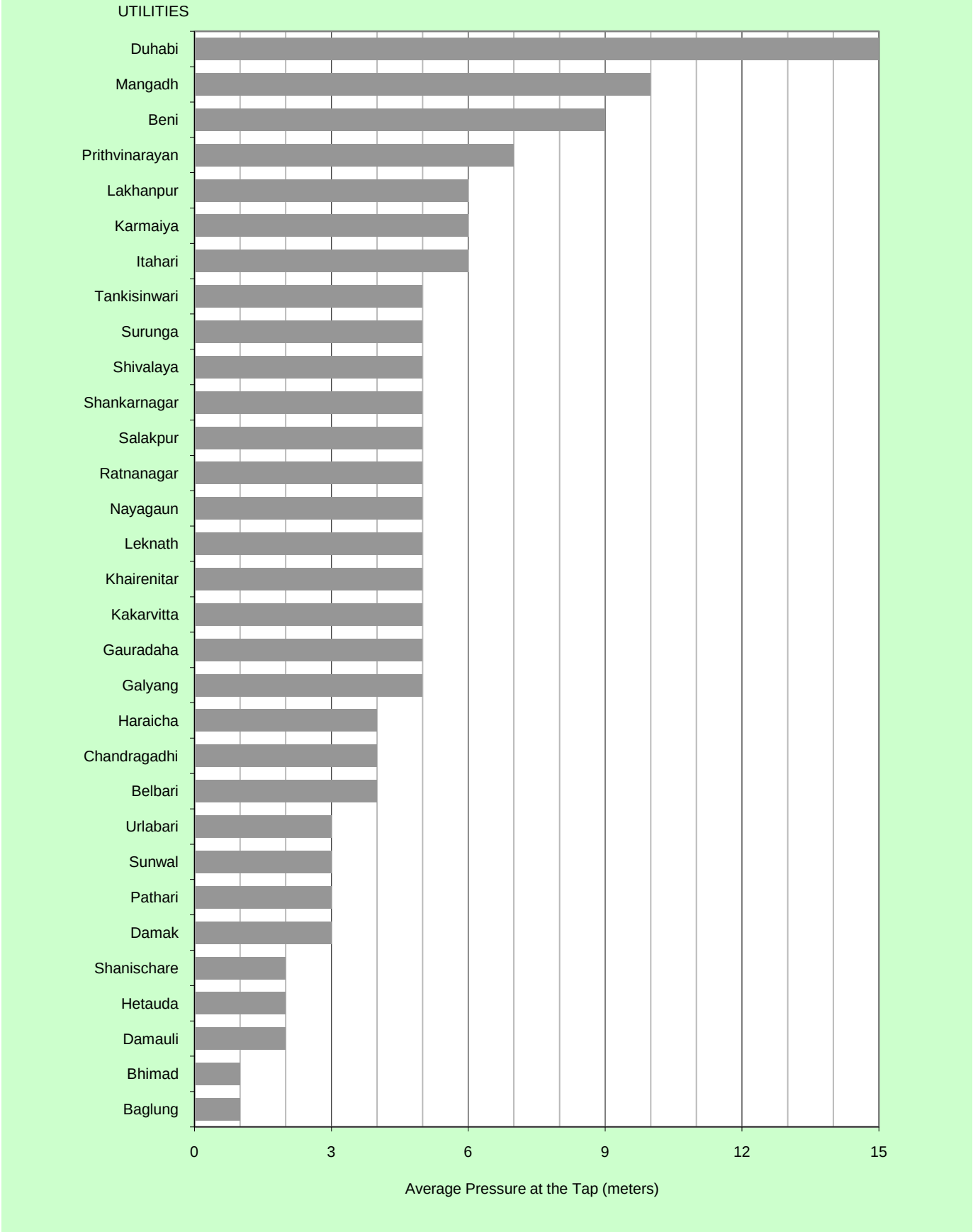


Figure 11: Monthly Bill Per Connection

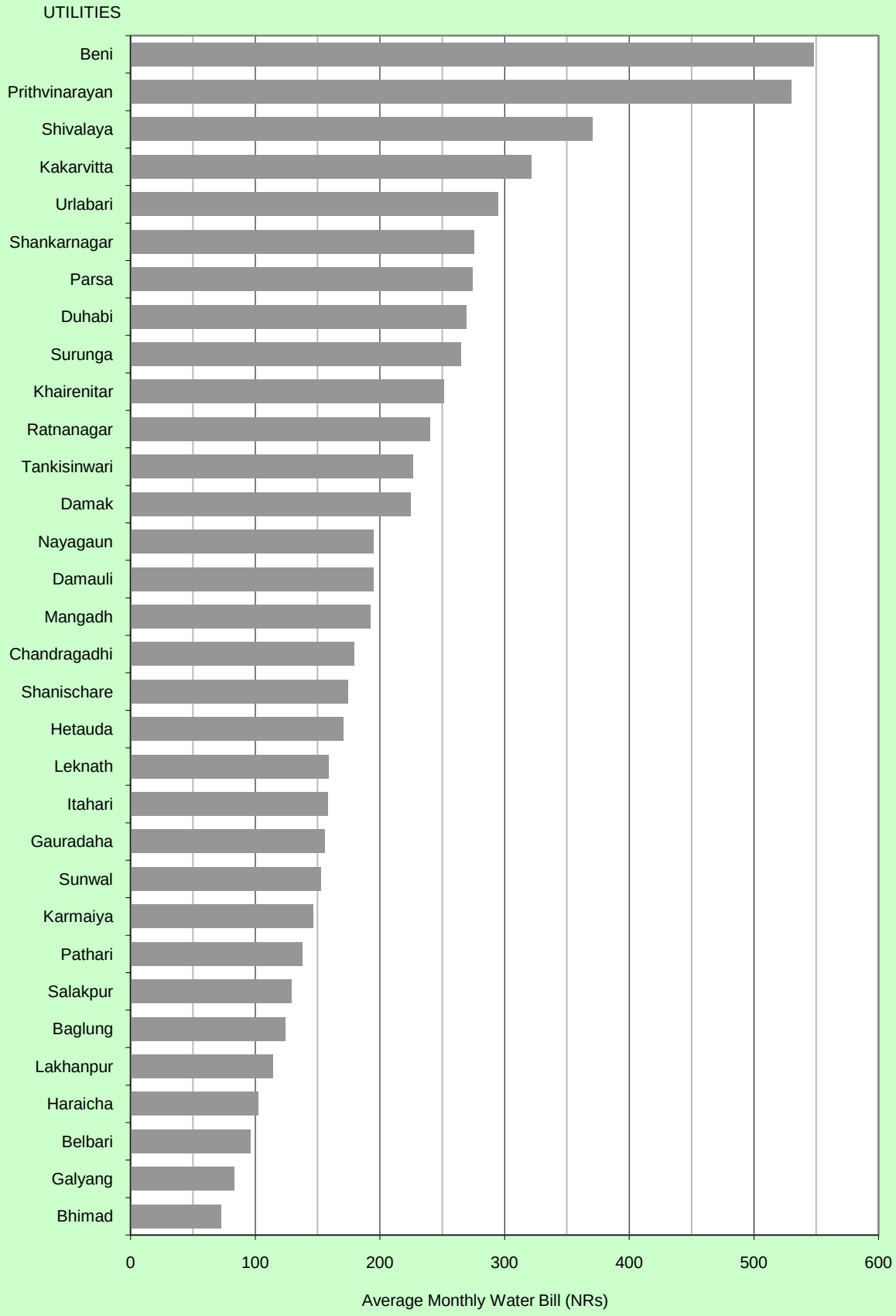


Figure 12: Water Quality Sampling

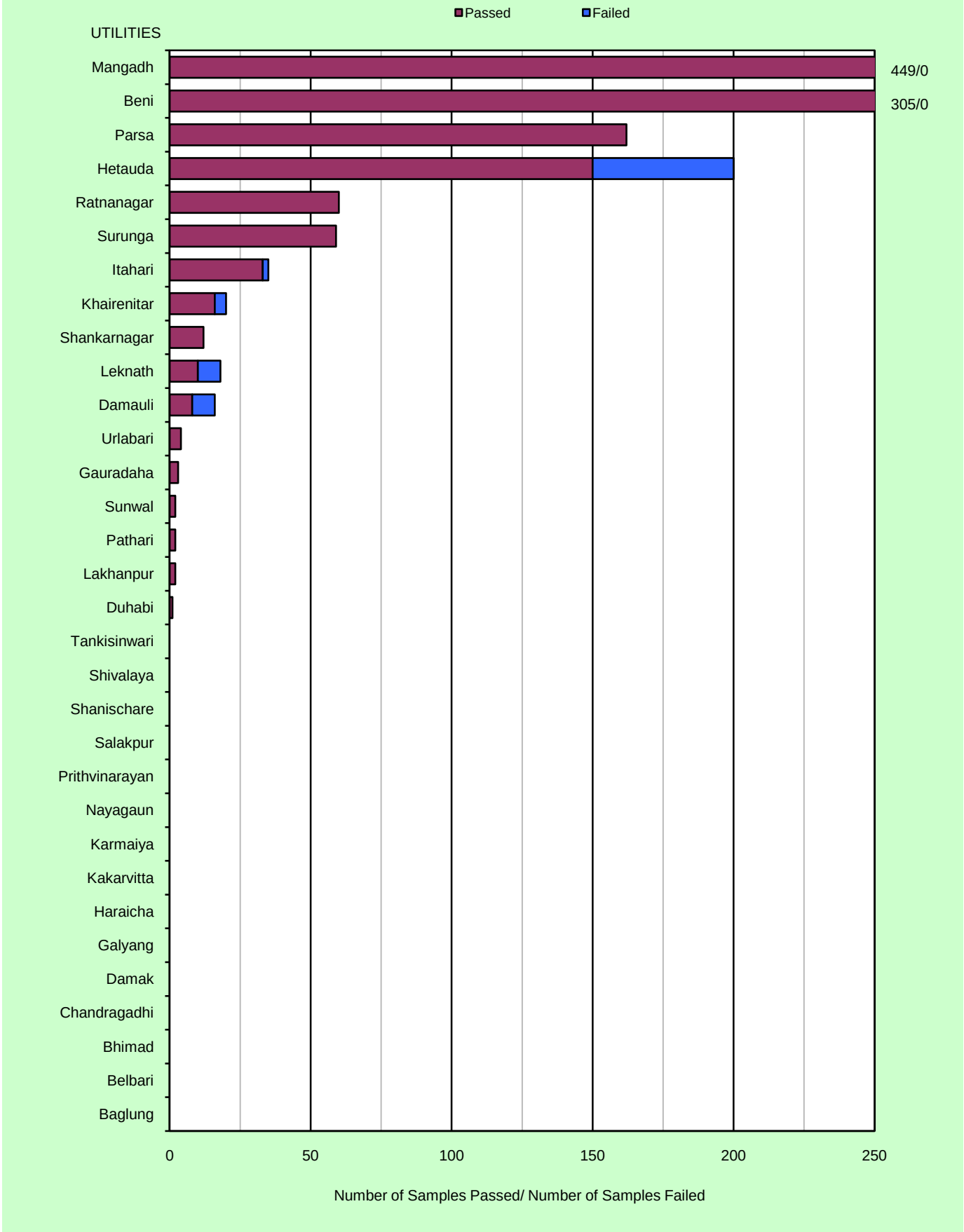


Figure 13: Complaints Received

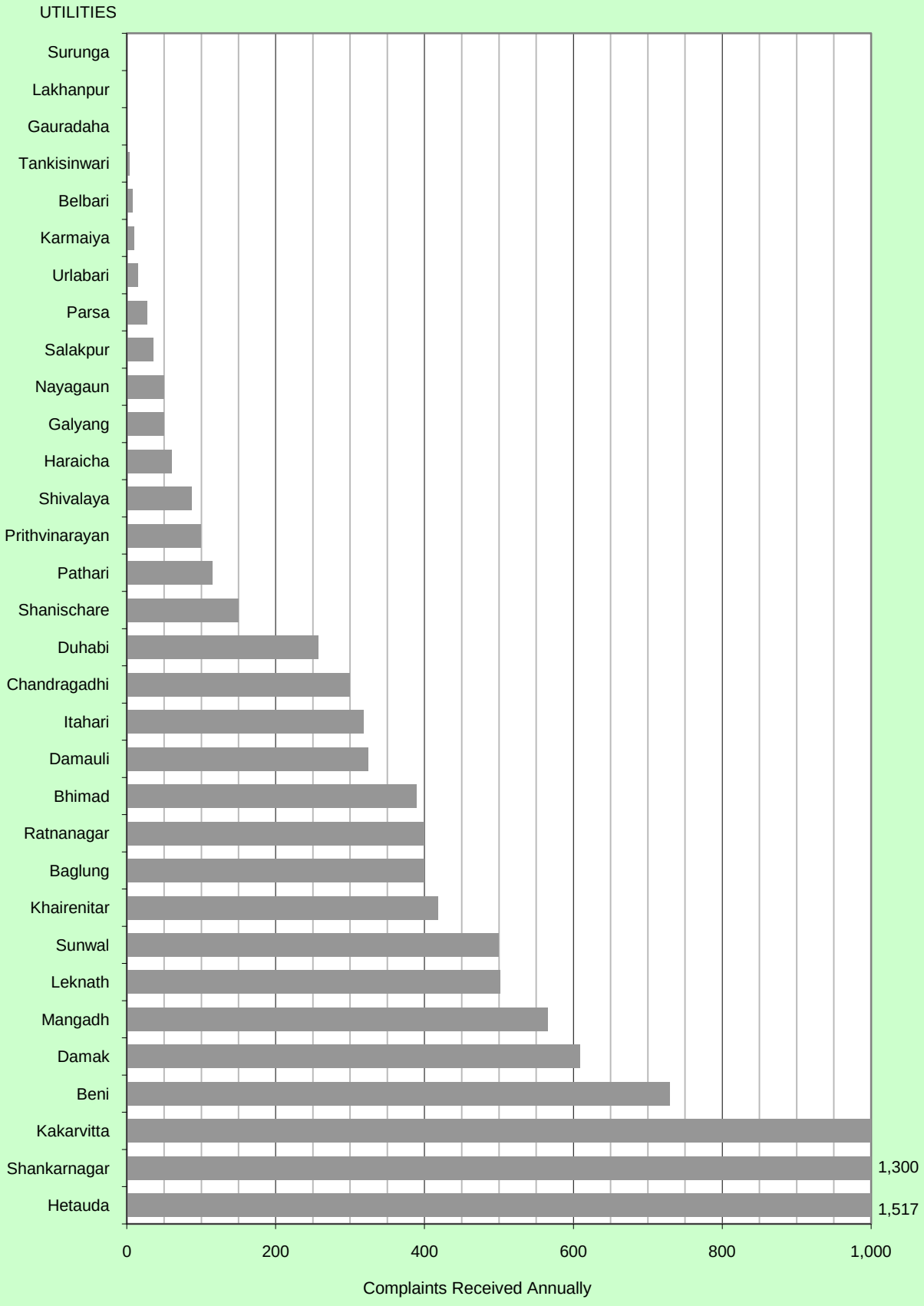


Figure 14: Pipe Leaks Repaired

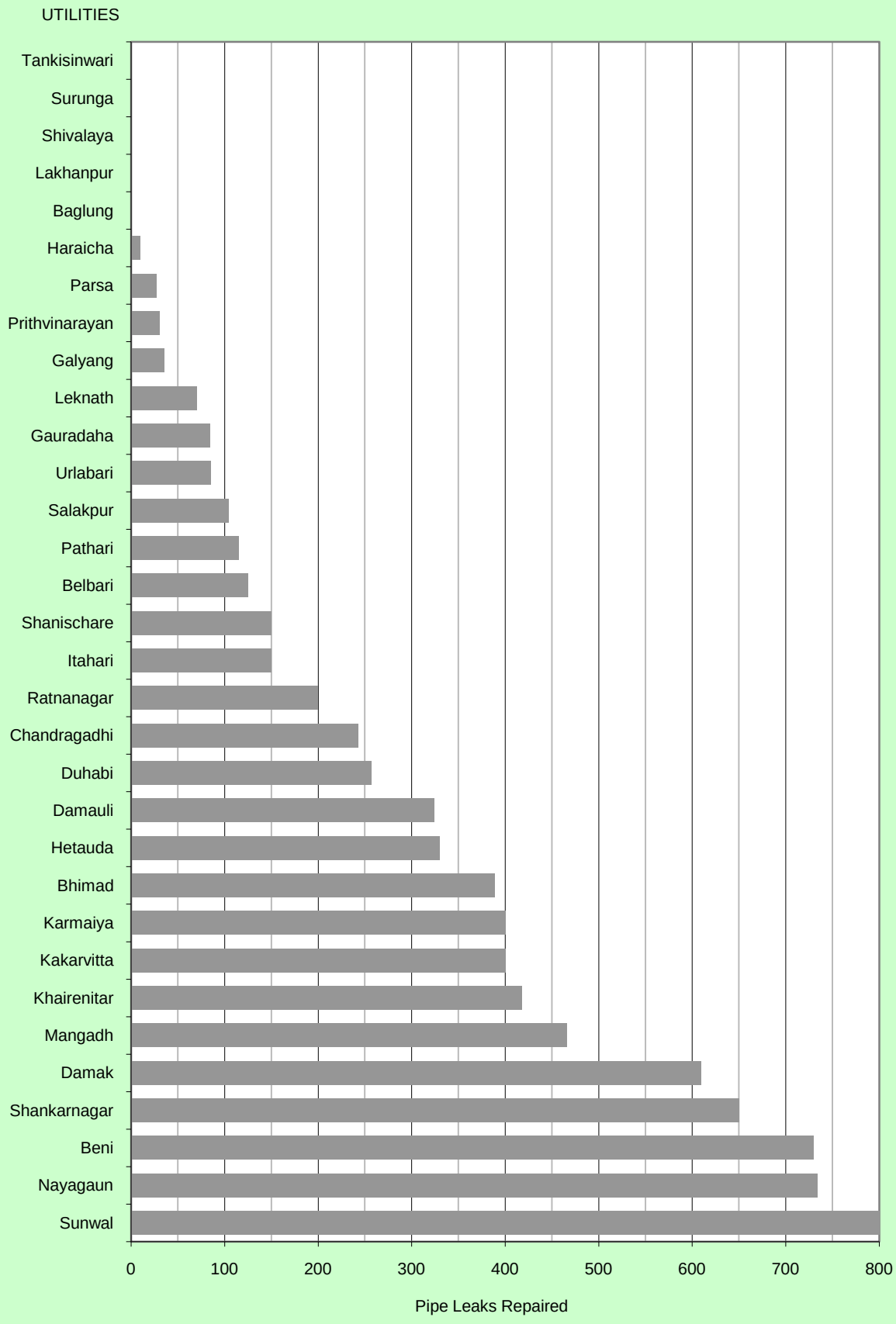


Figure 15: Operating Ratio

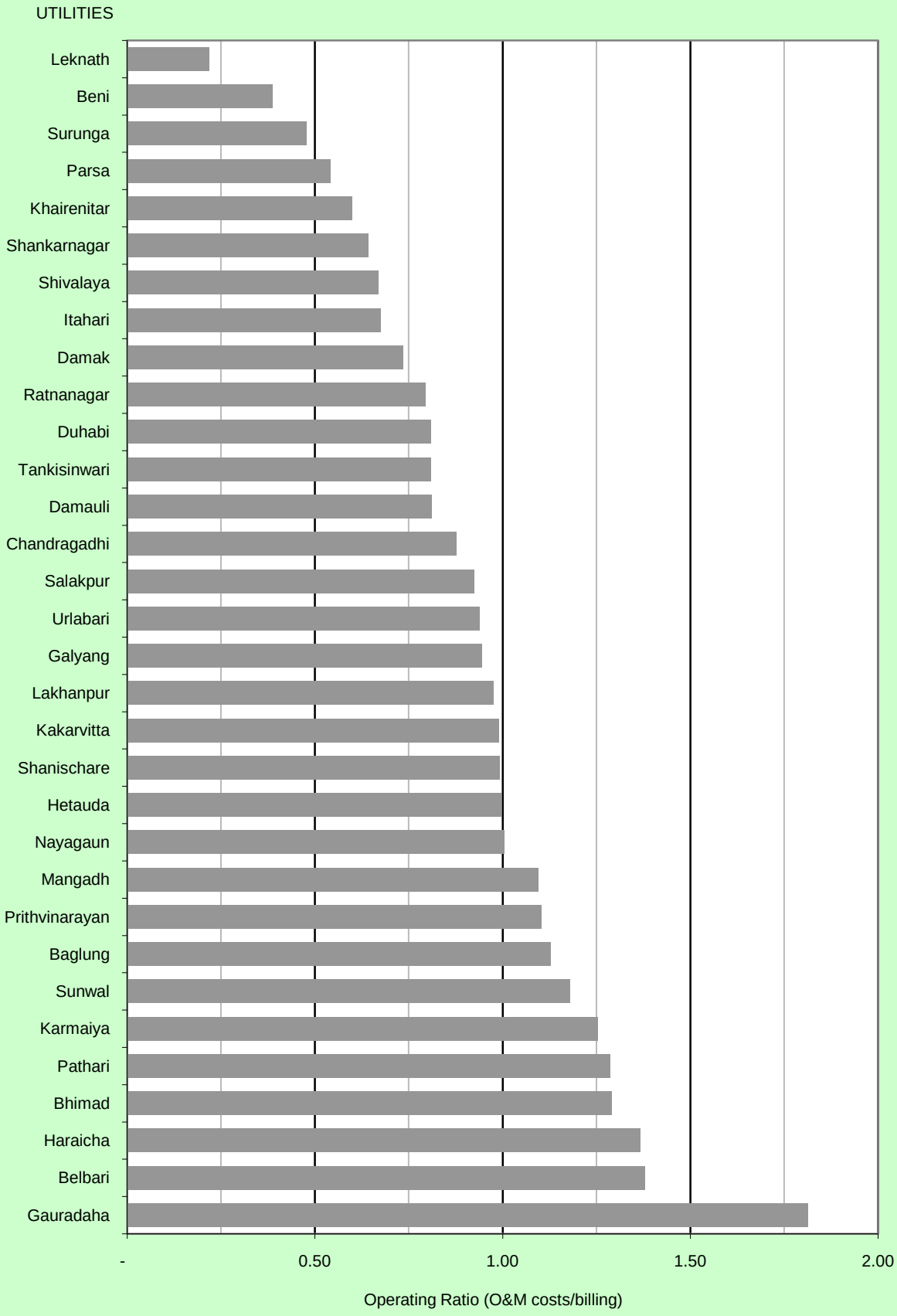


Figure 16: Accounts Receivable

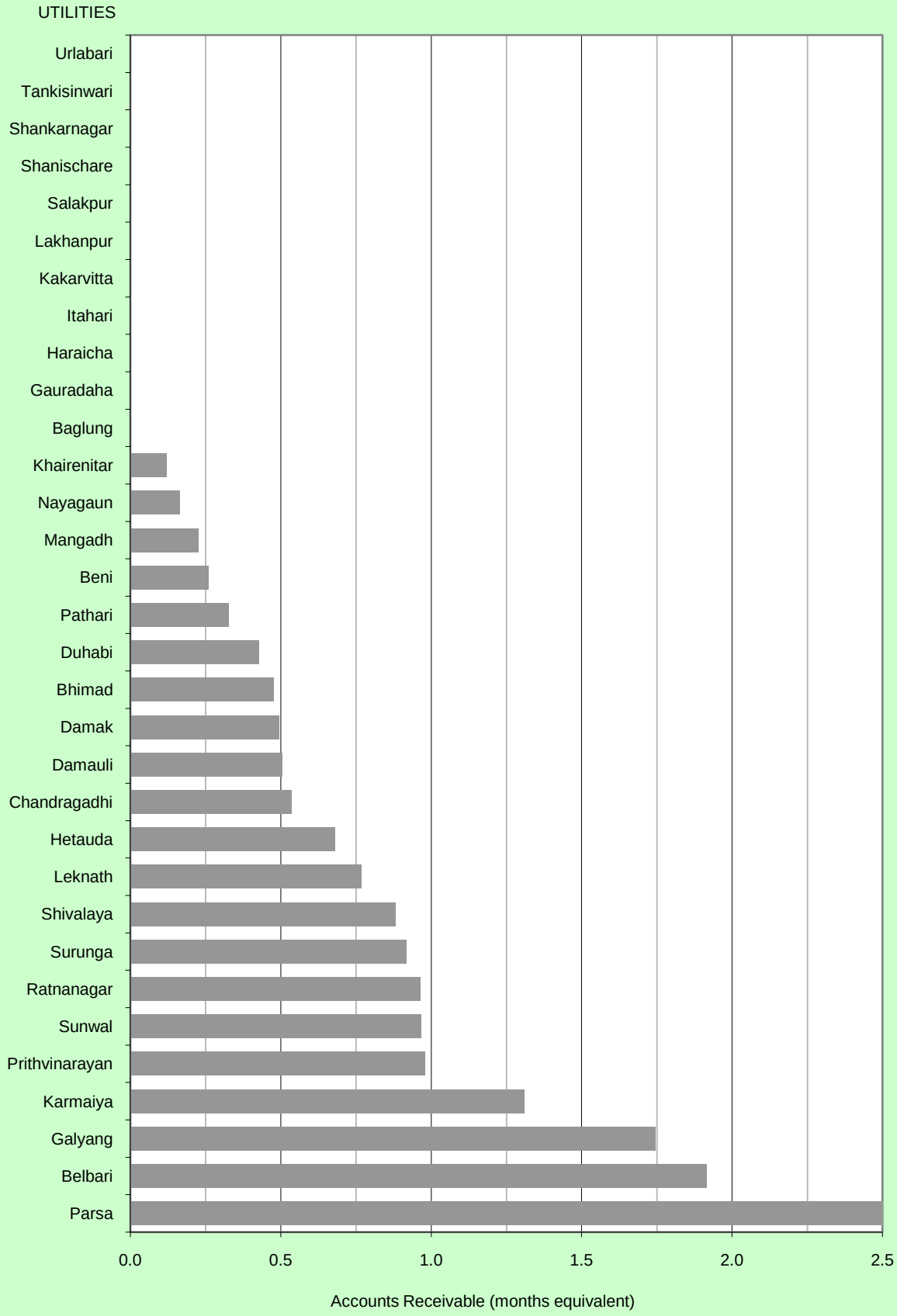


Figure 17: Revenue Collection Efficiency

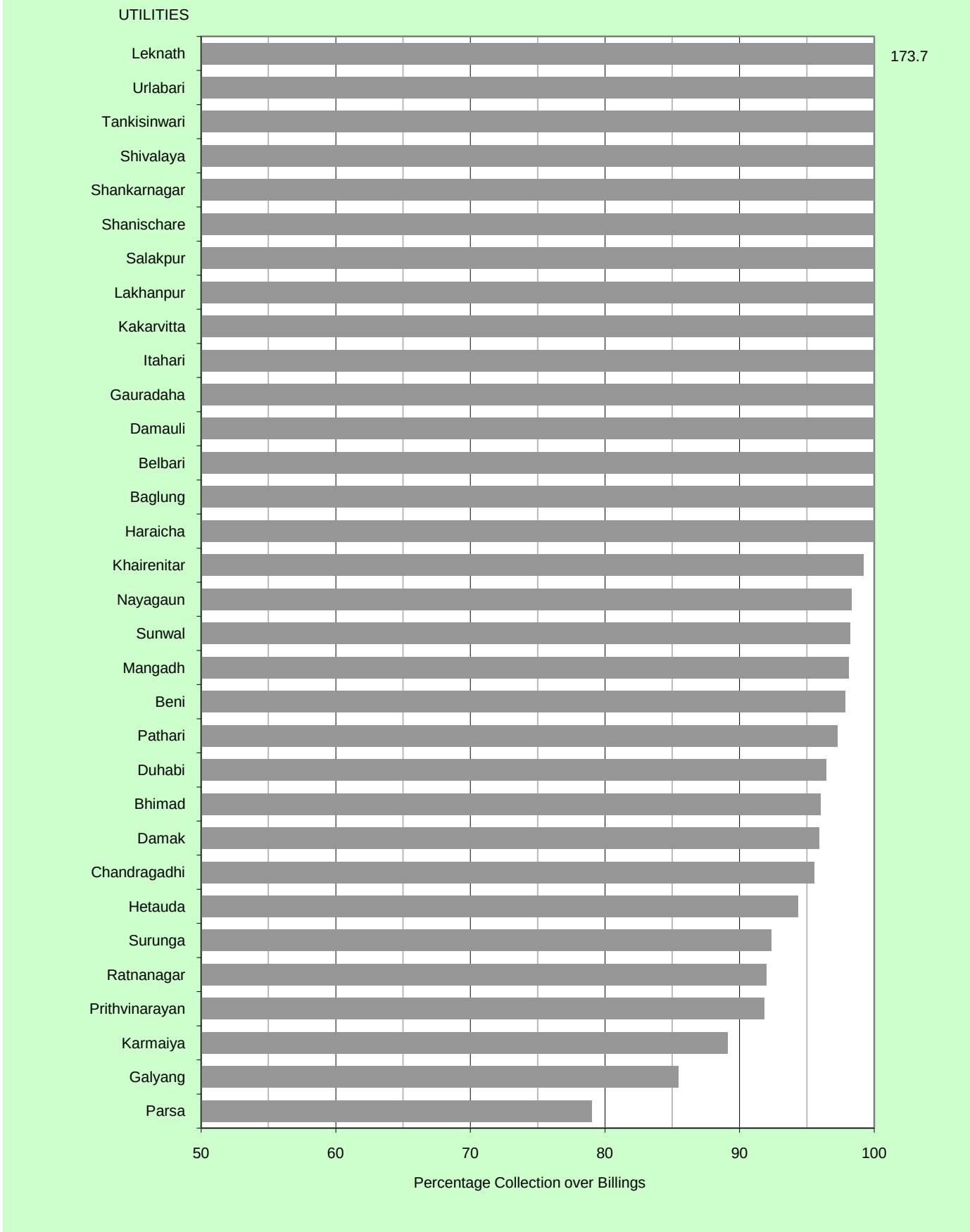


Figure 18: Staff Per 1,000 Connections

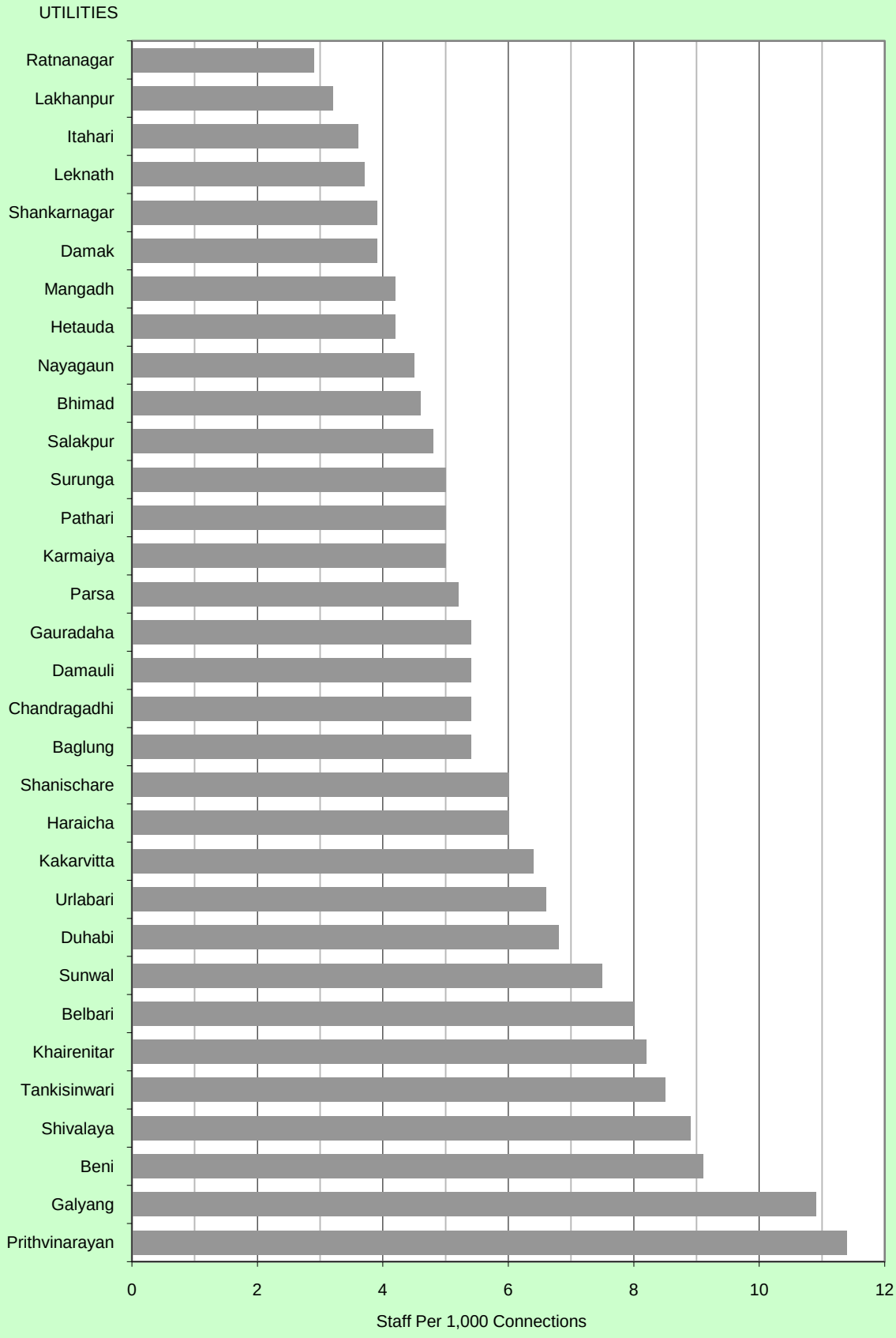


Figure 19: Average Tariff

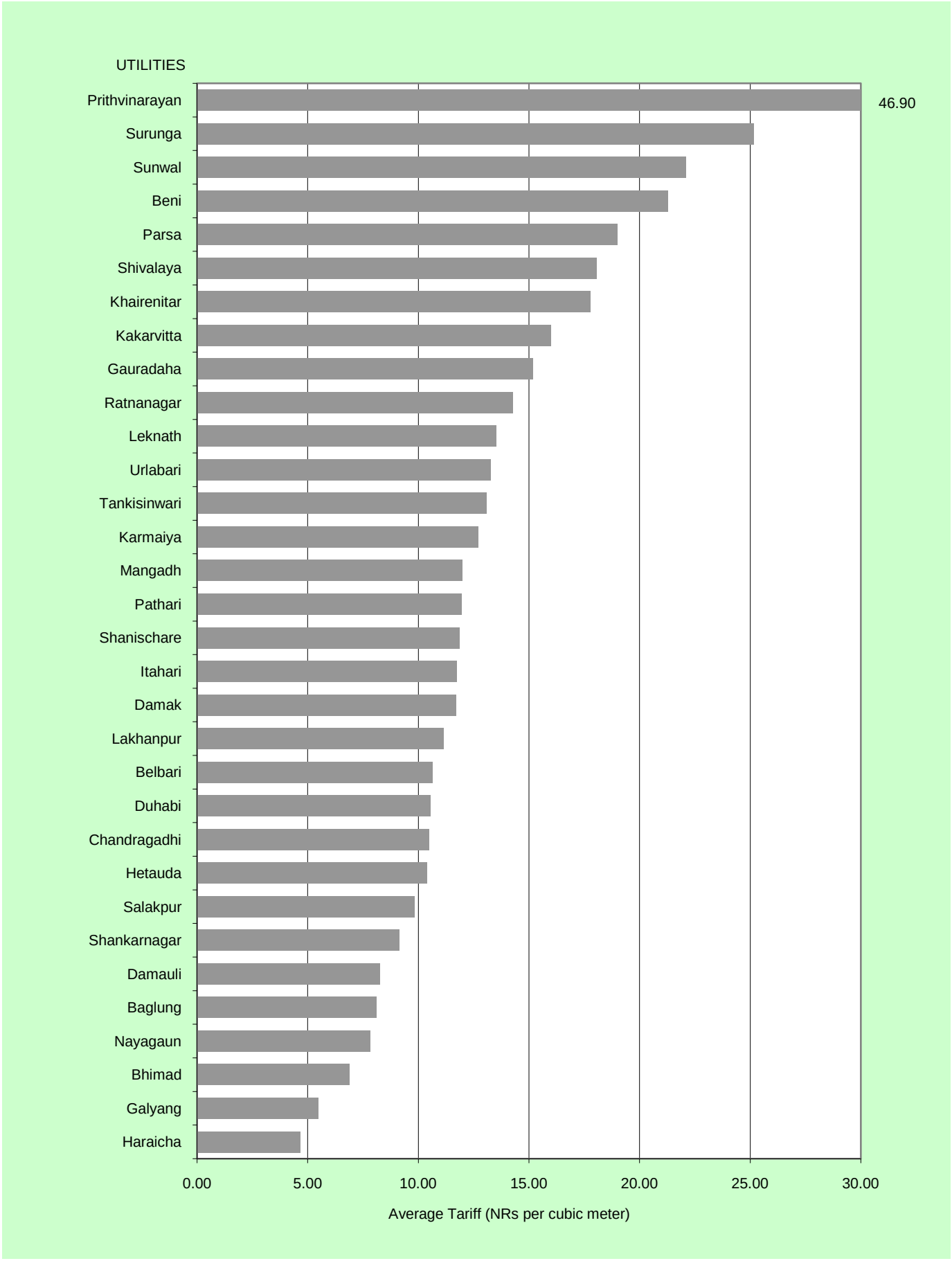


Figure 20a: DOMESTIC TARIFF STRUCTURES

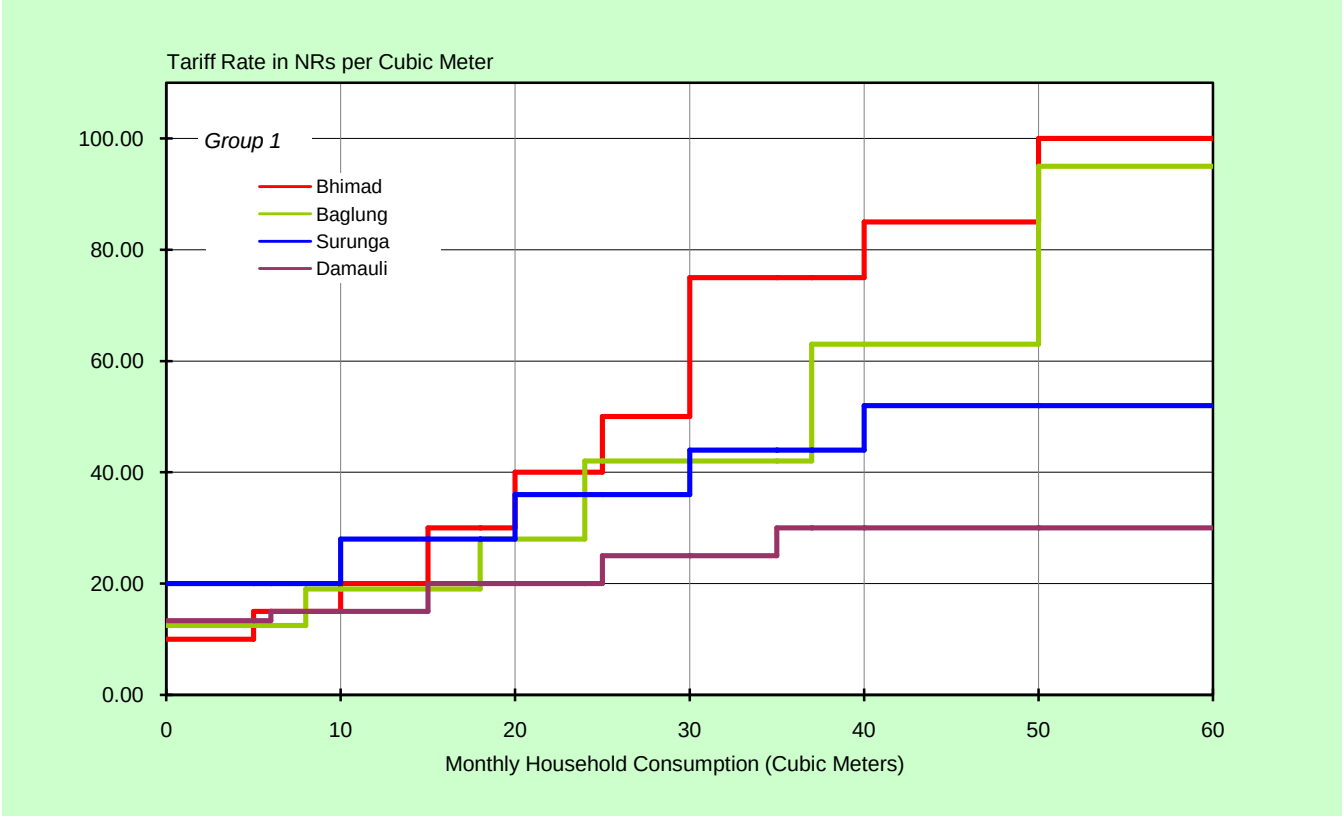


Figure 20b: DOMESTIC TARIFF STRUCTURES

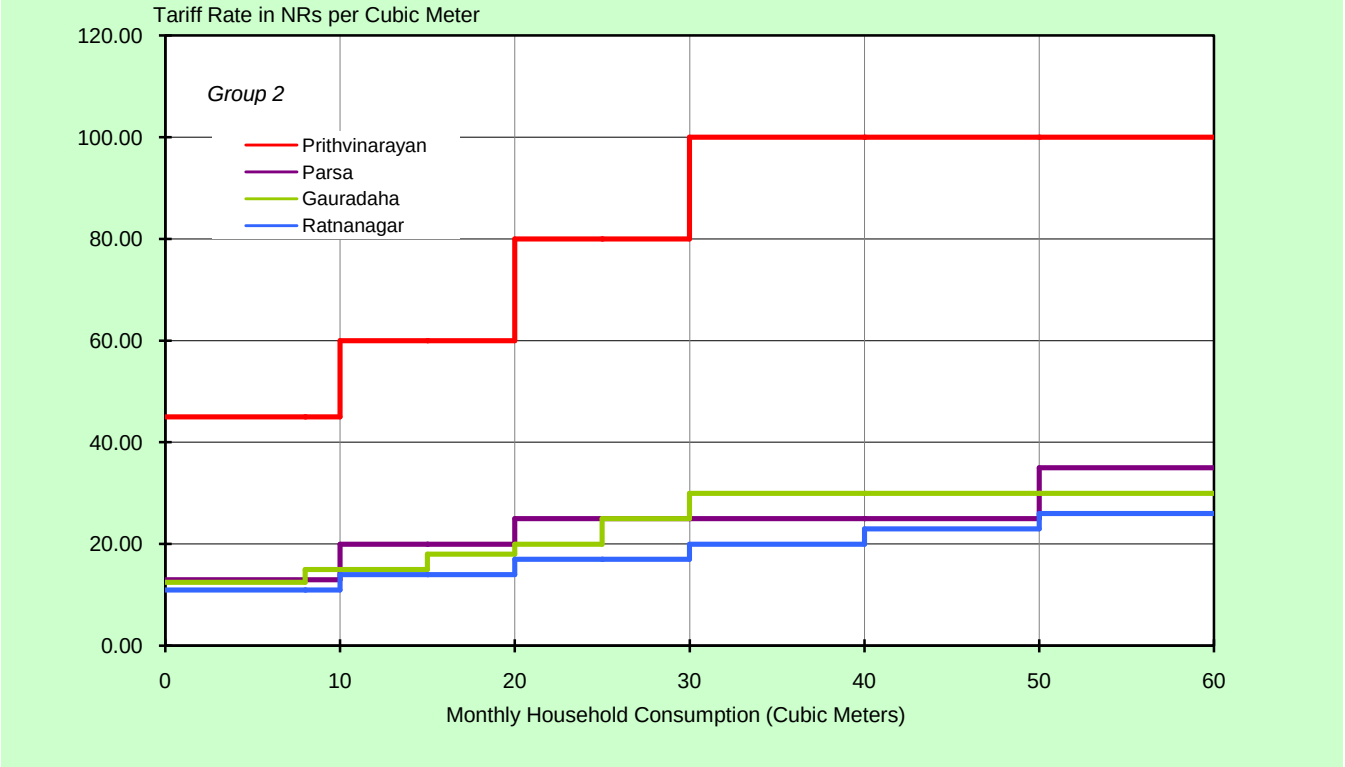


Figure 20c: DOMESTIC TARIFF STRUCTURES

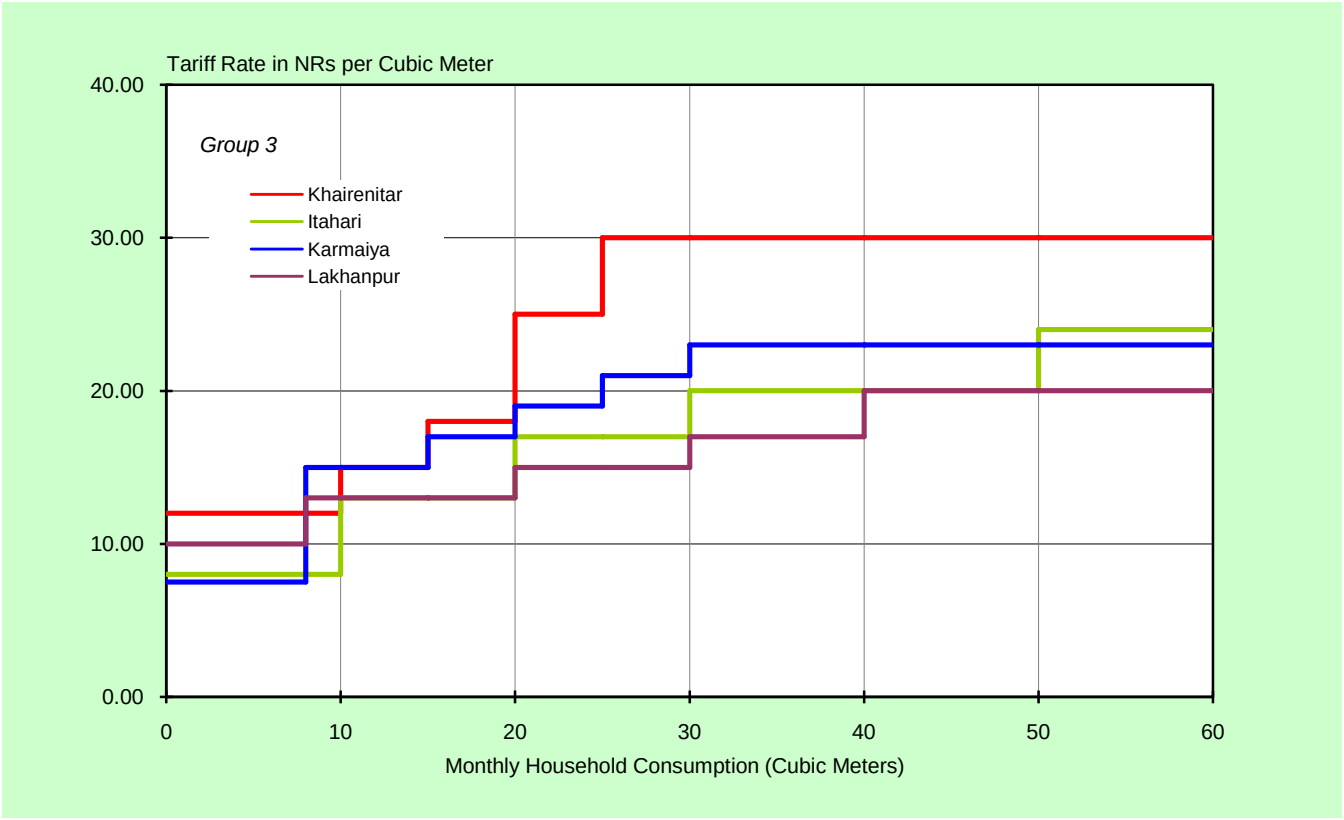


Figure 20d: DOMESTIC TARIFF STRUCTURES

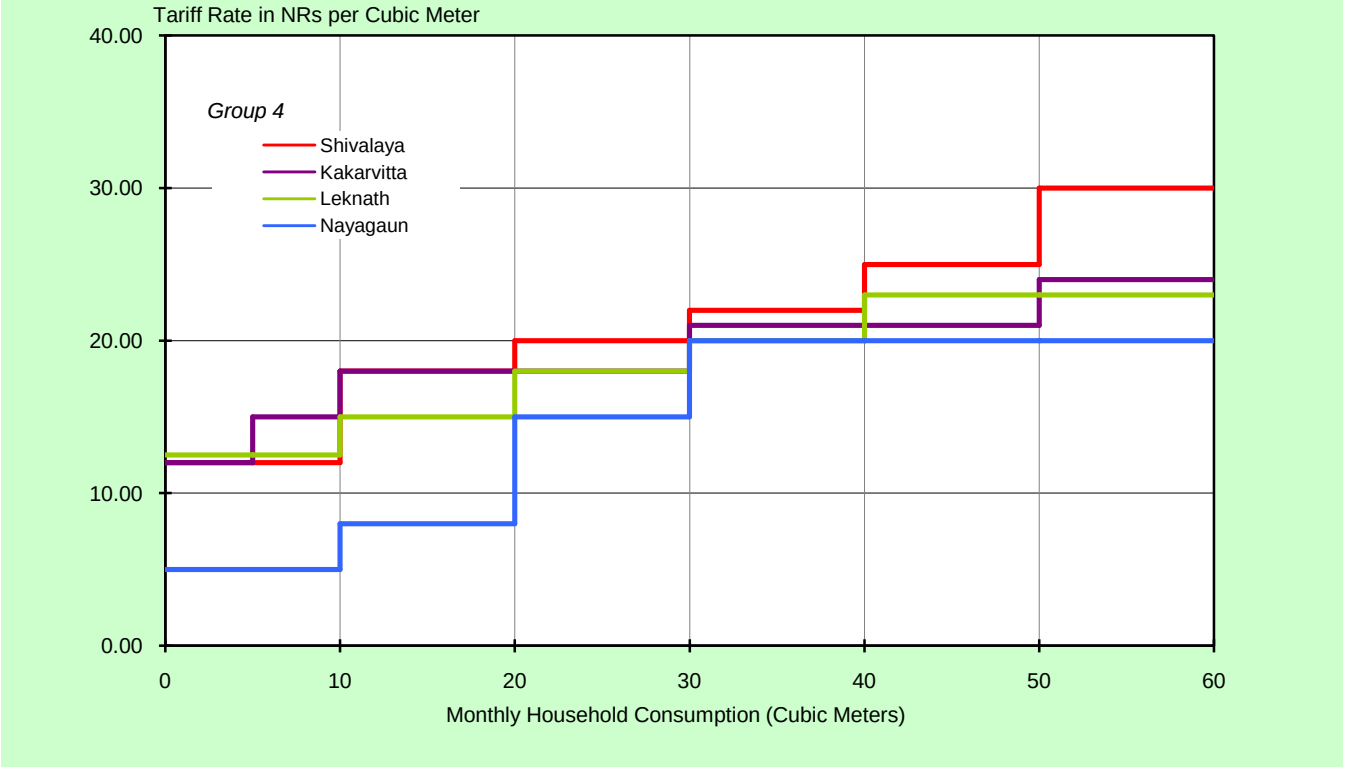


Figure 20e: DOMESTIC TARIFF STRUCTURES

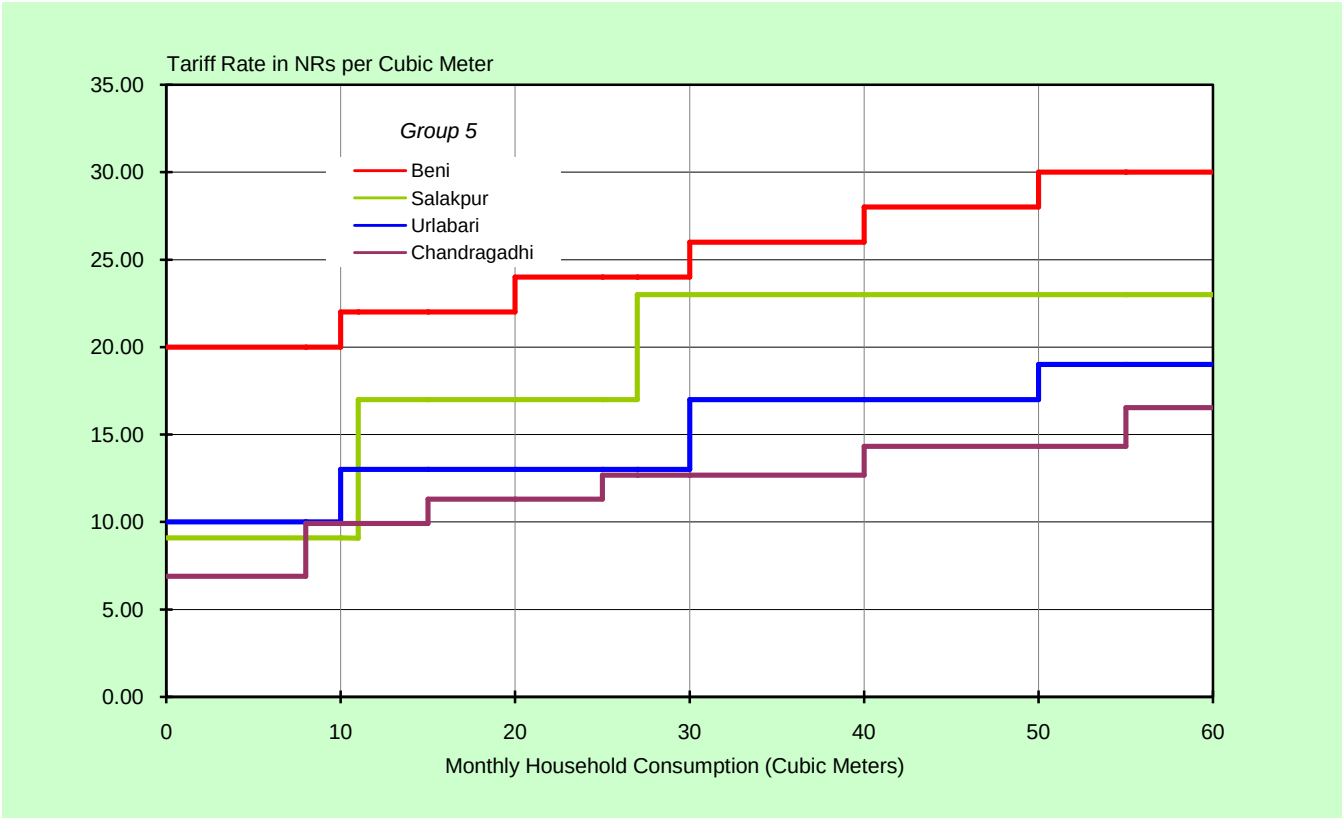


Figure 20f: DOMESTIC TARIFF STRUCTURES

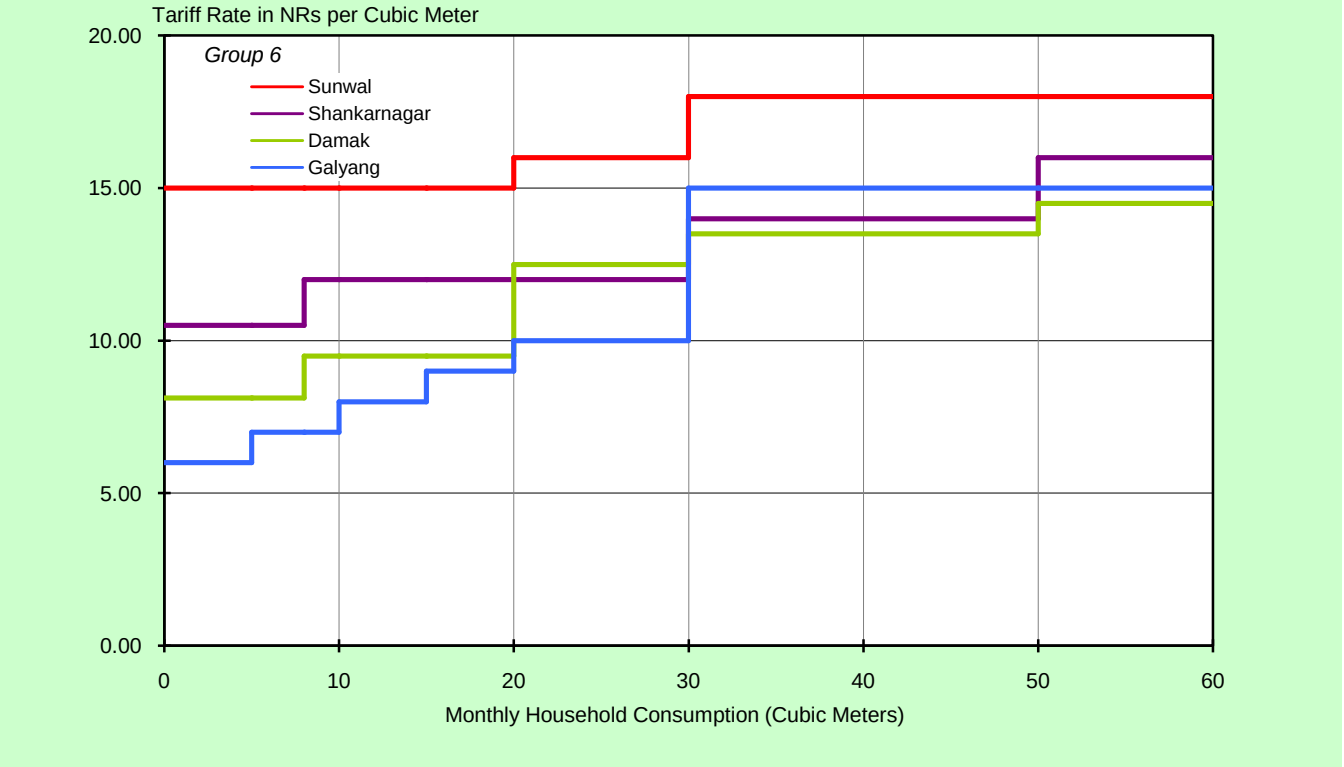


Figure 20g: DOMESTIC TARIFF STRUCTURES

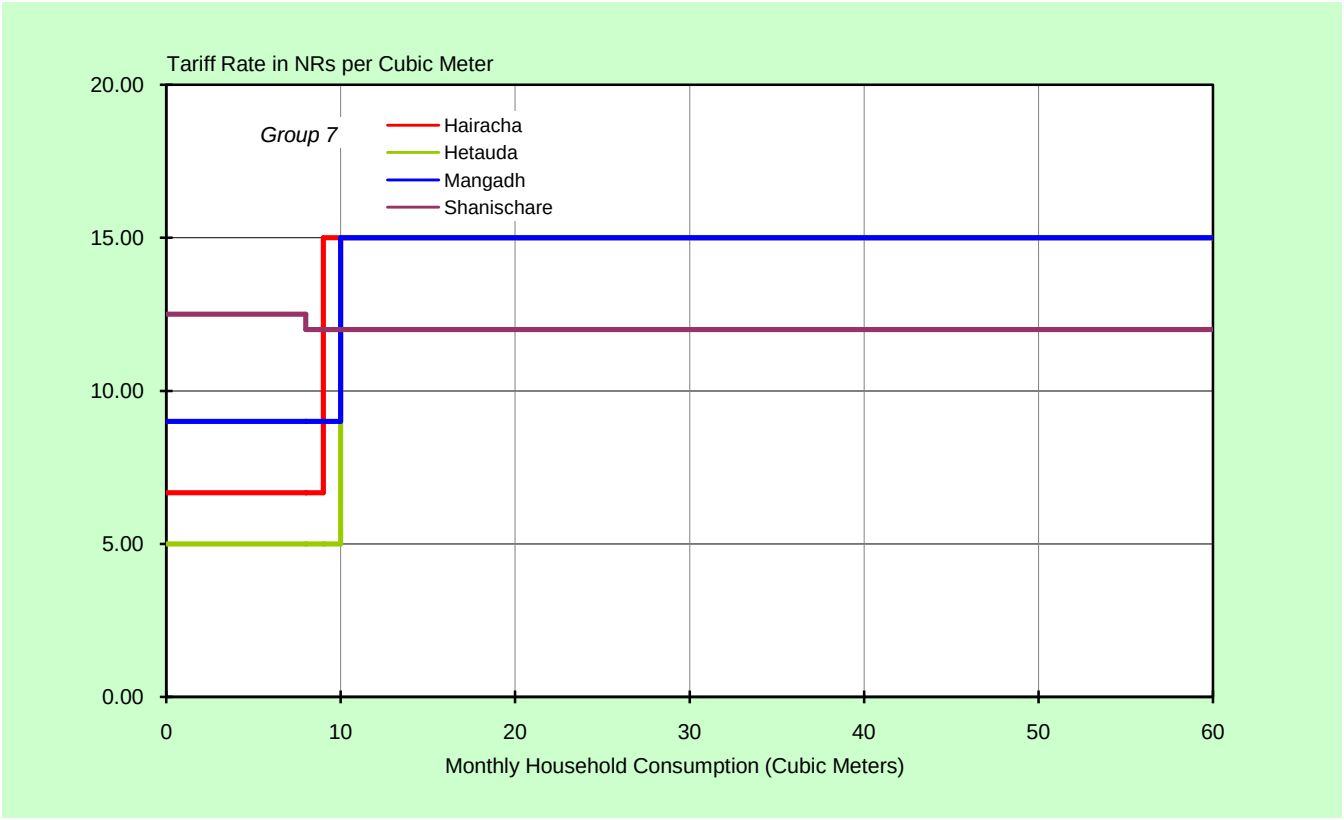


Figure 20h: DOMESTIC TARIFF STRUCTURES

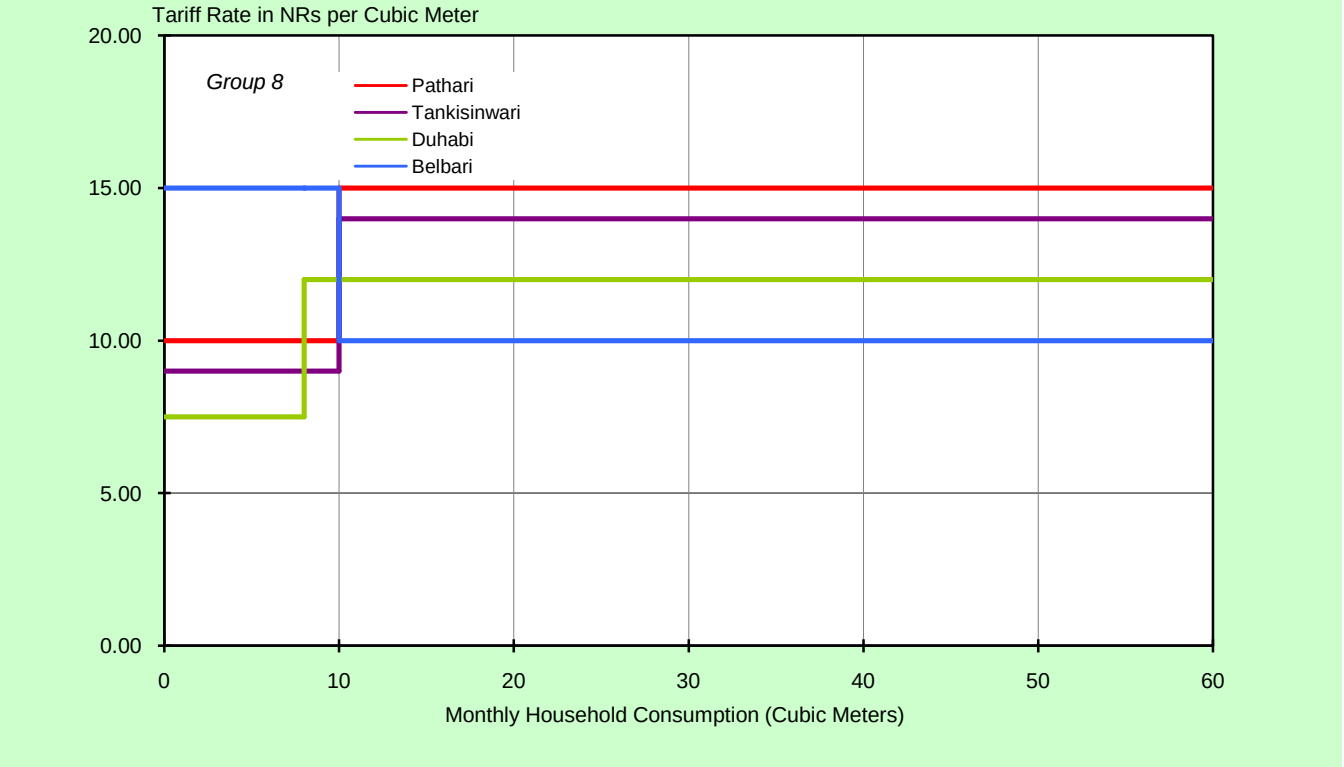


Figure 21: Unit Production Cost

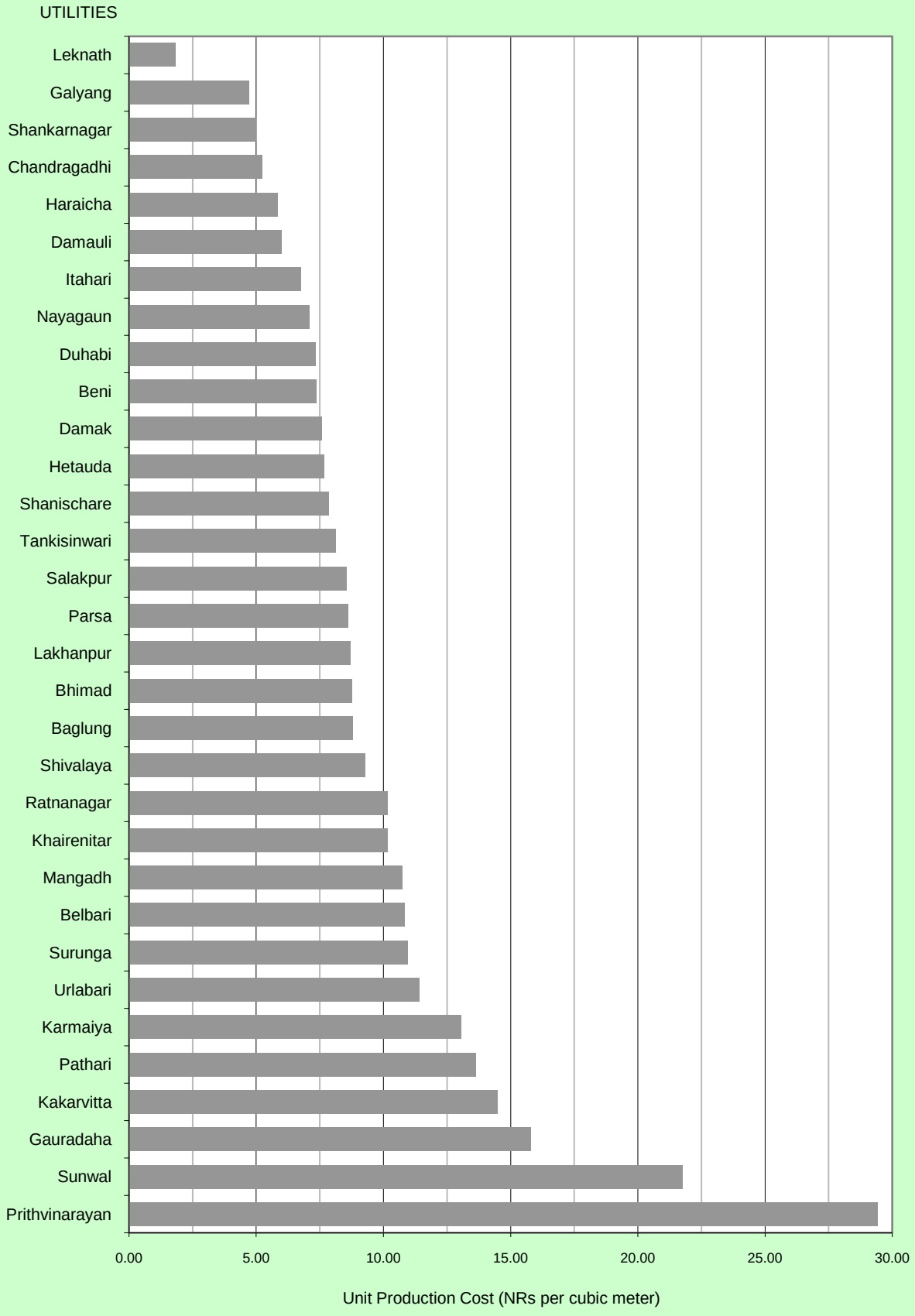


Figure 22: Connection Fee for Residential Connection

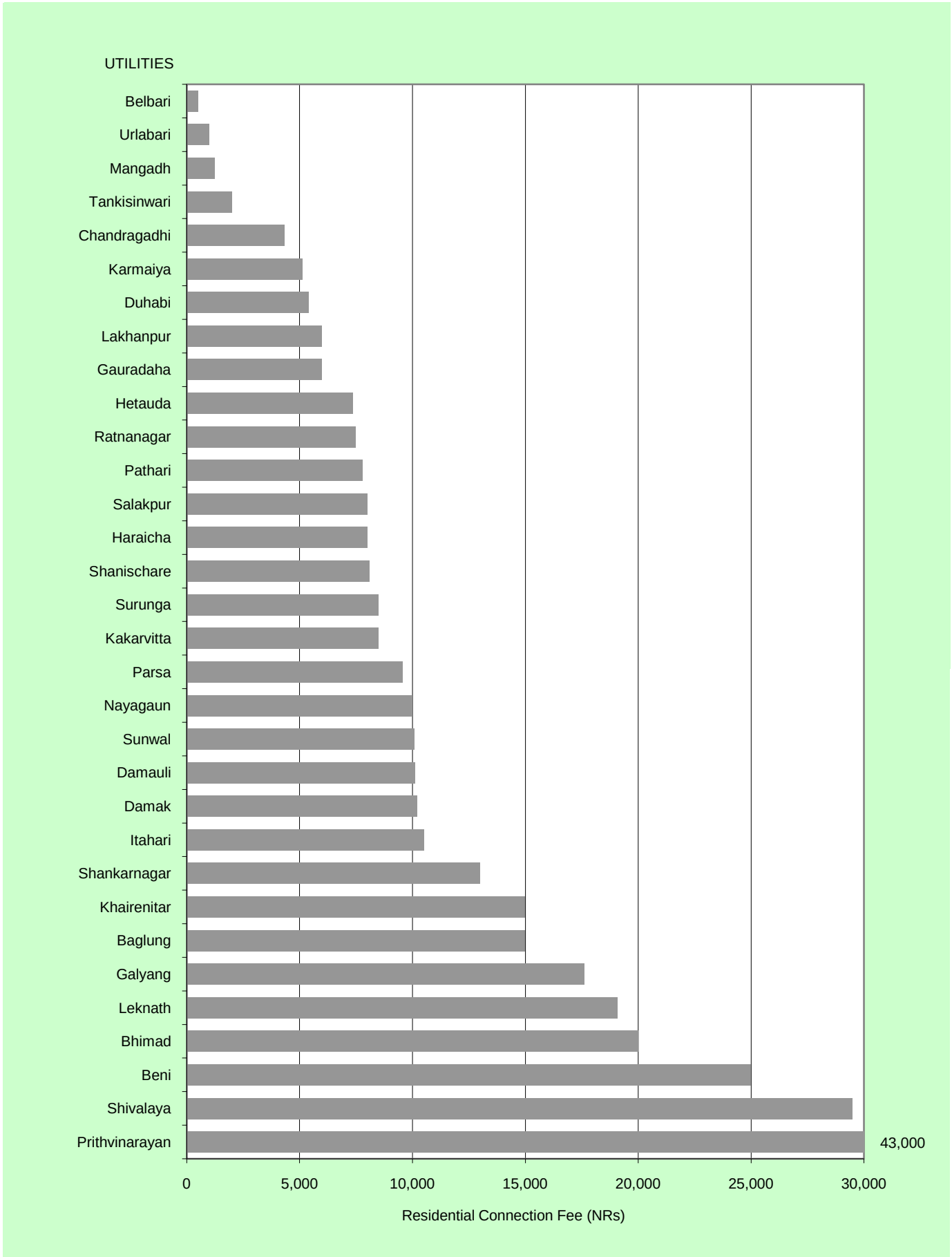


Figure 23: Annual Operation and Maintenance Costs

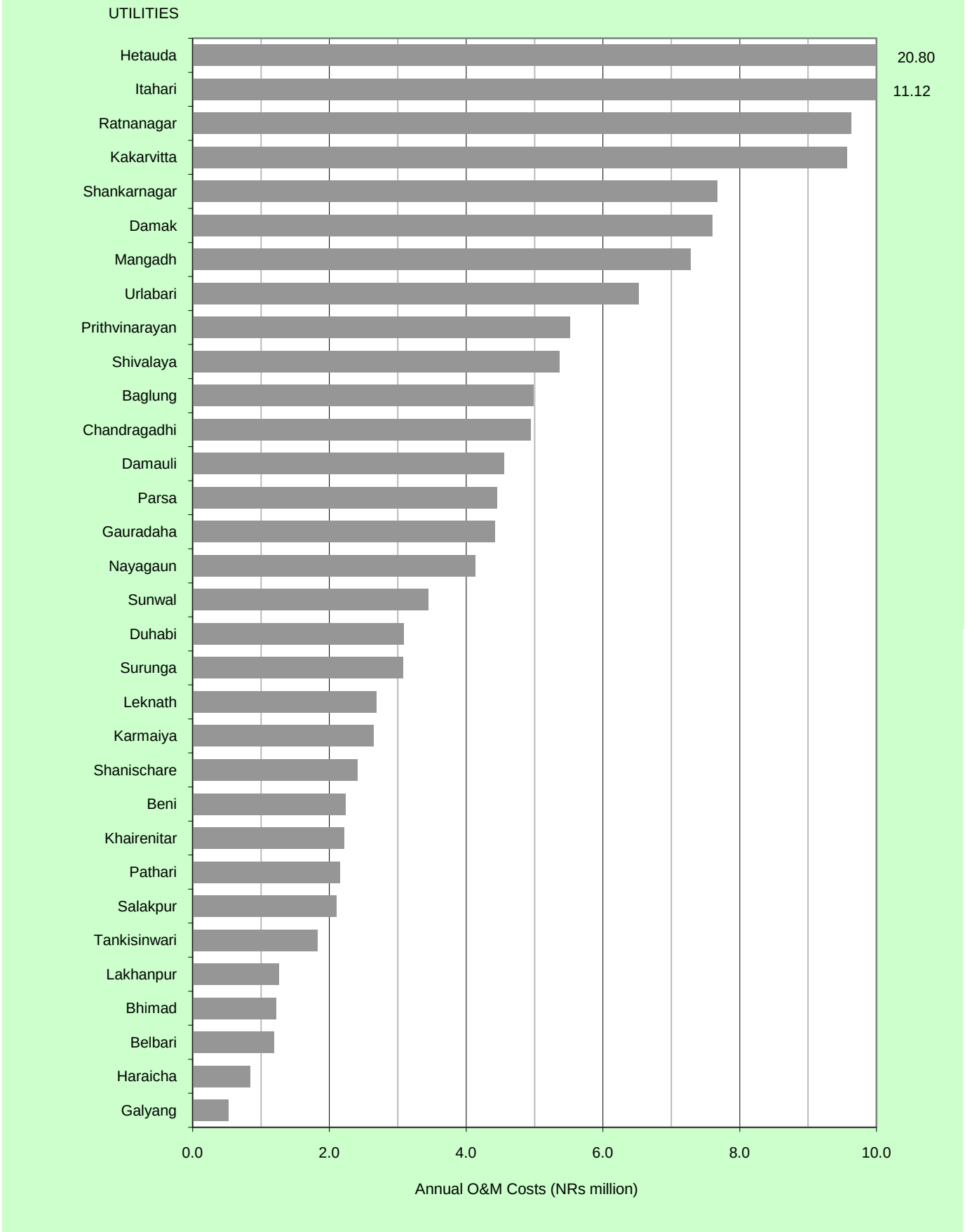
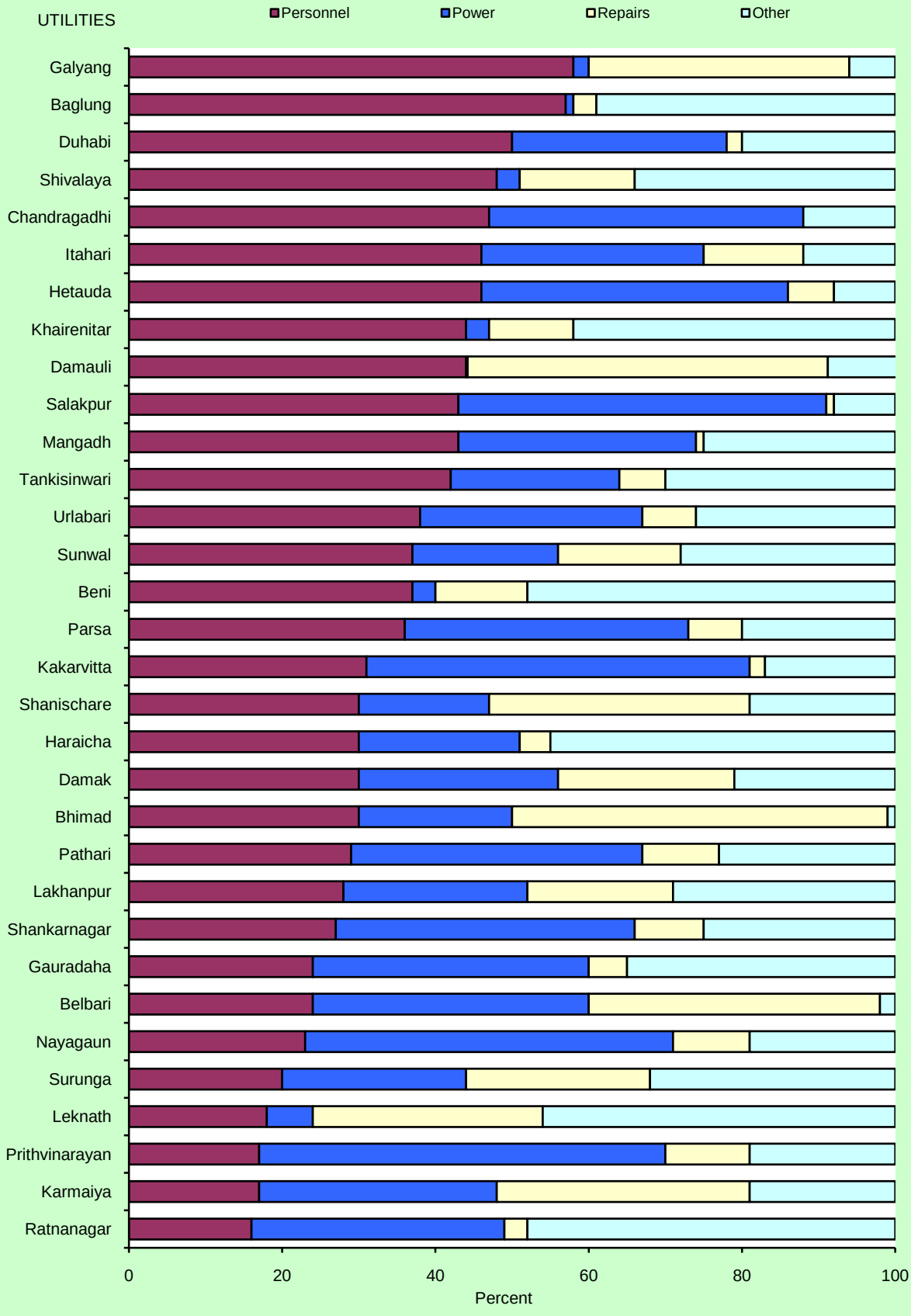


Figure 24: O&M Cost Components



PART III

Water Utility and Area Profiles

Water Utility

BAGLUNG URBAN WATER AND SANITATION USERS ASSOCIATION

Address : Ward No.2, Baglung Municipality, Baglung District
Telephone : +977 068 522 301
Fax : +977 068 522 301
E-mail : baglungurbandrinkingwater@gmail.com
Head : Kul Bahadur Rana, Chairman

Baglung Water and Sanitation Users Association (BUWSUA) became fully operational in 2007. It is legally registered with the District Water Resources Committee. BUWSUA is responsible for water supply for 6 urban wards of Baglung Municipality which has a total population of 50,000 people. Its present service area has a population density of 2,000 persons/km^2. It draws water from two river intakes. It has a master development plan covering 2011 to 2014 but has no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Two personnel attended training provided by DWSS in 2012. BUWSUA has a partly developed management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections : 2,966
Staff : 16
Annual O&M Costs : NRs4,984,704
Annual Collections : NRs4,417,137 Other Revenues: NRs2,794,792
Annual Billings : NRs4,417,137
Annual Capital Expenditure : Nil Average capital expenditure/connection/year: Nil

Baglung Urban Water and Sanitation Users Association received financial assistance from the government through DRILIP/DDC, DWSS and the District Soil Conservation for pipes and fittings, gabion and wall protection.

Tariff Structure

(Used in 2012)

Category	Private	Institution	Government
MINIMUM CHARGE	(NRs)	(NRs)	(NRs)
(First 8 m^3 or less)	100.00	150.00	200.00
ADDITIONAL CHARGE			
Consumption (m^3)	(NRs/m^3)	(NRs/m^3)	(NRs/m^3)
9 - 18 m^3	19.00	19.00	19.00
19 - 24 m^3	28.00	28.00	28.00
25 - 37 m^3	42.00	42.00	42.00
38 - 50 m^3	63.00	63.00	63.00
More than 50 m^3	95.00	95.00	95.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.
2. There were no new connections in 2012. Price of new domestic connection is NRs15,000 payable prior to connection.
3. The urban poor which comprise 9% of the service area population have been provided with community taps for their use.

Priority Need of Utility

1. Water supply as per demand of consumers. 2. Safe and drinkable water. 3. Office building.

Consumer Service

Average monthly consumption is about 15.3 m^3 per connection. The water bill averages NRs124.10 per month per connection. Water is available 2 hours a day to most users in the dry months and 3 hours a day in the wet months. Average pressure at the tap is 1 meter. Applicants have to wait for about one month for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were only 400 consumer complaints recorded while no leaks were reported during the year. Consumers complain in person at the water utility office when applying for connection or by letter. The service provider has made community taps available to the urban poor.

Performance Highlights

BUWSUA provides water at 50 lpcd to its consumers for an average of 2 hours per day in dry months and 3 hours in wet months to 60.0% of the population in its service area. NRW of 4.0% is the second lowest with production not metered although consumption is 99.9% metered making the NRW value an estimate at best. Financial management is mixed with operating ratio at 1.13, no accounts receivable and collection efficiency of 100%. Average tariff of NRs8.10/m^3 is the fifth lowest and not enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 5.4 is just below the average. There is room to increase tariff to allow the utility to increase water availability to more than 2-3 hours and increase the amount of water provided to its consumers as well as expand service to more people through the development of additional sources of water. BUWSUA also needs to fully meter its production to have a more accurate determination of unaccounted for water.

BAGLUNG WATER SUPPLY

Population: 30,000 [1]

Production / Distribution

Average Daily Production	1,555 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	Chlorination
Raw water storage	1,000 m^3
Service Area [3]	15.0 sq km
Distribution pipes	51.0 km

Service Connections

House (10.4 persons/HC)	2,830
Public Tap (200 persons/PT)	3
Commercial	0
Industrial	0
Institutional	119
Other (Community taps)	14
Total	**2,966**

Service Indicators

Service Coverage [4]	60.0%
Water availability/day	2 hours in dry months
	3 hours in wet months
Per Capita Consumption [5]	50 l/c/d
Average Tariff	NRs8.10/m^3

Efficiency Indicators

Non-Revenue Water [6]	4.0%
Unit Production Cost	NRs8.78/m^3
Operating Ratio [7]	1.13
Accounts Receivable	Nil
Staff/1,000 Connections	5.4

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] Total area of responsibility is 20.0 sq km.

[4] The population not served by the water utility draw water from springs, rivers and streams.

[5] This is for total consumption which is for domestic and institutional connections.

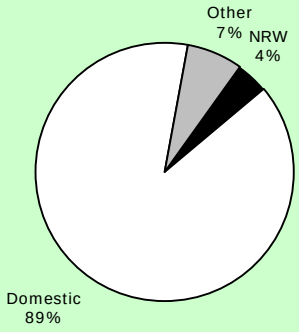
[6] There were no leaks reported repaired in 2012 while 250 meters were either replaced or repaired.

[7] The water service provider has no debt service.

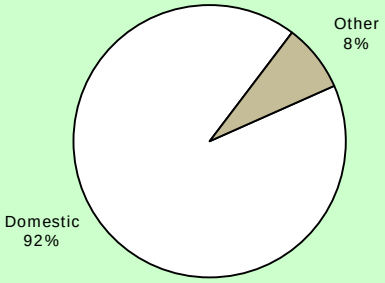
[8] Other use and billings are for institutional connections; domestic include others (community taps).

[9] Other costs include chemicals and miscellaneous expenses.

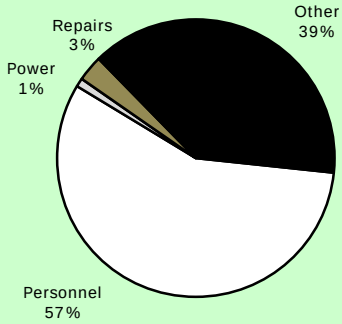
Data as of 2012.



Annual Water Use[8]
567,575 m^3



Annual Water Billings[8]
NRs4,417,137



Annual O&M Costs
NRs4,984,704

Water Utility

BELBARI SMALL TOWN WATER AND SANITATION USERS COMMITTEE

Address : Ward No.3, Belbari, Morang District
Telephone : +977 985 2055342
Fax : none
E-mail : none
Head : Khum Bahadur Khulal, Manager

Belbari Small Town Water and Sanitation Users Committee (BSTWSUC) became fully operational in 2009. It is legally registered with the District Development Committee. BSTWSUC is responsible for water supply for 4 urban and rural wards of Belbari which has a total population of 20,000 people. Its present service area has a population density of 289 persons/km^2. It draws water from two tubewells. It has a master development plan covering 2011 to 2013 and a water safety plan in place 2011. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by DWSSDO in 2012. BSTWSUC has a partly developed management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections : 750
Staff : 6
Annual O&M Costs : NRs1,191,529
Annual Collections : NRs 864,000 Other Revenue: NRs203,644
Annual Billings : NRs 864,000
Annual Capital Expenditure : Nil Average capital expenditure/connection/year: Nil

Belbari Small Town Water and Sanitation Users Committee received no assistance from the government, NGOs and funding agencies in recent years.

Tariff Structure

(Used in 2012)

Category	House	Institution
MINIMUM CHARGE	(NRs)	(NRs)
(First 10 m^3 or less)	150.00	300.00
ADDITIONAL CHARGE		
Consumption (m^3)	(NRs/m^3)	(NRs/m^3)
More than 10 m^3	10.00	10.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.
2. There were 307 new connections in 2012. Price of new domestic connection is only NRs500 payable prior to connection.
3. The urban poor which comprise 23% of the service area population have been provided with tap connection at minimal amount after recommendation from the local VDC.

Priority Need of Utility

1. Pipeline expansion on both sides of roads. 2. Electric power cost discount. 3. Galvanized iron pipe for pipeline river crossing.

Consumer Service

Average monthly consumption is about 9.0 m^3 per connection. The water bill averages NRs96.00 per month per connection. Water is available 4 hours a day to most users in the dry months and 8 hours a day in the wet months. Average pressure at the tap is 4 meters. Applicants have to wait for only one day for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were only 8 consumer complaints recorded and 125 leaks repaired during the year. Consumers can complain in person at the water utility office and by telephone. The service provider has made minimal tap connection fees available to the urban poor.

Performance Highlights

BSTWSUC provides water at only 60 lpcd to its consumers for an average of 4 hours per day in the dry months and 8 hours in the wet months to serving only 18.5% of the population, the lowest coverage. NRW of 26.2% is the sixth highest with both production and consumption fully metered. Financial management needs improvement with second highest operating ratio at 1.38, and also second highest accounts receivable equivalent of 1.9 months although collection efficiency is 100%. Average tariff of NRs10.63/m^3 is among the lowest one-third of the service providers and is clearly not enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 8.0 is among the highest. There is a need for the service provider to increase water availability to more than 8 hours per day, the amount of water provided its consumers and expand service to more people by developing new sources and reducing water losses. BSTWSUC also needs to collect water bills on time and lower its operating cost. It may also need to develop its staff with more training to make them more productive.

BELBARI WATER SUPPLY

Population: 4,050 [1]

Production / Distribution

Average Daily Production	302 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Aeration
Total water storage	900 m^3
Service Area [3]	14.0 sq km
Distribution pipes	47.0 km

Service Connections

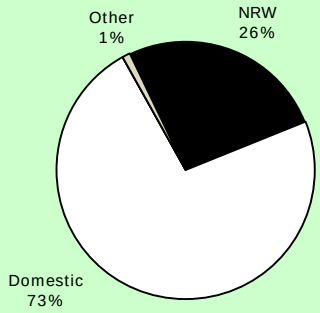
House (5 persons/HC)	739
Public Tap	0
Commercial	0
Industrial	0
Institutional	11
Other	0
Total	**750**

Service Indicators

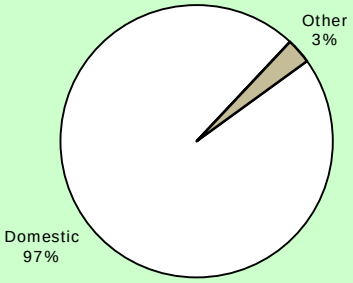
Service Coverage [4]	18.5%
Water availability/day	4 hours in dry months
	8 hours in wet months
Per Capita Consumption [5]	60 l/c/d
Average Tariff	NRs10.63/m^3

Efficiency Indicators

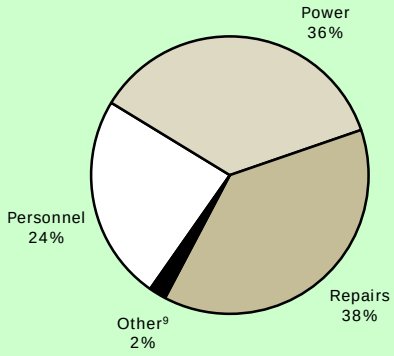
Non-Revenue Water [6]	26.2%
Unit Production Cost	NRs10.82/m^3
Operating Ratio [7]	1.38
Accounts Receivable	1.9 months
Staff/1,000 Connections	8.0



Annual Water Use[8]
110,160 m^3



Annual Water Billings[8]
NRs864,000



Annual O&M Costs
NRs1,191,529

Notes:

[1] The population is for the present area served by the utility.
[2] No water samples were taken in 2012 for residual chlorine test.
[3] This is also the total area of responsibility.
[4] The population not served by the water utility draw water from tubewells.
[5] This is for the total consumption.
[6] There were 125 leaks repaired in 2012 while 10 meters were either replaced or repaired.
[7] The water service provider has debt but could not pay debt service in 2012.
[8] Other use and billing include those from institutional connections.
[9] Other costs include chemical and transport expenses.

Data as of 2012.

Water Utility

BENI SMALL TOWN WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.2, Beni Bazar, Arthunge VDC, Myagdi District
Telephone : +977 069 520263
Fax : +977 069 520263
E-mail : none
Head : Hari Giri, Manager

Beni Small Town Water Supply and Sanitation Users Association (BSTWSSUA) became fully operational in 1995. It is legally registered with the District Water Resource Committee. BSTWSSUA is responsible for water supply for 5 urban and rural wards in 4 VDCs which has a total population of 12,000 people. Its present service area has a population density of 2,000 persons/km^2. It draws water from 5 intakes on the Pumdi River, Ritthakharka and Pumdi Springs, the Dudhe and Kopre streams. It has no master development plan but has a water safety plan in place since 2010. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One manager attended training provided by DWSS in 2012. BSTWSSUA has a partly developed management information system. Its billing system and water treatment operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 877	
Staff	: 8	
Annual O&M Costs	: NRs2,238,566	
Annual Collections	: NRs5,643,432	Other Revenues: NRs1,377,066
Annual Billings	: NRs5,767,212	
Annual Capital Expenditure	: NRs1,000,000	Average capital expenditure/connection/year: NRs1,140.25

Beni Small Town Water Supply and Sanitation Users Association has not received any financial assistance from the government and NGOs in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	200.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 20	22.00
21 - 30	24.00
31 - 40	26.00
41 - 50	28.00
More than 50 m^3	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 23 new connections in 2012. Price of new domestic connection is NRs25,000 payable prior to connection.
3. The urban poor who comprise 10% of the service area population are allowed to pay the connection fee for a period of up to 12 months.

Priority Need of Utility

1. Development of water source of at least 3 lps.
2. Development of better treatment system.
3. Development of water testing laboratory.

Consumer Service

Average monthly consumption is about 25.7 m^3 per connection. The water bill averages NRs548.01 per month per connection. Water is available 24 hours a day to most users in the wet months and 12 hours a day in the dry months. Average pressure at the tap is 9 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 305 water samples taken during the year passed the residual chlorine test. There were 730 consumer complaints recorded and also 730 leaks repaired during the year. Consumers can complain in person at the water utility office or by letter and telephone. The service provider provides water connections to the urban poor with connections fees paid by installment.

Performance Highlights

BSTWSSUA provides water at only 74 lpcd to its consumers for an average of 12-24 hours per day for 83.3% of the population in its service area. NRW of 10.7% is just higher than the top quartile with production not metered although consumption is 100% metered making the NRW value an estimate at best. Financial management is good with the second lowest operating ratio at 0.39 and accounts receivable equivalent of 0.3 month although collection efficiency of 97.9% needs improvement. Average tariff of NRs21.29/m^3 is the fourth highest. Staff/1000 connections ratio at 9.1 is third highest. New sources should be developed for BSTWSSUA to increase water provided to its consumers and increase its coverage. The low operating ratio shows it can absorb additional expenses even with its current tariff. BSTWSSUA also needs to meter its production to have a more accurate determination of its water losses.

BENI WATER SUPPLY

Population: 10,000 [1]

Production / Distribution

Average Daily Production	831 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	SSF, Sedimentation
Total water storage	505 m^3
Service Area [3]	5.0 sq km
Distribution pipes	12.5 km

Service Connections

House (11.4 persons/HC)	877
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**877**

Service Indicators

Service Coverage [4]	83.3%
Water availability/day	12 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	74 l/c/d
Average Tariff	NRs21.29/m^3

Efficiency Indicators

Non-Revenue Water [6]	10.7%
Unit Production Cost	NRs7.38/m^3
Operating Ratio [7]	0.39
Accounts Receivable	0.3 month
Staff/1,000 Connections	9.1

Notes:

[1] The population is for the present area served by the utility.

[2] All 305 water samples taken in 2012 passed the residual chlorine test.

[3] Total area of responsibility is 5.0 sq km.

[4] The population not served by the water utility draw water from springs, rivers and streams.

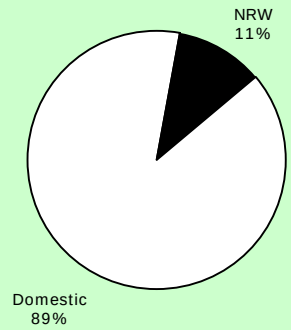
[5] This is for total consumption which are all from domestic connections.

[6] There were 730 leaks reported in 2012 while 7 meters were replaced.

[7] This does not include debt service of NRs.3,410,154.

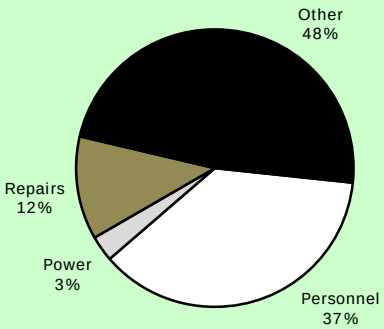
[8] Other costs include miscellaneous expenses.

Data as of 2012.



Annual Water Use
303,422 m^3

Annual Water Billings
NRs5,767,212



Annual O&M Costs[8]
NRs2,238,566

Water Utility

BHIMAD WATER AND SANITATION USERS COMMITTEE

Address : Ward No.1, Bhimad, Tanahu District
Telephone : +977 065 572 066
Fax : none
E-mail : bikram_lamsal@yahoo.com
Head : Kaji Man Shrestha, Chairman

Bhimad Water and Sanitation Users Committee (BWUSC) became fully operational in 1999. It is legally registered with the District Water Resource Committee. BWUSC is responsible for water supply for parts of two rural wards of Bhimad VDC which has a total population of 5,593 people. Its present service area has a population density of 2,432 persons/km^2. It draws water from two intakes from river and spring sources. It has no master development plan and no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. None of the service provider's personnel attended training in 2012. BWUSC has a partially developed management information system. Its pumping operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,083	
Staff	: 5	
Annual O&M Costs	: NRs1,223,573	
Annual Collections	: NRs 910,261	Other Revenues: NRs1,150,313
Annual Billings	: NRs 947,814	
Annual Capital Expenditure	: NRs 357,515	Average capital expenditure/connection/year: NRs330.12

Bhimad Water and Sanitation Users Committee received financial and technical assistance from Jwala Club of Chitwan, a non government organization, for source development, production and distribution.

Tariff Structure

(Used in 2012)

Category		All Users	
MINIMUM CHARGE			
(First 5 m^3 or less)		NRs50.00	
ADDITIONAL CHARGE			
Consumption (m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
6 - 10 m^3	15.00	26 - 30 m^3	50.00
11 - 15 m^3	20.00	31 - 40 m^3	75.00
16 - 20 m^3	30.00	41 - 50 m^3	85.00
21 - 25 m^3	40.00	More than 50 m^3	100.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 89 new connections in 2012. Price of new domestic connection is NRs20,000 payable prior to connection.
3. The urban poor which comprise 9% of the service area population have no special rates for connection fee or tariff charges.

Priority Need of Utility

1. Provide sufficient water for all. 2. Provide treated water for all. 3. Extension of distribution pipeline.

Consumer Service

Average monthly consumption is about 10.6 m^3 per connection. The water bill averages NRs72.93 per month per connection. Water is available 1 hour a day to most users in the dry months and 1.5 hours a day during the wet months. Average pressure at the tap is 1 meter. Applicants have to wait for about two weeks for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were 389 consumer complaints recorded and the same number of leaks was reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing water to the urban poor.

Performance Highlights

BWUSC provides water at only 67 lpcd to its consumers for the two lowest averages of 1 hour per day in the dry months and 1.5 hours per day in the wet months to all of the population in its service area. NRW of 1.9% is lowest but production is not metered and consumption is 99% metered making the NRW value an unreliable measure of losses. Financial management needs to be improved with operating ratio of 1.29 and collection efficiency of 96% although accounts receivable equivalent of 0.5 month is good. Average tariff of NRs6.90/m^3 is the third lowest and not enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 4.6 is better than the average. There is a need to increase tariff to allow the utility to cover its operating costs thus increasing water availability to more than 1.5 hours and increasing the amount of water provided to its consumers. BWUSC's source constraint needs to be addressed as a priority. Full metering of its production will give a more accurate determination of its losses. It may also want to consider sending its staff to training to develop their capabilities.

BHIMAD WATER SUPPLY

Population: 5,593 [1]

Production / Distribution

Average Daily Production	383 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	Chlorination
Raw water storage	155 m^3
Service Area [3]	2.3 sq km
Distribution pipes	7.0 km

Service Connections

House (5 persons/HC)	1,071
Public Tap	0
Commercial	3
Industrial	0
Institutional	6
Other	3
Total	**1,083**

Service Indicators

Service Coverage [4]	100.0%
Water availability/day	1.0 hour in dry months
	1.5 hours in wet months
Per Capita Consumption [5]	67 l/c/d
Average Tariff	NRs6.90/m^3

Efficiency Indicators

Non-Revenue Water [6]	1.9%
Unit Production Cost	NRs8.75/m^3
Operating Ratio [7]	1.29
Accounts Receivable	0.5 month
Staff/1,000 Connections	4.6

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] Total area of responsibility is 2.5 sq. km.

[4] The population not served by the water utility draw water from springs, rivers and streams.

[5] This is for total consumption for all types of connections.

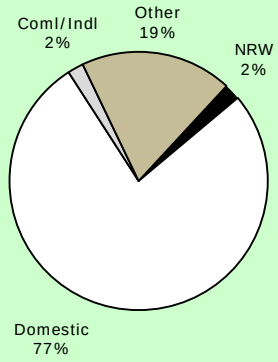
[6] There were 389 leaks repaired in 2012 while 27 meters were either replaced or repaired.

[7] The service provider does not have any debt service.

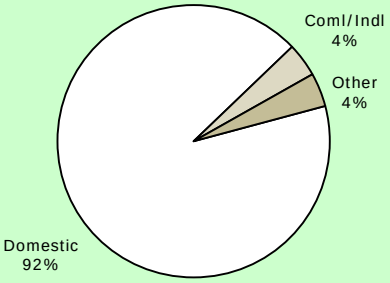
[8] Other use and billing include those for institutional connections.

[9] Other costs include transport expenses.

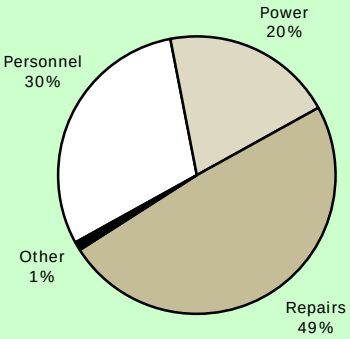
Data as of 2012.



Annual Water Use[8]
139,900 m^3



Annual Water Billings[8]
NRs947,814



Annual O&M Costs[9]
NRs1,223,573

Water Utility

WATER USERS AND SANITATION COMMITTEE, CHANDRAGADHI

Address : Ward No.7, Chandragadhi, Jhapa District
Telephone : +977 023 455796
Fax : none
E-mail : none
Head : Ambar Bahadur Karki, Chairman

Water Users and Sanitation Committee, Chandragadhi (WUSC Chandragadhi) became fully operational in 2001. It is legally registered with the District Water Resource Committee. WUSC is responsible for water supply for 11 urban and rural wards of Bhadrapur and Chandragadhi which has a total population of 18,092 people. Its present service area has a population density of 432 persons/km^2. It draws water from 3 tubewells. WUSC has no master development plan nor does it have a water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. None of its personnel attended training in 2012. WUSC has no management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 2,615	
Staff	: 14	
Annual O&M Costs	: NRs4,941,942	
Annual Collections	: NRs5,384,419	Other Revenues: NRs1,441,509
Annual Billings	: NRs5,635,502	
Annual Capital Expenditure	: NRs1,758,703	Average capital expenditure/connection/year: NRs672.54

Water Users and Sanitation Committee, Chandragadhi received technical assistance from the government through WSSDO for management support.

Tariff Structure

(Used in 2012)

Category	Household	Government
MINIMUM CHARGE	(NRs)	(NRs)
(First 8 m^3 or less)	55.13	71.66
ADDITIONAL CHARGE		
Consumption (m^3)	(NRs/m^3)	(NRs/m^3)
9 - 15 m^3	9.92	12.13
16 - 25 m^3	11.30	13.79
26 - 40 m^3	12.68	15.71
41 - 55 m^3	14.33	17.09
More than 55 m^3	16.54	19.30

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.
2. There were 150 new connections in 2012. Price of new domestic connection is NRs4,330 payable prior to connection.
3. The urban poor which comprise 9% of the service area population have been provided with community taps with minimal charges for their use.

Priority Need of Utility

1. Rehabilitation of the water supply system.
2. Construction of new overhead tank.
3. Train staff on new technology for operations.

Consumer Service

Average monthly consumption is about 17.1 m^3 per connection. The water bill averages NRs179.59 per month per connection. Water is available 12 hours a day to most users in both the dry months and the wet months. The average pressure at the tap is 4 meters. Applicants have to wait for about 2 days for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were 300 consumer complaints recorded while 243 leaks were repaired during the year. Consumers complain in person at the water utility office, by telephone or by writing a letter. The service provider has made community taps available to the urban poor.

Performance Highlights

WUSC Chandragadhi provides water at 98 lpcd to its consumers for an average of 12 hours per day during both dry and wet months to 83% of the population in its service area. NRW of 43.3% is the highest with production not metered although consumption is almost totally metered at 99.9%. Financial management looks good with operating ratio of 0.88 and accounts receivable equivalent of 0.5 month although collection efficiency of 95.5% needs improvement. Average tariff of NRs10.50/m^3 is below average yet enough to cover O&M expenses. Staff/1000 connections ratio at 5.4 is a little below the average. WUSC Chandragadhi's priority should be reduction of its water losses. Additional revenues from NRW reduction can be used to expand services to more people and provide longer hours of supply. It should also meter its production to have a more accurate determination of non revenue water. The service provider should also invest on training its staff for greater productivity and efficiency.

CHANDRAGADHI WATER SUPPLY

Population: 15,569 [1]

Production / Distribution

Average Daily Production	2,592 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Rapid sand filter
Treated water storage	810 m^3
Service Area [3]	36.0 sq km
Distribution pipes	60.0 km

Service Connections

House (6 persons/HC)	2,517
Public Tap (50 persons/PT)	2
Commercial	0
Industrial	0
Institutional	96
Other	0
Total	**2,615**

Service Indicators

Service Coverage [4]	83.0%
Water availability/day	12 hours in dry months
	12 hours in wet months
Per Capita Consumption [5]	98 l/c/d
Average Tariff	NRs8.30/m^3

Efficiency Indicators

Non-Revenue Water [6]	43.3%
Unit Production Cost	NRs5.22/m^3
Operating Ratio [7]	1.11
Accounts Receivable	0.7 month
Staff/1,000 Connections	5.4

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] The total area of responsibility is 57.0 sq km.

[4] The population not served by the water utility draw water from tubewells and dug wells.

[5] This is for the total consumption.

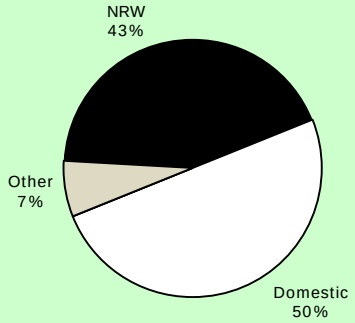
[6] There were 243 leaks repaired in 2012 while 387 meters were either replaced or repaired.

[7] The water service provider has no data on debt service in 2012.

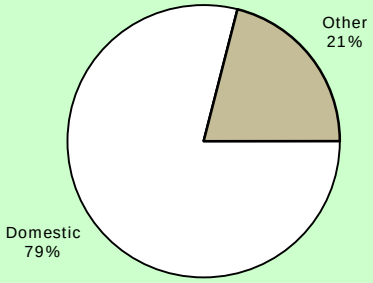
[8] Other use and billing include institutional consumption.

[9] Other costs include chemical and transport expenses.

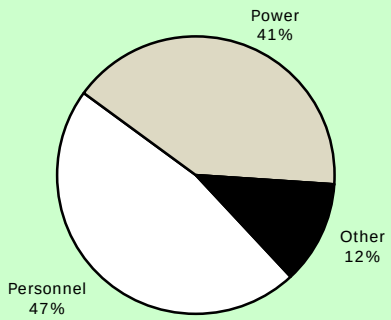
Data as of 2012.



Annual Water Use[8]
946,080 m^3



Annual Water Billings[8]
NRs5,635,504



Annual O&M Costs[9]
NRs4,941,942

Water Utility

DAMAK WATER AND SANITATION USERS ASSOCIATION

Address : Ward No.1, Damak, Jhapa District
Telephone : +977 023 580 039
Fax : +977 023 581 059
E-mail : none
Head : Pashupati Raj Gautam, Chairman

Damak Water and Sanitation Users Association (DWSUA) became operational in 1994. It was legally registered with the District Water Resource Committee in 2006. DWSUA is responsible for water supply for 7 urban wards of Damak municipality which has a total population of 40,000 people. Its present service area has a population density of 1,160 persons/km^2. The DWSUA draws water from 4 tubewells. It has no master development plan or water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Three personnel attended training funded from its operating budget in 2012. DWSUA does not have a management information system. None of its operations is computerized or automated.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 3,828	
Staff	: 15	
Annual O&M Costs	: NRs 7,597,000	
Annual Collections	: NRs 9,900,000	Other Revenues: NRs1,250,000
Annual Billings	: NRs10,325,000	
Annual Capital Expenditure	: NRs 650,000	Average capital expenditure/connection/year: NRs169.80

Technical assistance is provided by the Water Supply and Sewerage Division Office while UNHCR provided financial assistance towards the acquisition of a 40 KVA generator.

Tariff Structure

(Used in 2012)

Pipe size (diameter)	½ " dia.	¾ " dia.	1 " dia.	Public Taps
Minimum Charge				
Minimum consumption (m^3/month)	8	27	50	25
Minimum charge (NRs/month)	65.00	723.00	1,245.00	129.00
Additional Charge	(NRs/m^3)	(NRs/m^3)	(NRs/m^3)	(NRs/m^3)
Additional charge beyond minimum		20.00	20.00	14.00
9 – 20 m^3	9.50			
21 – 30 m^3	12.50			
31 – 50 m^3	13.50			
51 – 100 m^3	14.50			
More than 100 m^3	15.00			

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the DWSUA office.
2. There were 79 new connections in 2012. Price of new domestic connection is NRs10,200 payable prior to connection.
3. While no specific policy for serving the urban poor which comprise 25% of its service area population is in place, the tariffs for public taps become affordable at about NRs5.16/m^3 when shared with others.

Priority Need of Utility

1. Water production. 2. Revenue collection. 3. Regular maintenance.

Consumer Service

Average monthly consumption is about 19.2 m^3 per connection. The water bill averages NRs224.77 per month per connection. Water is available at an average of 18 hours a day to the users throughout the year despite having a 40 kva power generator with 50% of connections getting 24 hours and the rest with 1/2 to 23 hours per day water supply. Average pressure at the tap is 3.0 meters. Applicants had to wait for about 5 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 609 consumer complaints recorded and the same number of leaks were repaired during the year. Consumers can complain by writing to the water utility office. The lowest tariffs are for public taps at about NRs5.16/m^3 when connections are shared with other users.

Performance Highlights

DWSUA provides water at 104 lpcd to its consumers for an average of 18 hours per day during both dry and wet months but to only 58% of the population in its service area. NRW of 11.8% is lower than the average and good with both production and consumption 100% metered. Financial management is good with operating ratio at 0.74 and accounts receivable equivalent of 0.5 month although collection efficiency of 95.9% needs to be improved. Average tariff of NRs11.70/m^3 is also lower than the average and median but enough to cover O&M costs. Staff/1000 connections ratio is good at 3.9 which is the fifth lowest. A major customer service gap is the low coverage and should be improved but it may have to develop new sources which may require increasing tariff. The service provider should also try to collect all its water bills to further improve its finances.

DAMAK WATER SUPPLY

Population: 23,200 [1]

Production / Distribution

Average Daily Production	2,743 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter & aeration
Treated water storage	450 m^3
Service Area [3]	20.0 sq km
Distribution pipes	41.0 km

Service Connections

House (6 persons/HC)	3,824
Public Tap (50 persons/PT)	4
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**3,828**

Service Indicators

Service Coverage [4]	58.0%
Water availability/day [5]	18 hours in dry months
	18 hours in wet months
Per Capita Consumption [6]	104 l/c/d
Average Tariff	NRs11.70/m^3

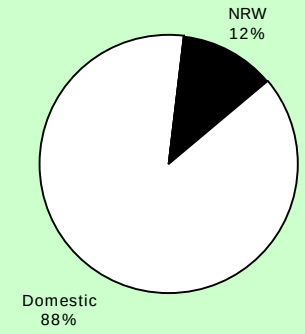
Efficiency Indicators

Non-Revenue Water [7]	11.8%
Unit Production Cost	NRs7.59/m^3
Operating Ratio [8]	0.74
Accounts Receivable	0.5 month
Staff/1,000 Connections	3.9

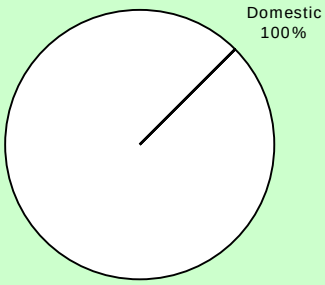
Notes:

1 The population is for the present area served by the utility.
2 No water samples were taken in 2012 for residual chlorine test.
3 Total area of responsibility is 25.0 sq km.
4 The population not served by the water utility draw water from tube wells.
5 24 hours per day availability is for only 50% of users; the rest get 1/2 to 23 hours.
6 This is for total consumption for house and public taps connections.
7 There were 609 leaks repaired in 2012 while 97 meters were repaired and 91 replaced.
8 The water service provider has no debt service.
9 Total consumption and water billings are for domestic connections.
10 Other costs include chemicals and transport costs.

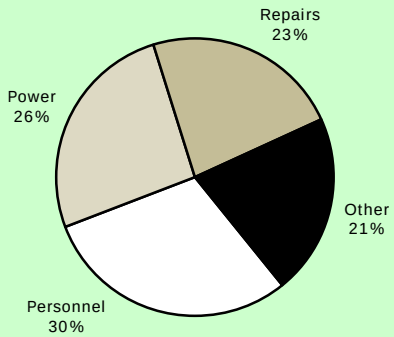
Data as of 2012.



Annual Water Use[9]
1,001,069 m^3



Annual Water Billings[9]
NRs10,325,000



Annual O&M Costs[10]
NRs7,597,000

Water Utility

DAMAULI WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.10, Damauli, Byas Municipality, Tanahu District
Telephone : +977 065 561 808/809
Fax : +977 065 561 808
E-mail : none
Head : Shanti Raman Wagle, Chairperson

Damauli Water Supply and Sanitation Users Association (DWSSUA) became fully operational in 2008. It is legally registered with the District Water Resources Committee. DWSSUA is responsible for water supply for 4 urban wards of Byas Municipality which has a total population of 26,000 people. It draws water from Gunadi Spring and Madi River with 4 intakes and one tube well. It has a master development plan covering 2013 to 2015 and a water safety plan in place since 2010. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report. No personnel attended training in 2012. DWSSUA has a partially developed management information system. Only water treatment operation is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 2,402	
Staff	: 13	
Annual O&M Costs	: NRs4,556,016	
Annual Collections	: NRs5,608,670	Other Revenues: NRs1,521,924
Annual Billings	: NRs5,608,670	
Annual Capital Expenditure	: NRs 678,533	Average capital expenditure/connection/year: NRs282.90

Institutional and financial assistance are provided by the Byas Municipal Government in the form of management assistance and deputation of staff.

Tariff Structure

(Used in 2012)

Category	Private Users
MINIMUM CHARGE	(NRs)
(First 6 m^3 or less)	80.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
7 - 15	15.00
16 - 25	20.00
26 - 35	25.00
More than 35	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 92 new connections in 2012. Price of new domestic connection is NRs10,125 payable prior to connection.
3. The urban poor which comprise 10% of the service area population have no special rates for connection fee or tariff charges.

Priority Need of Utility

1. Safe and sufficient drinking water to be provided
2. Construction of sewerage for healthy environment
3. Provision for a sanitary landfill for solid waste

Consumer Service

Average monthly consumption is about 23.6 m^3 per connection. The water bill averages NRs194.58 per month per connection. Water is available 6 hours a day to most users in both wet and dry months. Average pressure at the tap is 2 meters. Applicants have to wait for about one month maximum for new connections to be made. Connection fee is paid all at the start. Eight out of 16 samples taken during the year passed the residual chlorine test. There were 324 consumer complaints recorded while 324 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider has no policy for providing water to the urban poor.

Performance Highlights

DWSSUA provides water at 89 lpcd to its consumers for an average of only 6 hours per day during both the dry and wet months to 80.8% of the population in its service area. NRW of 10.9% is better than average although production is not metered and consumption is fully metered making the NRW figure an estimate at best. Financial management is good with operating ratio at 0.81, accounts receivable equivalent of 0.5 month and collection efficiency of 100%. Average tariff of NRs8.26/m^3 is the sixth lowest but sufficient for revenues to cover O&M costs. Staff/1000 connections ratio at 5.4 is just below the average and at the median. The low tariff may be increased to buy a backup power generator to provide water at more than 6 hours per day. DWSSUA also needs to meter its production to have a more accurate determination of non revenue water. It may also need to invest in training its staff to increase their productivity.

DAMAULI WATER SUPPLY

Population: 21,000 [1]

Production / Distribution

Average Daily Production	2,088 m^3/d
Groundwater	17%
Surface Water	83%
Treatment Type [2]	Sedimentation, roughing filter
Treated water storage	750 m^3
Service Area [3]	not defined
Distribution pipes	33.0 km

Service Connections

House (8 persons/HC)	2,197
Public Tap	0
Commercial	150
Industrial	5
Institutional	50
Other	0
Total	**2,402**

Service Indicators

Service Coverage [4]	80.8%
Water availability/day	6 hours in dry months
	6 hours in wet months
Per Capita Consumption [5]	89 l/c/d
Average Tariff	NRs8.26/m^3

Efficiency Indicators

Non-Revenue Water [6]	10.9%
Unit Production Cost	NRs5.98/m^3
Operating Ratio [7]	0.81
Accounts Receivable	0.5 month
Staff/1,000 Connections	5.4

Notes:

[1] The population is for the present area served by the utility.

[2] Of 16 water samples taken in 2012, 8 passed the residual chlorine test.

[3] No data were given for the area of responsibility and service area.

[4] The population not served by the water utility draw water from tube wells dug wells, springs, rivers and streams.

[5] This is for total consumption for all types of connections.

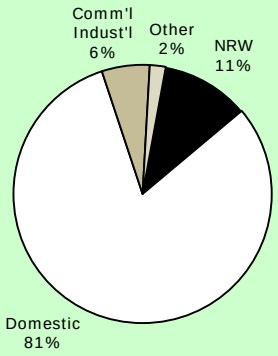
[6] There were 324 leaks repaired in 2012 while 50 meters were either replaced or repaired.

[7] The water service provider has no debt service.

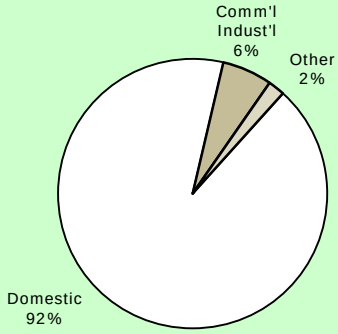
[8] Other use and billing include those for institutional connections

[9] Other costs include those for transport and chemicals.

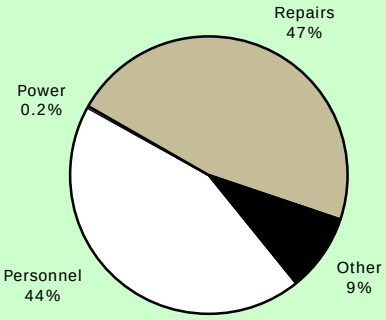
Data as of 2012.



Annual Water Use[8]
762,120 m^3



Annual Water Billings[8]
NRs5,608,670



Annual O&M Costs[9]
NRs4,556,016

Water Utility

DUHABI WATER SUPPLY PROJECT MAIN USERS COMMITTEE

Address : Ward No.5, Duhabi VDC, Sunwari District
Telephone : +977 025 540401
Fax : none
E-mail : none
Head : Tej Narayan Rauniyar, Chairman

Duhabi Water Supply Project Main Users Committee (DWSPMUS) became fully operational in 1995. It is legally registered with the District Water Resource Committee. DWSPMUS is responsible for water supply for 8 rural and urban wards of Duhabi and VDC which has a total population of 22,000 people. Its present service area has a population density of 722 persons/km^2. It draws water from 3 tubewells of which 2 are operational. It has a master development plan covering 2014 to 2016 but has no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2012. DWSPMUS does not have a management information system and none of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,180	
Staff	: 8	
Annual O&M Costs	: NRs3,084,490	
Annual Collections	: NRs3,677,850	Other Revenues: NRs420,735
Annual Billings	: NRs3,813,552	
Annual Capital Expenditure	: NRs18,136	Average capital expenditure/connection/year: NRs15.37

Duhabi Water Supply Project Main Users Committee received no assistance from the government nor NGOs.

Tariff Structure

(Used in 2012)

Domestic Users		Commercial / Institutional Users	
MINIMUM CHARGE	(NRs)	**MINIMUM CHARGE**	(NRs)
(First 8 m^3 or less)	60.00	(First 20 m^3 or less)	3500.00
ADDITIONAL CHARGE		**ADDITIONAL CHARGE**	
Consumption (m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
More than 8 m^3	12.00	More than 20 m^3	18.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid through bill collectors.
2. There were 85 new connections in 2012. Price of new domestic connection is NRs5,400 payable prior to connection.
3. The urban poor which comprise 20% of the service area population can pay NRs3,000 at the start and the rest over a period of 12 months.

Priority Need of Utility

1. Improve water quality
2. Waste management.
3. Better accounting system to be more transparent.

Consumer Service

Average monthly consumption is about 25.6 m^3 per connection. The water bill averages NRs269.32 per month per connection. Water is available 9 hours a day to most users in the dry months and 10 hours a day in the wet months. Average pressure at the tap is 15 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. The single water sample taken during the year passed the residual chlorine test. There were 257 consumer complaints recorded and the same number of leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider allows the urban poor to pay the connection fee in installment over a period of one year.

Performance Highlights

DWSPMUS provides the highest amount of water at 160 lpcd to its consumers for an average of 9 hours per day in the dry months -10 hours per day in the wet months to but only 28.2% of the population in its service area, the third lowest. NRW of 13.9% is better than average and while consumption is fully metered, production is not metered making the NRW an estimate at best. Financial management is just fine with operating ratio at 0.81, accounts receivable of 0.4 month except for 96.4% collection efficiency. Average tariff of NRs10.54/m^3 is just outside the lowest quartile but is enough to cover O&M expenses. Staff/1000 connections ratio at 6.8 is higher than the average. There is a need to increase its coverage to more consumers and water availability to longer distribution hours per day. The low tariff may also be a reason for high per capita consumption. DWSPMUS has to meter production for a more accurate determination of its losses. It also has to collect all its bills from customers. Staff productivity and efficiency can be improved by investing in training of staff.

DUHABI WATER SUPPLY

Population: 6,500 [1]

Production / Distribution

Average Daily Production	1,151 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	450 m^3
Service Area [3]	9.0 sq km
Distribution pipes	25.0 km

Service Connections

House (5.5 persons/HC)	1,135
Public Tap	0
Commercial	29
Industrial	0
Institutional	16
Other	0
Total	**1,180**

Service Indicators

Service Coverage [4]	28.2%
Water availability/day	9 hours in dry months
	10 hours in wet months
Per Capita Consumption [5]	160 l/c/d
Average Tariff	NRs10.54/m^3

Efficiency Indicators

Non-Revenue Water [6]	13.9%
Unit Production Cost	NRs7.34/m^3
Operating Ratio [7]	0.81
Accounts Receivable	0.4 month
Staff/1,000 Connections	6.8

Notes:

[1] The population is for the present area served by the utility.

[2] Only one water sample was taken in 2012 and it passed the residual chlorine test.

[3] Total area of responsibility is 12.0 sq km.

[4] The population not served by the water utility draw water from tubewells.

[5] This is for total consumption for all types of connections.

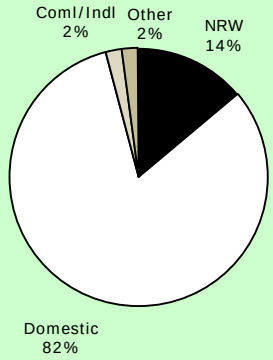
[6] There were 257 leaks reported in 2012 while 64 meters were replaced.

[7] The water service provider has no debt service.

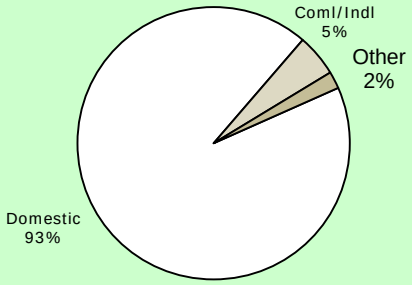
[8] Other use and billing is for institutional connections.

[9] Other costs include transport and chemicals expenses.

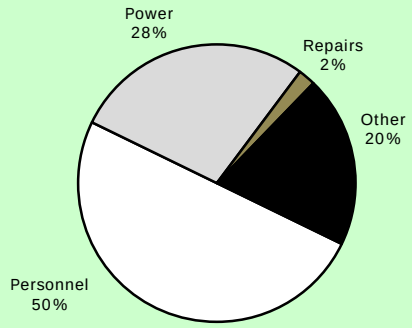
Data as of 2012.



Annual Water Use[8]
420,000 m^3



Annual Water Billings[8]
NRs3,813,552



Annual O&M Costs[9]
NRs3,804,490

Water Utility

GALYANG WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.8, Galyang Bazaar, Jagatradevi, Syangja District
Telephone : +977 063 460 161 or 460 230
Fax : none
E-mail : none
Head : Prem Raj Shrestha, Chairperson

Galyang Water Supply and Sanitation Users Association (GWSUA) became fully operational in 1993. It is legally registered with the District Water Resources Committee since 2007. GWSUA is responsible for water supply and sanitation related waste services for 6 wards of Jagatrevi and Tulsi Bhanjyang VDCs which have urban and rural areas with a total population of 11,000 people. It draws water from spring sources with 3 intakes. It has no master development plan or a water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2012 from a training budget comprising 3% of its operational budget. GWSUA has a partially developed management information system. Billing and accounting operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 550	
Staff	: 6	
Annual O&M Costs	: NRs520,000	
Annual Collections	: NRs470,000	Other Revenues: Nil
Annual Billings	: NRs550,000	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

GWSUA has not received any form of assistance in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 5 m^3 or less)	30.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
6 - 10	7.00
11 - 15	8.00
16 - 20	9.00
21 - 30	10.00
More than 30	15.00

Notes:

1. All consumers pay on metered use. Consumers in urban areas are billed monthly while rural users are billed yearly. Water bills are paid at the water service provider's office.
2. There were 20 new connections in 2012. Price of new domestic connection is NRs17,600 payable prior to connection.
3. The urban poor who comprise 20% of the service area population are allowed to pay the connection fee in installment.

Priority Need of Utility

1. Transmission pipelines leakage control. 2. Development of additional sources. 3. Construction of sewerage system.

Consumer Service

Average monthly consumption is about 15.2 m^3 per connection. The water bill averages NRs83.33 per month per connection. Water is available only 1 hour a day to most users in the dry months and 2 hours a day in the wet months. Average pressure at the tap is 5 meters. Applicants have to wait for about 4 months for new connections to be made. Connection fee is paid all at the start except for the urban poor who are allowed to pay in installment. No residual chlorine tests were made by the service provider in 2012. There were 50 consumer complaints recorded while 35 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or letter.

Performance Highlights

GWSUA provides the lowest water at only 26 lpcd to its consumers for an average of 1 hour per day in the dry months and 2 hours per day in the wet months and to 95.4% of the population in its service area. NRW of 9.1% is among the lowest but production is not metered and consumption is only 82% metered making the NRW figure an estimate at best. While operating ratio at 0.95 is fair, financial management needs improvement with accounts receivable equivalent of 1.7 months, the third highest, and collection efficiency of only 85.5%, the second lowest. Average tariff of NRs5.50/m^3 is also second lowest and is barely enough to cover O&M expenses. Staff/1000 connections ratio at 10.9 is the second highest among the service providers. There is a need to increase tariff to allow the utility to put up a backup power source to increase water availability to more than 1-2 hours per day and to develop new sources to increase per capita supply to consumers. GWSUA should put more effort in collecting all their bills and collecting them on time.

GALYANG WATER SUPPLY

Population: 10,400 [1]

Production / Distribution

Average Daily Production	301 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	Chlorination
Raw water storage	180 m^3
Service Area [3]	not defined
Distribution pipes	16.0 km

Service Connections

House (12 persons/HC)	450
Public Tap (50 persons/PT)	100
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**550**

Service Indicators

Service Coverage [4]	94.5%	
Water availability/day	1 hour in	dry months
	2 hours in	wet months
Per Capita Consumption [5]	26 l/c/d	
Average Tariff	NRs5.50/m^3	

Efficiency Indicators

Non-Revenue Water [6]	9.1%
Unit Production Cost	NRs4.73/m^3
Operating Ratio [7]	0.95
Accounts Receivable	1.7 months
Staff/1,000 Connections	10.9

Notes:

[1] The population is for the present area served by the utility.

[2] No residual chlorine test was made in 2012.

[3] No data was available for the service area and the area of responsibility.

[4] The population not served by the water utility draw water from springs, rivers and streams.

[5] This is for total consumption which is all domestic.

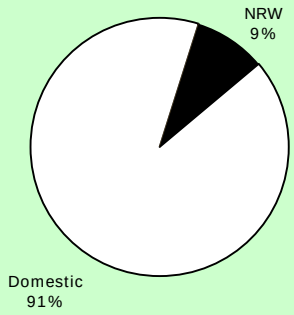
[6] There were 35 leaks repaired in 2012 while 15 meters were either replaced or repaired.

[7] The water service provider has no debt service.

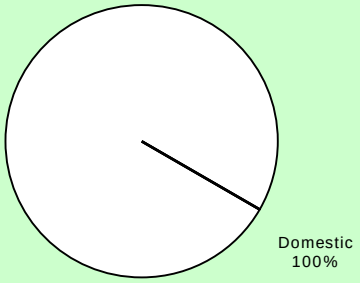
[8] Only domestic users are being served through house connections and public taps.

[9] Other costs are for transport and chemicals.

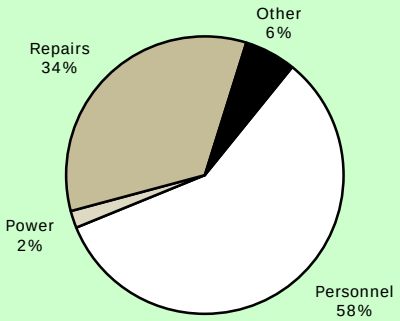
Data as of 2012.



Annual Water Use[8]
110,000 m^3



Annual Water Billings[8]
NRs550,000



Annual O&M Costs[9]
NRs520,000

GAURADAHA *Utility Profile*

Water Utility

GAURADAHA WATER AND SANITATION USERS COMMITTEE

Address : Ward No.9, Gauradaha, Jhapa District
Telephone : +977 023 480207
Fax : none
E-mail : none
Head : Sriprasad Tajpuriya, Manager

Gauradaha Water and Sanitation Users Committee (GWSUC) became fully operational in 2002. It is legally registered with the District Development Committee. GWSUC is responsible for water supply for 8 urban and rural wards of Gauradaha which has a total population of 17,966 people. Its present service area has a population density of 155 persons/km^2. It draws water from 5 tubewells of which 2 are operational. It has a master development plan covering 2011 to 2025 and a water safety plan in place 2006. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. No data was given on the number of personnel who attended training in 2012. GWSUC has a partly developed management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,305	
Staff	: 7	
Annual O&M Costs	: NRs4,418.444	
Annual Collections	: NRs2,436,507	Other Revenues: NRs1,549,576
Annual Billings	: NRs2,436,507	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Gauradaha Water and Sanitation Users Committee received technical, financial and institutional assistance from DWSS to strengthen its management capacity.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 8 m^3 or less)	100.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
9 - 15	15.00
16 - 20	18.00
21 - 25	20.00
26 - 30	25.00
More than 30 m^3	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.
2. There were 230 new connections in 2012. Price of new domestic connection is NRs6,000 payable prior to connection.
3. The urban poor who comprise 5% of the service area population receive no special tariff rates or connection charges.

Priority Need of Utility

1. Increase in storage capacity. 2. Additional borehole or tubewell. 3. Extension of distribution pipeline.

Consumer Service

Average monthly consumption is about 10.2 m^3 per connection. The water bill averages NRs155.59 per month per connection. Water is available 24 hours a day to most users in both the dry months and wet months with the help of power generators. Average pressure at the tap is 5 meters. Applicants have to wait for only one day for new connections to be made. Connection fee is paid all at the start. All 3 water samples taken in 2012 passed the residual chlorine test. There were no consumer complaints recorded but 84 leaks were repaired during the year. Consumers can complain in person at the water utility office and by telephone. The service provider has no policy for providing service to the urban poor.

Performance Highlights

GWSUC provides water at 67 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to only 36.3% of the population in its service area. NRW of 42.6% is third highest with both production consumption 100% metered. While accounts are current with no accounts receivable and collection efficiency of 100%, it has the highest operating ratio of 1.81 with revenues not enough to cover O&M expenses mainly because of the high NRW. Average tariff of NRs15.19/m^3 is the eight highest but not enough to produce the necessary revenues. Staff/1000 connections ratio at 5.4 is below the average but just at the median. There is a need to reduce NRW which will allow the service provider to expand its service to more households and also to improve its finances. GWSUC can also invest in training its staff to increase their productivity and efficiency.

GAURADAHA WATER SUPPLY

Population: 6,525 [1]

Production / Distribution

Average Daily Production	766 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter, aeration
Treated water storage	450 m^3
Service Area [3]	42.0 sq km
Distribution pipes	42.0 km

Service Connections

House (5 persons/HC)	1,305
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,305**

Service Indicators

Service Coverage [4]	36.3%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	67 l/c/d
Average Tariff	NRs15.19/m^3

Efficiency Indicators

Non-Revenue Water [6]	42.6%
Unit Production Cost	NRs15.80/m^3
Operating Ratio [7]	1.81
Accounts Receivable	Nil
Staff/1,000 Connections	5.4

Notes:

[1] The population is for the present area served by the utility.

[2] All 3 water samples taken in 2012 passed the residual chlorine test.

[3] The total area of responsibility is 57 sq km.

[4] The population not served by the water utility draw water from tubewells.

[5] This is for the total consumption which is all domestic.

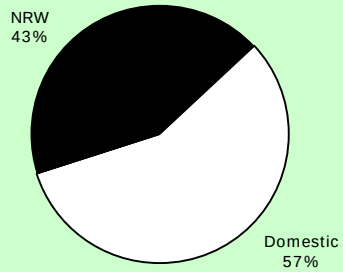
[6] There were 84 leaks repaired in 2012 while 23 meters were either replaced or repaired.

[7] The water service provider has no data on debt service in 2012.

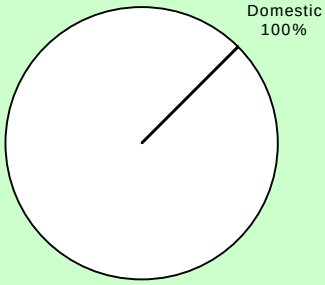
[8] All use and billing are from house connections.

[9] Other costs include chemical and transport expenses.

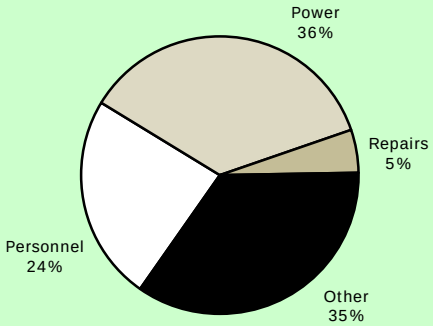
Data as of 2012.



Annual Water Use[8]
279,696 m^3



Annual Water Billings[8]
NRs2,436,507



Annual O&M Costs[9]
NRs4,418,444

Water Utility

HARAICHA WATER SUPPLY AND SANITATION USERS COMMITTEE

Address : Ward No.7, Haraicha, Pacham, Morang District
Telephone : +977 981 5358321
Fax : none
E-mail : dayaram_khawas2001@yahoo.com
Head : Bir Bahadur Khulal, Chairman

Haraicha Water Supply and Sanitation Users Committee (HWSSUC) became fully operational in 2000. It is legally registered with the District Water Resource Committee. HWSSUC is responsible for water supply for 14 rural wards of Hairacha, Indrapur, Mrigauliya and Banigaun VDCs which have a total population of 11,590 people. Its present service area has a population density of 125 persons/km^2. It draws water from 2 tubewells which are both operational. It has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by WSSDO in 2012. HWSSUC has no management information system. Its accounting system is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 500	
Staff	: 3	
Annual O&M Costs	: NRs841,114	
Annual Collections	: NRs615,715	Other Revenues: NRs358,285
Annual Billings	: NRs615,716	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Haraicha Water Supply and Sanitation Users Committee has not received any form of assistance from the government, NGOs or funding agencies in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 9 m^3 or less)	60.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
More than 9 m^3	15.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 60 new connections in 2012. Price of new domestic connection is NRs8,000 payable prior to connection.
3. The urban poor which comprise 10% of the service area population are not given any special tariff rates or connection charges.

Priority Need of Utility

1. Provision of safe water to consumers.
2. Application of national water quality standards.
3. Repair and maintenance of the system.

Consumer Service

Average monthly consumption is about 22.0 m^3 per connection. The water bill averages NRs102.62 per month per connection. Water is available 20 hours a day to most users during both the wet months and the dry months. Average pressure at the tap is 4 meters. Applicants have to wait for only a day for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 60 consumer complaints recorded while 10 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider has no special policy for providing water supply to the urban poor.

Performance Highlights

HWSSUC provides water at 90 lpcd to its consumers for an average of 20 hours per day throughout the year to only 34.5% of the population in its service area. NRW of 8.5% is sixth lowest with both production and consumption 100% metered. Financial management still needs to be improved having the third highest operating ratio of 1.37 despite having no accounts receivable and collection efficiency of 100%. The service provider has the lowest average tariff of NRs4.67/m^3 that does not produce enough revenues to cover O&M expenses. Staff/1000 connections ratio at 6.0 is higher than the average. There is a need to increase tariff to allow the utility to cover its operating costs and raise capital to expand its services to more households. HWSSUC also needs to develop the capacity of its staff by sending more of them to relevant training programs.

HARAICHA WATER SUPPLY

Population: 4,000 [1]

Production / Distribution

Average Daily Production	395 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	50 m^3
Service Area [3]	32.0 sq km
Distribution pipes	5.0 km

Service Connections

House (8 persons/HC)	495
Public Tap	0
Commercial	0
Industrial	0
Institutional	5
Other	0
Total	**500**

Service Indicators

Service Coverage [4]	34.5%
Water availability/day	20 hours in dry months
	20 hours in wet months
Per Capita Consumption [5]	90 l/c/d
Average Tariff	NRs4.67/m^3

Efficiency Indicators

Non-Revenue Water [6]	8.5%
Unit Production Cost	NRs5.84/m^3
Operating Ratio [7]	1.37
Accounts Receivable	Nil
Staff/1,000 Connections	6.0

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] This is also the total area of responsibility.

[4] The population not served by the water utility draw water from tubewells.

[5] This is for the total consumption which is mostly domestic.

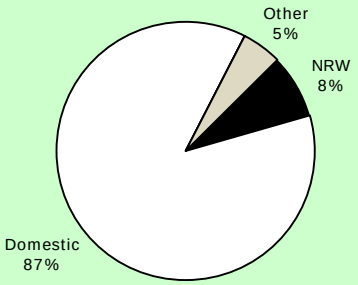
[6] There were 10 leaks repaired in 2012 while 50 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

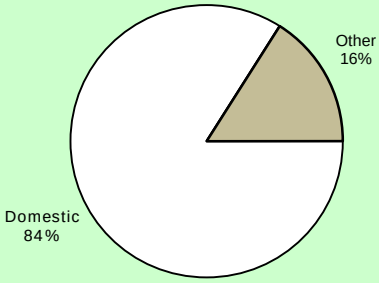
[8] Other use and billings are for institutional connections.

[9] Other costs include chemical and transport expenses.

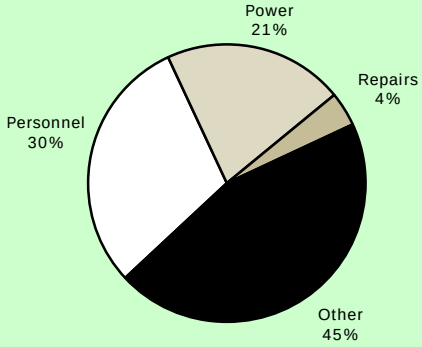
Data as of 2012.



Annual Water Use[8]
144,000 m^3



Annual Water Billings[8]
NRs615,716



Annual O&M Costs[9]
NRs841,114

Water Utility

HETAUDA WATER SUPPLY MANAGEMENT BOARD

Address : Harikunj Road, Hetauda – 2, Makwanpur District
Telephone : +977 057 520 313
Fax : none
E-mail : shakyamohan@yahoo.com
Head : Mohan Kumar Shakya, Executive Director

Hetauda Water Supply Management Board (HWSMB) took operational control of the water supply system from the municipal government in 2013. It is responsible for water supply for 9 wards of Hetauda municipality which has a total population of 70,000 people. Its present service area has a population density of 2,075 persons/km^2. The HWSMB draws water from 2 river intakes and 7 out of 9 tubewells. It has a new master development plan covering 2013 - 2033 but no water safety plan in place. The service provider has an annual report for 2011 that is available to the public as well as an audited financial report for the same year. Eight personnel attended training funded from its operating budget in 2012. HWSMB has a partially developed management information system. None of its operations is computerized or automated.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 10,200	
Staff	: 43	
Annual O&M Costs	: NRs20,800,000	
Annual Collections	: NRs19,672,926	Other Revenues: NRs5,272,000
Annual Billings	: NRs20,856,000	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Financial assistance are provided by the Hetauda Municipal Government and the Makwanpur District Development Committee for source development, production and distribution.

Tariff Structure

(Used in 2012)

Pipe size (diameter)	½ " dia.	¾ " dia.	1 " dia.
CHARGE CATEGORY			
Minimum Charge			
Minimum consumption (m^3/month)	10	27	56
Minimum charge (NRs/month)	50.00	810.00	1,680.00
Additional Charge	(NRs/m^3)	(NRs/m^3)	(NRs/m^3)
Additional charge beyond minimum	15.00	30.00	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at HWSMB office.
2. There were 659 new connections in 2012. Price of new domestic connection is NRs7,365 payable prior to connection.
3. While no specific policy for serving the urban poor is in place, the first tariff block for the smallest pipe connection of ½" diameter was designed make it affordable for the urban poor.

Priority Need of Utility

1. Development of source of water. 2. Development of storage capacity. 3. Water treatment plants.

Consumer Service

Average monthly consumption is about 16.4 m^3 per connection. The water bill averages NRs170.39 per month per connection. Water is available 3 hours a day to most users during dry months and 4 hours a day in the wet months. Average pressure at the tap is 2.0 meters. Applicants have to wait for about 7 days for new connections to be made. Connection fee is paid all at the start. About 150 out of 200 water samples taken during the year passed the residual chlorine test. There were 1,517 consumer complaints recorded and 330 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The urban poor avail of the lowest priced block tariff for the smallest ½" diameter pipe connection.

Performance Highlights

HWSMB provides water at 85 lpcd to its consumers for an average of 3 hours per day during the dry months and 4 hours per day in the wet months and to 92.9% of the population in its service area. NRW of 25.7% is at the highest quartile. Production is fully metered although consumption is only 83% metered making the NRW an estimate at best. Financial management with accounts receivable equivalent of 0.7 month needs some improvement in operating ratio of 1.00 and collection efficiency of 94.3%. Average tariff of NRs10.38/m^3 is almost among the lowest, barely enough to cover O&M expenses. Staff/1000 connections ratio at 4.2 is in the lowest quartile. There may be a need to increase tariff to allow the utility to cover its operating costs better and also to increase water availability to more than 3-4 hours per day with backup generators as other utilities have done. HWSMB also needs to fully meter all its connections to have a more accurate determination of non revenue water and to subsequently reduce it.

HETAUDA WATER SUPPLY

Population: 65,000 [1]

Production / Distribution

Average Daily Production	7,416 m^3/d
Groundwater	72%
Surface Water	28%
Treatment Type [2]	Roughing & pressure filter
Total water storage	3,250 m^3
Service Area [3]	31.3 sq km
Distribution pipes	180.0 km

Service Connections

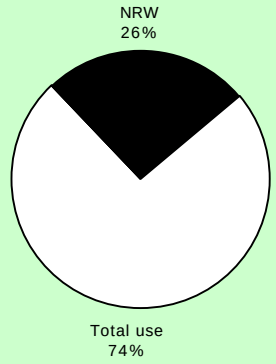
House (6.2 persons/HC)	10,027
Public Tap (40 persons/PT)	22
Commercial	0
Industrial	0
Institutional	151
Other	0
Total	**10,200**

Service Indicators

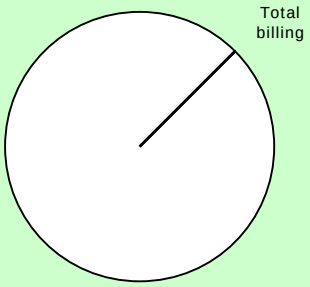
Service Coverage [4]	92.9%
Water availability/day	3 hours in dry months
	4 hours in wet months
Per Capita Consumption [5]	85 l/c/d
Average Tariff	NRs10.38/m^3

Efficiency Indicators

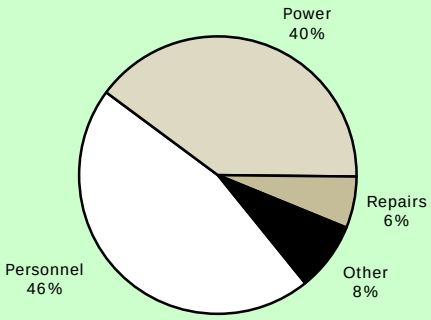
Non-Revenue Water [6]	25.7%
Unit Production Cost	NRs7.68/m^3
Operating Ratio [7]	1.00
Accounts Receivable	0.7 month
Staff/1,000 Connections	4.2



Annual Water Use[8]
2,706,760 m^3



Annual Water Billings[8]
NRs20,856,000



Annual O&M Costs[9]
NRs20,800,000

Notes:

[1] The population is for the present area served by the utility.
[2] Of 200 water samples taken in 2012, 150 passed the residual chlorine test.
[3] This is also the total area of responsibility.
[4] The population not served by the water utility draw water from tube wells.
[5] This is for total consumption for all types of connections.
[6] There were 330 leaks repaired in 2012 while 1187 meters were either replaced or repaired.
[7] The water service provider has no debt service.
[8] No breakdown according to type of connection.
[9] Other costs include chemicals.

Data as of 2012.

Water Utility

ITAHARI SMALL TOWN WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.4, Kachana Tole, Itahari, Sunsari District
Telephone : +977 025 580758
Fax : +977 025 585758
E-mail : khanepaniitr@gmail.com
Head : Sriram Chaulagai, Chairman

Itahari Small Town Water Supply and Sanitation Users Association (IWSSUA) became fully operational in 1996. It is legally registered with the District Water Resource Committee. IWSSUA is responsible for water supply for 13 urban and rural wards of Itahari Municipality and Hasposa, Akamba and Pakali VDCs which has a total population of 100,000 people. Its present service area has a population density of 4,000 persons/km^2. It draws water from 6 tubewells all of which are currently operational. IWSSUA has a master development plan covering 2012 to 2015 and a water safety plan in place since 2011. The service provider has an annual report for 2012 that is available to the public. It has an audited financial report for the same year. No personnel attended training in 2012. IWSSUA has a well developed management information system and a computerized billing system.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 8,655	
Staff	: 31	
Annual O&M Costs	: NRs11,122,760	
Annual Collections	: NRs16,462,463	Other Revenues: NRs14,805,400
Annual Billings	: NRs16,462,463	
Annual Capital Expenditure	: NRs 8,817,347	Average capital expenditure/connection/year: NRs1,018.76

Itahari Small Town Water Supply and Sanitation Users Association received financial assistance from the Itahari Municipal Government and Lumanti, a non government organization, in providing house connections for the poor.

Tariff Structure

(Used in 2012)

Category	½" connection		3/4" connection	
	House	Comm'l/Ind'l/Corp/Gov't		
MINIMUM CHARGE	(NRs)	(NRs)	**MINIMUM CHARGE**	(NRs)
(First 10 m^3 or less)	80.00	200.00	(First 30 m^3 or less)	800.00
ADDITIONAL CHARGE			**ADDITIONAL CHARGE**	
Consumption (m^3)	(NRs/m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
11 - 20 m^3	13.00	15.00	31 – 60 m^3	30.00
21 - 30 m^3	17.00	20.00	More than 60 m^3	35.00
31 – 50 m^3	20.00	25.00		
More than 50 m^3	24.00	30.00		

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 1,733 new connections in 2012. Price of new domestic connection is NRs10,525 payable prior to connection.
3. The poor which comprise 27.7% of the service area population are provided subsidies for connecting with house connections.

Priority Need of Utility

1. Additional deep boring. 2. Office building. 3. Fuel grant or subsidy.

Consumer Service

Average monthly consumption is about 13.5 m^3 per connection. The water bill averages NRs158.51 per month per connection. Water is available 10 hours a day to most users in both wet and dry months. Average pressure at the tap is 6.0 meters. Applicants have to wait for only 2 days for new connections to be made. Connection fee is paid all at the start. About 33 out of 35 water samples taken in 2012 passed the residual chlorine test. There were 318 consumer complaints recorded while 150 leaks were reported repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the poor through subsidized house connection fees.

Performance Highlights

IWSSUA provides water at 77 lpcd to its consumers for an average of 10 hours per day during both dry and wet months and to only 50% of the population in its service area. NRW of 15% is at the median and lower than the average. Production is 99.7% metered and consumption is 100% metered. Financial management is good with an operating ratio of 0.68, no accounts receivable and 100% collection efficiency. Average tariff of NRs11.75/m^3 is lower than the average but enough to bring revenues to cover O&M expenses. Staff/1000 connections ratio is good at 3.6, the third lowest among the utilities. Additional investments may be needed to develop new sources and provide backup power to raise water availability to more than just 10 hours per day and to expand water services to more people. IWSSUA can further increase productivity and efficiency of its staff by sending them to appropriate training courses.

ITAHARI WATER SUPPLY

Population: 100,000 [1]

Production / Distribution

Average Daily Production	4,515 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter, aeration
Treated water storage	1,350 m^3
Service Area [3]	25.0 sq km
Distribution pipes	300.0 km

Service Connections

House (5.8 persons/HC)	8,567
Public Tap	0
Commercial	50
Industrial	4
Institutional	34
Other	0
Total	**8,655**

Service Indicators

Service Coverage [4]	50.0%
Water availability/day	10 hours in dry months
	10 hours in wet months
Per Capita Consumption [5]	77 l/c/d
Average Tariff	NRs11.75/m^3

Efficiency Indicators

Non-Revenue Water [6]	15.0%
Unit Production Cost	NRs6.75/m^3
Operating Ratio [7]	0.68
Accounts Receivable	Nil
Staff/1,000 Connections	3.6

Notes:

[1] The population is for the present area served by the utility.

[2] About 33 out of 35 water samples taken in 2012 passed the residual chlorine test.

[3] This is also the original total area of responsibility.

[4] The population not served by the water utility draw water from dug wells, streams, rivers and springs.

[5] This is for the total consumption.

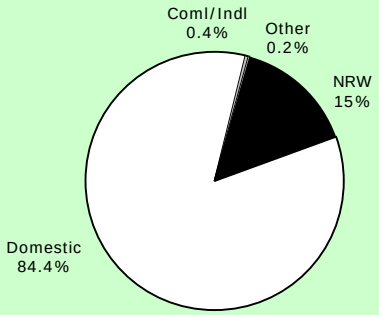
[6] There were 150 leaks repaired in 2012 while 120 meters were either replaced or repaired.

[7] The service provider has a debt service of NRs12,000,000 in 2012

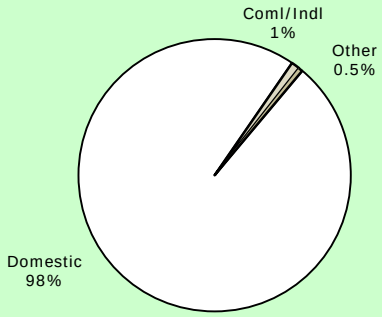
[8] Other billing is for institutional connections.

[9] Other costs include transport and chemicals expenses.

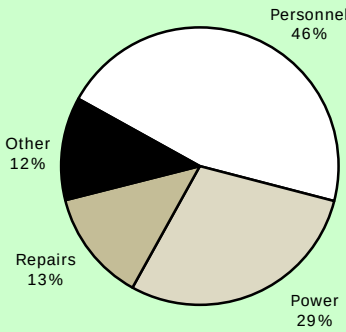
Data as of 2012.



Annual Water Use
1,647,975 m^3



Annual Water Billings[8]
NRs16,462,463



Annual O&M Costs
NRs11,122,760

KAKARVITTA *Utility Profile*

Water Utility

KAKARVITTA WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.10, Kakarvitta, Mechinagar, Jhapa District
Telephone : +977 023 562027
Fax : none
E-mail : kakarvittawatersupply@gmail.com
Head : Deepak Prasad Poudel, Office Chief

Kakarvitta Water Supply and Sanitation Users Association (KWSSUA) became fully operational in 1994. It is legally registered with the District Water Resource Committee. KWSSUA is responsible for water supply for 7 urban and rural wards of Mechinagar municipality which has a total population of 22,000 people. Its present service area has a population density of 529 persons/km^2. It draws water from 6 tubewells 4 of which are currently operational. KWSSUA has a master development plan covering 2004 to 2014 and a water safety plan in place since 2010. The service provider has an annual report for 2012 that is available to the public. It also has an audited financial report for the same year. None of its personnel attended training in 2012. KWSSUA has a partly developed management information system and a computerized billing system.

Mission Statement

Safe Water, Healthy Life.

General Data About Water Utility

Connections	: 2,489	
Staff	: 16	
Annual O&M Costs	: NRs9,572,969	
Annual Collections	: NRs9,607,730	Other Revenues: NRs1,862,597
Annual Billings	: NRs9,607,730	
Annual Capital Expenditure	: NRs2,186,883	Average capital expenditure/connection/year: NRs878.62

Kakarvitta Water Supply and Sanitation Users Association received assistance from the DWSS for water production and distribution.

Tariff Structure

(Used in 2012)

Category	½" connection	1" connection	2" connection	Community Taps
MINIMUM CHARGE	First 5 m^3 or less	First 50 m^3 or less	First 500 m^3 or less	First 10 m^3 or less
	NRs60.00	NRs1,220.00	NRs 20,000.00	NRs120.00
ADDITIONAL CHARGE				
Consumption (m^3)	(NRs/m^3)	Beyond 50 m^3	Beyond 500 m^3	Beyond 10 m^3
6 - 10 m^3	15.00	(NRs/m^3)	(NRs/m^3)	(NRs/m^3)
11 - 30 m^3	18.00	35.00	45.00	12.00
31 - 50 m^3	21.00			
51 - 80 m^3	24.00			
81 - 100 m^3	27.00			
More than 100 m^3	30.00			

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 110 new connections in 2012. Price of new domestic connection is NRs8,500 payable prior to connection.
3. The poor which comprise 20% of the service area population are provided community taps at subsidized rates.

Priority Need of Utility

1. Reduced tariff rate. 2. 24-hours supply. 3. Safe potable water.

Consumer Service

Average monthly consumption is about 20.1 m^3 per connection. The water bill averages NRs321.67 per month per connection. Water is available 20-21 hours a day to most users in both wet and dry months. Average pressure at the tap is 5.0 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2012 for residual chlorine test. There were 1,000 consumer complaints recorded while 400 leaks were reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides water to the poor through community taps with subsidized tariff.

Performance Highlights

KWSSUA provides water at 95 lpcd to its consumers for an average of 20.5 hours per day during both dry and wet months and to 78.6% of the population in its service area. NRW of 9.1% is in the lowest quartile. Both production and consumption are fully metered. Financial management is good with operating ratio of 0.99, no accounts receivable and 100% collection efficiency. Average tariff of NRs16.01/m^3 is just high enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 6.4 is higher than the average. The service provider is doing quite well although it could further expand its services to more people in its service area and provide water for longer hours per day. KWSSUA should consider developing the capacity of its staff by sending them to appropriate training programs to them more productive and efficient. It should also improve its operating ratio either by raising more revenues or reducing operating costs.

KAKARVITTA WATER SUPPLY

Population: 18,000 [1]

Production / Distribution

Average Daily Production	1,808 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	None
Raw water storage	325 m^3
Service Area [3]	34.0 sq km
Distribution pipes	30.0 km

Service Connections

House (7 persons/HC)	2,474
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other (community taps)	15
Total	**2,489**

Service Indicators

Service Coverage [4]	78.6%	
Water availability/day	20.5 hours	in dry months
	20.5 hours	in wet months
Per Capita Consumption [5]	95 l/c/d	
Average Tariff	NRs16.01/m^3	

Efficiency Indicators

Non-Revenue Water [6]	9.1%
Unit Production Cost	NRs14.50/m^3
Operating Ratio [7]	0.99
Accounts Receivable	Nil
Staff/1,000 Connections	6.4

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] This expanded from the original total area of responsibility of 14.0 sq km.

[4] The population not served by the water utility draw water from tubewells, dug wells, streams, rivers and springs.

[5] This is for the total consumption which is domestic including community taps.

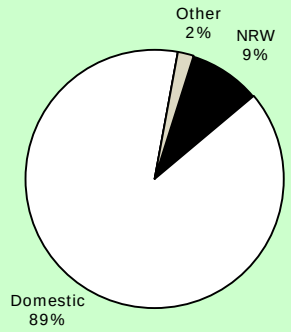
[6] There were 400 leaks repaired in 2012 while 25 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

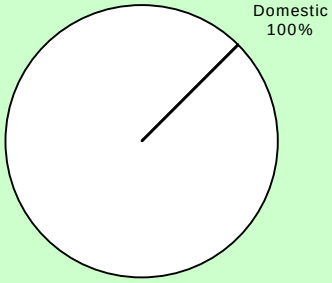
[8] Other use is for community taps.

[9] Other costs include transport and chemicals expenses.

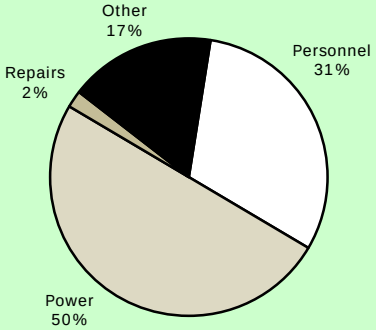
Data as of 2012.



Annual Water Use[8]
660,000 m^3



Annual Water Billings
NRs9,607,730



Annual O&M Costs[9]
NRs9,572,969

Water Utility

KARMAIYA WATER AND SANITATION USERS COMMITTEE

Address : Ward No.4, Karmaiya, Bagmati, Sarlahi District
Telephone : +977 046 691617
Fax : none
E-mail : none
Head : Dol Raj Pandey, Chairman

Karmaiya Water and Sanitation Users Committee (KWSUC) became fully operational in 1991. It is legally registered with the District Water Resource Committee. KWSUC is responsible for water supply for 12 urban and rural wards of Karmaiya and Dhugrekhola VDCs which has a total population of 20,000 people. Its present service area has a population density of 469 persons/km^2. It draws water from 20 dug wells which are all operational. It has no master development plan or a water safety plan in place. The service provider has an annual report for 2012 that is not available to the public and an audited financial report for the same year. No personnel attended any training in 2012. KWSUC has no management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,200	
Staff	: 6	
Annual O&M Costs	: NRs2,648,245	
Annual Collections	: NRs1,882,902	Other Revenues: Nil
Annual Billings	: NRs2,113,328	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Karmaiya Water and Sanitation Users Committee received institutional assistance from DWSSDO Sarlahi to strengthen its water distribution capacity.

Tariff Structure

(Used in 2012)

1/2 " Tap Connection		1" Tap Connection	
MINIMUM CHARGE	(NRs)	**MINIMUM CHARGE**	(NRs)
(First 10 m^3 or less)	75.00	(First 10 m^3 or less)	498.00
ADDITIONAL CHARGE		**ADDITIONAL CHARGE**	
Consumption (m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
11 - 15	15.00	11 - 20	55.00
16 - 20	17.00	21 - 30	67.00
21 - 25	19.00	31 - 40	76.00
26 - 30	21.00	41 - 50	84.00
More than 30 m^3	23.00	More than 50 m^3	116.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.
2. There were 62 new connections in 2012. Price of new domestic connection is only NRs5,130 payable prior to connection.
3. The urban poor who comprise 10% of the service area population receive no special tariff rates or connection charges.

Priority Need of Utility

1. Regular supply of safe water to consumers. 2. Construction of toilet in every house. 3. Funding and cost recovery.

Consumer Service

Average monthly consumption is about 11.5 m^3 per connection. The water bill averages NRs146.76 per month per connection. Water is available 4 hours a day to most users in the dry months and 6 hours per day in the wet months. Average pressure at the tap is 6 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2012 for residual chlorine test. There were only 10 consumer complaints recorded and 400 leaks repaired during the year. Consumers can complain in person at the water utility office and by telephone. The service provider has no policy for providing water service to the urban poor.

Performance Highlights

KWSUC provides water at only 30 lpcd to its consumers for an average of 4 hours per day during the dry months and 6 hours per day in the wet months and to 75% of the population in its service area. NRW of 18.1% is just above the average. However, production is not metered although consumption is fully metered making the NRW value an estimate at best. Financial management needs to be improved with the fourth highest operating ratio at 1.25, accounts receivable equivalent of 1.3 months, also fourth highest, and third lowest collection efficiency of 89.1%. Average tariff of NRs12.72/m^3 is lower than the average. Staff/1000 connections ratio at 5.0 is just below the median. The current tariff should be adjusted to raise revenues to cover operational expenses. KWSUC also needs to collect all its bill payments in a timely manner. Production needs to be metered to have a more accurate determination of non revenue water. It may have to invest in the development of new sources to be able to provide more water to consumers and for longer periods per day and in training of its staff.

KARMAIYA WATER SUPPLY

Population: 15,000 [1]

Production / Distribution

Average Daily Production	555 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	450 m^3
Service Area [3]	32.0 sq km
Distribution pipes	32.0 km

Service Connections

House (13 persons/HC)	1,185
Public Tap	0
Commercial	0
Industrial	0
Institutional	3
Other	12
Total	**1,200**

Service Indicators

Service Coverage [4]	75.0%
Water availability/day	4 hours in dry months
	6 hours in wet months
Per Capita Consumption [5]	30 l/c/d
Average Tariff	NRs12.72/m^3

Efficiency Indicators

Non-Revenue Water [6]	18.1%
Unit Production Cost	NRs13.06/m^3
Operating Ratio [7]	1.25
Accounts Receivable	1.3 months
Staff/1,000 Connections	5.0

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] The total area of responsibility is 35 sq km.

[4] The population not served by the water utility draw water from dug wells, springs, rivers, streams and irrigation canals.

[5] This is for the total consumption which is mostly domestic.

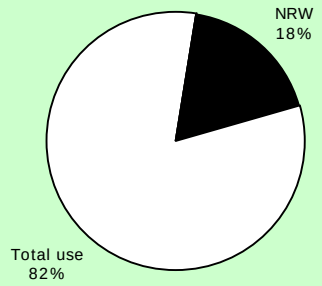
[6] There were 400 leaks repaired in 2012 while 150 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

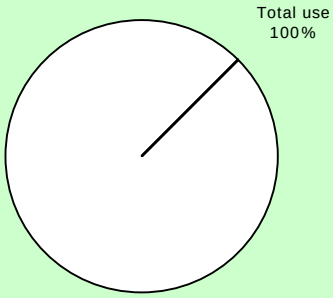
[8] No breakdowns on use and billing were given but these are mostly from domestic connections.

[9] Other costs include transport expenses.

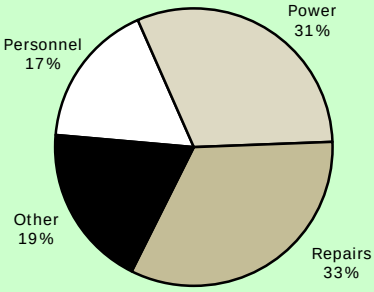
Data as of 2012.



Annual Water Use[8]
202,733 m^3



Annual Water Billings[8]
NRs2,113,238



Annual O&M Costs[9]
NRs2,648,245

KHAIRENITAR *Utility Profile*

Water Utility

KHAIRENITAR SMALL TOWN WATER SUPPLY USERS COMMITTEE

Address : Ward No.8, Khairenitar, Tanahu District
Telephone : +977 065 570720
Fax : +977 065 570720
E-mail : none
Head : Mohan Bahadur Thapa, Chairman

Khairenitar Small Town Water Supply Users Committee (KSTWSUC) became fully operational in 2005. It is legally registered with the District Water Resource Committee. KSTWSUC is responsible for water supply for 2 urban and rural wards of Khairenitar which has a total population of 6,250 people. Its present service area has a population density of 1,563 persons/km^2. It draws water from 3 spring intakes which are all operational. It has no master development plan but has a water safety plan in place since 2009. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training funded from its nominal training budget in 2012. KSTWSUC has a partly developed management information system. Its billing system is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,220	
Staff	: 10	
Annual O&M Costs	: NRs2,212,603	
Annual Collections	: NRs3,655,611	Other Revenues: NRs1,029,192
Annual Billings	: NRs3,685,587	
Annual Capital Expenditure	: NRs1,340,215	Average capital expenditure/connection/year: NRs1,098.54

Khairenitar Small Town Water Supply Users Committee received financial assistance from the Town Development Fund for management support.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	120.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 15	15.00
16 - 20	18.00
21 - 25	25.00
More than 25 m^3	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 43 new connections in 2012. Price of new domestic connection is NRs15,000 payable prior to connection.
3. The poor which comprise 2% of the service area population are provided with house connections on installments of 12-24 months.

Priority Need of Utility

1. Additional water source requirement.
2. Additional reservoir and extension of distribution pipelines.
3. Capacity building for total sanitation program.

Consumer Service

Average monthly consumption is about 14.2 m^3 per connection. The water bill averages NRs251.75 per month per connection. Water is available 6 hours a day to most users in the wet months and 8 hours a day in the dry months. Average pressure at the tap is 5 meters. Applicants have to wait for 2 days for new connections to be made. Connection fee is paid all at the start. About 16 out of 20 water samples taken during the year passed the residual chlorine test. There were 418 consumer complaints recorded while the same number of leaks were repaired during the year. Consumers can complain in person at the water utility office. The service provider connects the poor through house connections with connection fees paid in 12 to 24 month installments.

Performance Highlights

KSTWSUC provides water at 91 lpcd to its consumers for an average of 6 hours per day during the dry season and 8 hours per day in the wet season to all of the population in its service area. NRW of 4.7% is third lowest with consumption fully metered although production is only 98% metered. Financial management is good with operating ratio at 0.6, accounts receivable equivalent of 0.1 month and collection efficiency of 99.2%. Average tariff of NRs17.77/m^3 is the seventh highest covering operating expenses well. Staff/1000 connections ratio at 8.2 is fifth highest among the utilities. There is a need to increase water availability to more than 8 hours per day by investing on a backup power supply. KSTWSUC may have to invest in training its staff to develop their capabilities and increase their productivity.

KHAIRENITAR WATER SUPPLY

Population: 6,250 [1]

Production / Distribution

Average Daily Production	597 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	Pressure & roughing filter
Treated water storage	400 m^3
Service Area [3]	4.0 sq km
Distribution pipes	23.7 km

Service Connections

House (5.1 persons/HC)	1,220
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,220**

Service Indicators

Service Coverage [4]	100.0%
Water availability/day	6 hours in dry months
	8 hours in wet months
Per Capita Consumption [5]	91 l/c/d
Average Tariff	NRs17.77/m^3

Efficiency Indicators

Non-Revenue Water [6]	4.7%
Unit Production Cost	NRs10.16/m^3
Operating Ratio [7]	0.60
Accounts Receivable	0.1 month
Staff/1,000 Connections	8.2

Notes:

[1] The population is for the present area served by the utility.

[2] About 16 out of 20 water samples taken in 2012 passed the residual chlorine test.

[3] This is also the original total area of responsibility.

[4] The population not served by the water utility draw water from springs, rivers and streams.

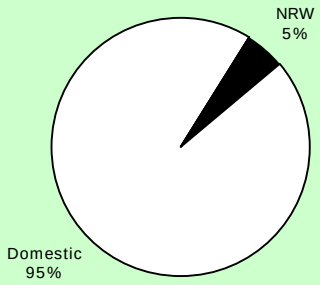
[5] This is for the total consumption which are all domestic.

[6] There were 418 leaks repaired in 2012 while 5 meters were replaced and 35 were repaired.

[7] The O&M cost does not include debt service of NRs541,051.

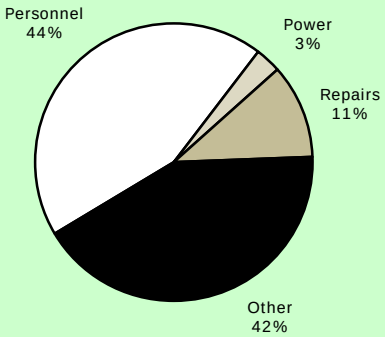
[8] Other costs include transport and chemicals expenses.

Data as of 2012.



Annual Water Use
217,728 m^3

Annual Water Billings
NRs3,685,587



Annual O&M Costs
NRs2,212,603

Water Utility

LAKHANPUR WATER AND SANITATION USERS COMMITTEE

Address : Ward No.1, Pathibhara Chowk, Lakhanpur, Jhapa District
Telephone : +977 023 582176
Fax : none
E-mail : none
Head : Usha Bhandari, Chairperson

Lakhanpur Water and Sanitation Users Committee (LWSUC) became fully operational in 2008. It is legally registered with the District Water Resource Committee. LWSUC is responsible for water supply for 3 rural wards of Lakhanpur which has a total population of 19,690 people. Its present service area has a population density of 149 persons/km^2. It draws water from 2 tubewells of which only one is currently functioning. It has a master development plan covering 2012 to 2017 and a water safety plan in place since 2012. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Three personnel attended training provided by the WSSDO in 2012. LWSUC has no management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 938	
Staff	: 3	
Annual O&M Costs	: NRs1,257,484	
Annual Collections	: NRs1,287,525	Other Revenues: NRs965,836
Annual Billings	: NRs1,287,525	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Lakhanpur Water and Sanitation Users Committee has not received any assistance in any form from the government, NGOs or funding agencies in recent years.

Tariff Structure

(Used in 2012)

Category	All Users ½" connection
MINIMUM CHARGE	(NRs)
(First 8 m^3 or less)	80.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
9 – 20	13.00
21 – 30	15.00
31 - 40	17.00
More than 40 m^3	20.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 188 new connections in 2012. Price of new domestic connection is NRs6,000 payable prior to connection.
3. The urban poor which comprise 10% of the service area population have no special rates for tariffs or connection charges.

Priority Need of Utility

1. Need for 60 KVA generator. 2. Additional borehole or tubewell. 3. Expansion of 5 km pipeline.

Consumer Service

Average monthly consumption is about 10.3 m^3 per connection. The water bill averages NRs114.39 per month per connection. Water is available 18 hours a day to most users in the wet months and 16 hours a day in the dry months. Average pressure at the tap is 6 meters. Applicants have to wait for one day only for new connections to be made. Connection fee is paid all at the start. Only 2 water samples were taken during the year and both passed the residual chlorine test. Neither consumer complaints nor leaks were reported in 2012. Consumers can complain by telephone. The service provider has no policy for providing water to the urban poor.

Performance Highlights

LWSUC provides water at only 52 lpcd to its consumers for an average of 16 hours per day in the dry months and 18 hours per day in the wet months to 31.1% of the population in its service area. NRW of 20% is higher than the average with production not metered although consumption is 100% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.98, collection efficiency of100% and no accounts receivable. Average tariff of NRs11.15/m^3 is lower than the average but is just enough to cover O&M expenses. Staff/1000 connections ratio at 3.2 is the second lowest showing good utilization of staff. There is a need to increase coverage to more people in its service area as well as the amount of water delivered to its customers. LWSUC may have to develop new sources to do this. It also needs to fully meter its production to have a more accurate determination of non revenue water.

LAKHANPUR WATER SUPPLY

Population: 6,125 [1]

Production / Distribution

Average Daily Production	396 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter, aeration
Treated water storage	200 m^3
Service Area [3]	41.0 sq km
Distribution pipes	41.0 km

Service Connections

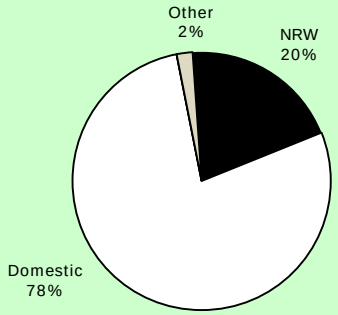
House (6.5 persons/HC)	936
Public Tap	0
Commercial	0
Industrial	0
Institutional	2
Other	0
Total	**938**

Service Indicators

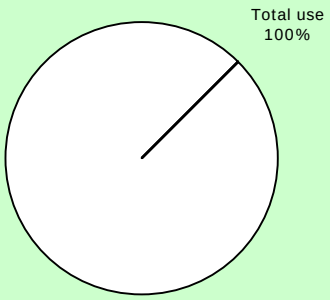
Service Coverage [4]	31.1%
Water availability/day	16 hours in dry months
	18 hours in wet months
Per Capita Consumption [5]	52 l/c/d
Average Tariff	NRs11.15/m^3

Efficiency Indicators

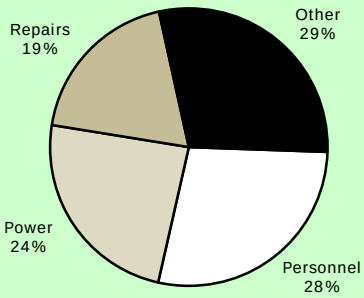
Non-Revenue Water [6]	20.0%
Unit Production Cost	NRs8.71/m^3
Operating Ratio [7]	0.98
Accounts Receivable	Nil
Staff/1,000 Connections	3.2



Annual Water Use[8]
144,375 m^3



Annual Water Billings
NRs1,287,525



Annual O&M Costs[9]
NRs1,257,484

Notes:

[1] The population is for the present area served by the utility.
[2] Only 2 water samples taken in 2012 and both passed the residual chlorine test.
[3] The total area of responsibility is 42.0 sq km.
[4] The population not served by the water utility draw water from tubewells.
[5] This is for the total consumption.
[6] There were no leaks repaired in 2012 while 30 meters were either replaced or repaired.
[7] The water service provider has no debt service in 2012.
[8] Other use include institutional consumption.
[9] Other costs include chemical and transport expenses.

Data as of 2012.

LEKHNATH *Utility Profile*

Water Utility

LEKHNATH SMALL TOWN WATER SUPPLY AND SANITATION USER COMMITTEE

Address : Lekhnath – 12, Khudi Dungepatan, Kaski District
Telephone : +977 061 561 295
Fax : +977 061 560 451
E-mail : lekhnathwatersupply@ymail.com
Head : Mr Chandra Krishna Karmacharya, Chairperson

Lekhnath Small Town Water Supply and Sanitation User Committee (LSTWSSUC) became fully operational in 2008. It is responsible for water supply for 14 urban wards of Lekhnath which has a total population of 58,000 people. Its present service area has a population density of 845 persons/km^2. The WSSUC draws water from 6 river intakes of which 4 are currently functioning. It has no master development plan but has a water safety plan in place since 2009. LSTWSSUC has an annual report for 2012 that is available to the public as well as an audited financial report. Ten personnel attended external training conducted by DWSS in 2012. LSTWSSUC has a well developed management information system with computerized billing and accounting systems.

Mission Statement

Safe water for each house is a sign of civilization. Let us keep our house, yard, colony clean ourselves.

General Data About Water Utility

Connections	: 6,406	
Staff	: 24	
Annual O&M Costs	: NRs 2,685,513	
Annual Collections	: NRs21,235,343	Other Revenues: NRs3,134,885
Annual Billings	: NRs12,228,242	
Annual Capital Expenditure	: NRs 8,692,226	Average capital expenditure/connection/year: NRs1,356.89

Technical and financial assistance are provided by the government (DWSS, TDF), international organizations (WHO, UN-HABITAT) and private sector partners (Maynilad Water Services, Inc., Philippines)

Tariff Structure

(Used in 2012)

Category	Private Users	Community Tap Users
MINIMUM CHARGE	(NRs)	(NRs)
(First 10 m^3 or less)	125.00	Private user charge less 30%
COMMODITY CHARGE		
Consumption (m^3)	(NRs/m^3)	
11 - 20	15.00	
21 - 30	18.00	
31 - 40	20.00	
More than 40	23.00	

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at LSTWSSUC office and through banks.
2. There were 500 new connections in 2012. Price of new domestic connection is NRs19,075 payable prior to connection.
3. The urban poor which comprise 19% of the service area population are given 30% discount on tariff charges and connection fees and loans for connection charges.

Priority Need of Utility

1. Leak detection equipment and professional training
2. Water testing laboratory and professional training
3. Training on water audit, distribution management and system analysis

Consumer Service

Average monthly consumption is about 11.8 m^3 per connection. The water bill averages NRs159.07 per month per connection. Water is available 14 hours a day to most users in both wet and dry months. Average pressure at the tap ranges from 1 to 10 meters. Applicants have to wait for about 2 days maximum for new connections to be made. Connection fee is paid all at the start. Ten out of 18 samples taken during the year passed the residual chlorine test. There were 502 consumer complaints recorded while 70 leaks were repaired during the year. Consumers can complain in person at the water utility or by telephone. Community taps serving the urban poor are given 30% discount on connection fees and tariff charges.

Performance Highlights

LSTWSSUC provides water at 62 lpcd to its consumers for an average of 14 hours per day throughout the year to 69% of the population in its service area. NRW of 38% is fourth highest with both production and consumption fully metered. Financial management is good with operating ratio at 0.22, accounts receivable equivalent of 0.8 month and collection efficiency of 173.7% suggesting collection of a large amount of past arrears during the year. Average tariff of NRs13.52/m^3 is above the average and more than enough to cover O&M expenses. Staff/1000 connections ratio is also good at 3.7 which is the fourth lowest. While financial management is good, consumers need to be provided with more water for longer hours per day. NRW also needs to be reduced which can help in providing more water per capita as well as expand to more consumers. LSTWSSUC may need to develop new sources and invest in a backup power generator to achieve these.

LEKHNATH WATER SUPPLY

Population: 40,000 [1]

Production / Distribution

Average Daily Production	4,000 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	Sedimentation, pressure filter
Treated water storage	2,000 m^3
Service Area [3]	47.4 sq km
Distribution pipes	250.0 km

Service Connections

House (6 persons/HC)	6,246
Public Tap (6.4 persons/PT)	80
Commercial	0
Industrial	6
Institutional	74
Other	0
Total	**6,406**

Service Indicators

Service Coverage [4]	69.0%
Water availability/day	14 hours in dry months
	14 hours in wet months
Per Capita Consumption [5]	62 l/c/d
Average Tariff	NRs13.52/m^3

Efficiency Indicators

Non-Revenue Water [6]	38.0%
Unit Production Cost	NRs1.84/m^3
Operating Ratio [7]	0.22
Accounts Receivable	0.8 month
Staff/1,000 Connections	3.7

Notes:

[1] The population is for the present area served by the utility.

[2] Of 18 water samples taken in 2012, 10 passed the residual chlorine test.

[3] This is also the total area of responsibility.

[4] The population not served by the water utility draw water from other piped water service providers and tube wells.

[5] This is for total consumption for all types of connections.

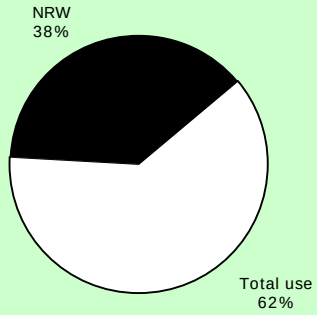
[6] There were 70 leaks repaired in 2012 while 250 meters were either replaced or repaired.

[7] Operating cost does not include debt service of NRs.9,289,851

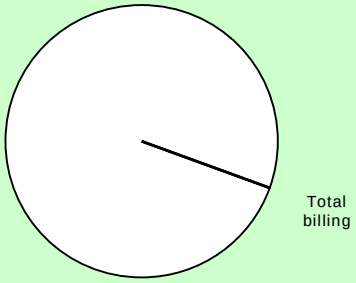
[8] No breakdown according to type of connection.

[9] Other costs include transport and chemicals.

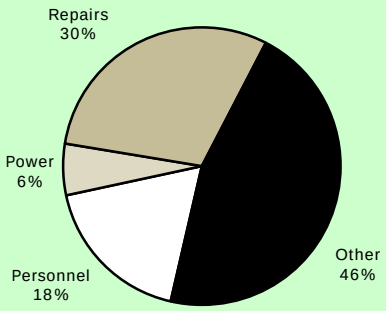
Data as of 2012.



Annual Water Use[8]
1,460,000 m^3



Annual Water Billings[8]
NRs12,228,242



Annual O&M Costs[9]
NRs2,685,513

Water Utility

MANGADH WATER SUPPLY AND SANITATION USERS COMMITTEE

Address : Ward No.4, Pushpalal Chowk,Mangadh, Biratnagar, Morang District
Telephone : +977 021 421287
Fax : +977 021 420914
E-mail : mangadhwusc@gmail.com
Head : Ram Bahadur Ghimire, Chairman

Mangadh Water Supply and Sanitation Users Committee (MWSSUC) became fully operational in 2005. It is legally registered with the District Water Resource Committee. MWSSUC is responsible for water supply for 6 urban and rural wards of Biratnagar and Tankisinuwari VDC which have a total population of 61,729 people. Its present service area has a population density of 1,670 persons/km^2. It draws water from 3 tubewells of which 2 are operational. It has a master development plan covering 2013 to 2025 and a water safety plan in place since 2011. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Eight personnel attended training provided by DWSS in 2012. MWSSUC has a partly developed management information system. Its accounting, pumping and water treatment operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 2,876	
Staff	: 12	
Annual O&M Costs	: NRs7,283,232	
Annual Collections	: NRs6,525,300	Other Revenues: NRs2,362,677
Annual Billings	: NRs6,649,662	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Mangadh Water Supply and Sanitation Users Committee received technical, financial and institutional assistance from the government (Biratnagar Municipality, national government) JICA and World Vision.

Tariff Structure

(Used in 2012)

Category	All Users ½" connection
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	90.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
More than 10 m^3	15.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 161 new connections in 2012. Price of new domestic connection is NRs1,250 payable prior to connection.
3. The urban poor which comprise 5% of the service area population are given 25% - 75% discount on connection charges.

Priority Need of Utility

1. New tubewells and rehabilitation of existing ones. 2. Water treatment facilities and reservoirs. 3. Water quality testing laboratory.

Consumer Service

Average monthly consumption is about 16.1 m^3 per connection. The water bill averages NRs192.68 per month per connection. Water is available 10 hours a day to most users during both the wet months and the dry months. Average pressure at the tap is 10 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 449 water samples taken during the year passed the residual chlorine test. There were 566 consumer complaints recorded while 466 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the urban poor with 25% to 75% discount on connection charges.

Performance Highlights

MWSSUC provides water at only 57 lpcd to its consumers for an average of 10 hours per day during both dry and wet months to 43.3% of the population in its service area. NRW of 18.4% is just above average with both production and consumption fully metered. Financial management needs to be improved with operating ratio at 1.10 and collection efficiency of 98.1% although accounts receivable equivalent of 0.2 month is good. Average tariff of NRs12.00/m^3 is a little above average. Staff/1000 connections ratio at 4.2 is in the lowest quartile. There is a need for MWSSUC to lower its operating costs and collect more of its bills. MWSSUC also needs to increase its coverage, availability to more consumers and the amount of water supplied to its consumers. It will have to invest in a new source as current production will not be enough.

MANGADH WATER SUPPLY

Population: 26,716 [1]

Production / Distribution

Average Daily Production	1,859 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter, aeration
Treated water storage	750 m^3
Service Area [3]	16.0 sq km
Distribution pipes	60.0 km

Service Connections

House (9.2 persons/HC)	2,876
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**2,876**

Service Indicators

Service Coverage [4]	43.3%
Water availability/day	10 hours in dry months
	10 hours in wet months
Per Capita Consumption [5]	57 l/c/d
Average Tariff	NRs12.00/m^3

Efficiency Indicators

Non-Revenue Water [6]	18.4%
Unit Production Cost	NRs10.73/m^3
Operating Ratio [7]	1.10
Accounts Receivable	0.2 month
Staff/1,000 Connections	4.2

Notes:

[1] The population is for the present area served by the utility.

[2] All 449 water samples taken in 2012 passed the residual chlorine test.

[3] The total area of responsibility is 20.0 sq km.

[4] The population not served by the water utility draw water from dug wells, springs, rivers and streams.

[5] This is for the total consumption which are all domestic.

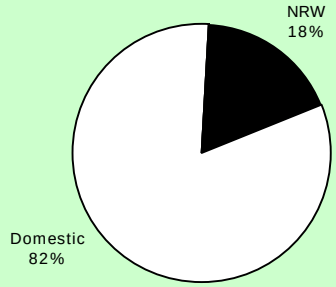
[6] There were 466 leaks repaired in 2012 while 55 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

[8] All use and billings are for house connections.

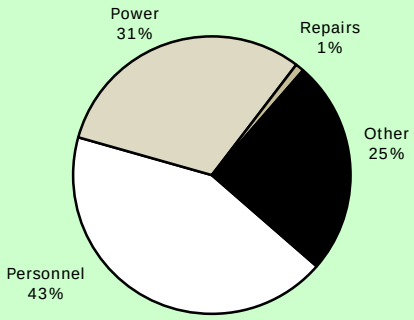
[9] Other costs include chemical expenses.

Data as of 2012.



Annual Water Use[8]
687,503 m^3

Annual Water Billings[8]
NRs6,649,662



Annual O&M Costs[9]
NRs7,283,232

Water Utility

NAYAGAUN WATER SUPPLY USERS AND SANITATION ASSOCIATION

Address : Ward No.14, Nayagaun, Butwal Municipality, Rupandehi District
Telephone : +977 071 445 093
Fax : none
E-mail : none
Head : Sabitra Regmi, Chairperson

Nayagaun Water Supply Users and Sanitation Association (NWSUSA) became fully operational in 2003. It is legally registered with the District Water Resource Committee. NWSUSA is responsible for water supply for 2 urban wards of Butwal Municipality which has a total population of 18,450 people. Its present service area has a population density of 1,845 persons/km^2. It draws water from 3 wells all of which are currently operational. It has no master development plan and no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by DWSS in 2012. NWSUSA has no management information system but its billing and accounting systems are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,760	
Staff	: 8	
Annual O&M Costs	: NRs4,139,422	
Annual Collections	: NRs4,053,171	Other Revenues: NRs3,691,455
Annual Billings	: NRs4,121,782	
Annual Capital Expenditure	: NRs3,724,462	Average capital expenditure/connection/year: NRs2,116.17

Nayagaun Water Supply Users and Sanitation Association has not received any assistance from the government and non government organizations in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	50.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 20 m^3	8.00
21 - 30 m^3	15.00
More than 30 m^3	20.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 270 new connections in 2012. Price of new domestic connection is NRs10,000 payable prior to connection.
3. The urban poor which comprise 2% of the service area population have no special rates for connection fee or tariff charges.

Priority Need of Utility

1. Provide enough water to all consumers. 2. Easy access to water for all. 3. Quality water supply.

Consumer Service

Average monthly consumption is about 24.9 m^3 per connection. The water bill averages NRs195.16 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of power generators. Average pressure at the tap is 5 m. Applicants have to wait for about two weeks for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were 50 consumer complaints recorded while 734 leaks were reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing water to the poor.

Performance Highlights

NWSUSA provides water at 143 lpcd, the second highest, to its consumers for an average of 24 hours per day to 54.8% of the population in its service area. NRW of 10% is almost among the lowest. Production is fully metered with consumption at 99.9% metering. Financial management needs some improvement with operating ratio of 1.00 and collection efficiency of 98.6% although accounts receivable equivalent of 0.2 month is good. Average tariff of NRs7.84/m^3 is low with revenues raised just enough to cover operating costs. Staff/1000 connections ratio at 4.5 is almost at the lowest quartile. While customer service is good except for coverage, operating costs should be controlled and revenues increased possibly by increasing tariff to improve its finances. Higher tariff may also reduce the high per capita consumption. NWSUSA may also need to develop new sources to expand coverage. It should consider sending its staff to more training programs to increase their productivity.

NAYAGAUN WATER SUPPLY

Population: 18,450 [1]

Production / Distribution

Average Daily Production	1,600 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	None
Raw water storage	225 m^3
Service Area [3]	10.0 sq km
Distribution pipes	74.0 km

Service Connections

House (6 persons/HC)	1,760
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,760**

Service Indicators

Service Coverage [4]	54.8%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	143 l/c/d
Average Tariff	NRs7.84/m^3

Efficiency Indicators

Non-Revenue Water [6]	10.0%
Unit Production Cost	NRs7.09/m^3
Operating Ratio [7]	1.00
Accounts Receivable	0.2 month
Staff/1,000 Connections	4.5

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] The present service area is an expansion from the original 6.2 sq km.

[4] The population not served by the water utility draw water from tubewells and other service providers.

[5] This is for total consumption which is all from domestic connections.

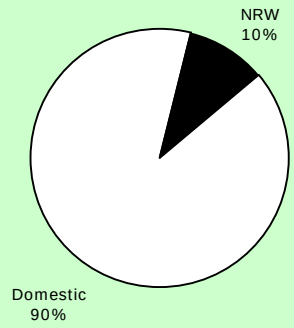
[6] There were 734 leaks repaired in 2012 while 11 meters were replaced and 700 repaired.

[7] The water service provider has no debt service.

[8] Total use and billings are all for domestic connections.

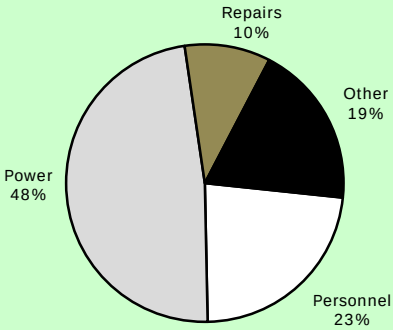
[9] Other costs include transport and miscellaneous expenses.

Data as of 2012.



Annual Water Use[8]
584,000 m^3

Annual Water Billings[8]
NRs4,121,782



Annual O&M Costs
NRs4,139,422

Water Utility

PARSA SMALL TOWN WATER SUPPLY AND SANITATION CONSUMERS' ASSOCIATION

Address : Khairahani – 4, Parsa, Chitwan District
Telephone : +977 056 582 351
Fax : +977 056 583 627
E-mail : pwssca@gmail.com
Head : Serman Tamang, Chairman

Parsa Small Town Water Supply and Sanitation Consumers' Association (PWSSCA) became fully operational in 2005. It is legally registered with the District Development Committee. PWSSCA is responsible for water supply for 15 wards of Khairahani MCDC and the VDCs of Chainpur, Kumroj, Bachhauli and Birendranagar which has a total population of 29,154 people. Its present service area has a population density of 1,205 persons/km^2. It draws water from 2 tubewells. It has no master development plan but has a water safety plan in place since 2009. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same period. Two personnel attended training conducted by DWSS in 2012. PWSSCA has a partially developed management information system. Only billing is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 2,497	
Staff	: 13	
Annual O&M Costs	: NRs4,445,495	
Annual Collections	: NRs6,492,943	Other Revenues: NRs1,891,125
Annual Billings	: NRs8,215,405	
Annual Capital Expenditure	: NRs 572,811	Average capital expenditure/connection/year: NRs229.40

Technical, financial and institutional assistance were provided by the government (VDCs, DDC, WSSDO) and financing institutions (ADB, TDF) and UN-Habitat.

Tariff Structure

(Used in 2012)

Category	Domestic	Commercial / Industrial / Construction
MINIMUM CHARGE	(NRs)	(NRs)
(First 10 m^3 or less)	130.00	150.00
ADDITIONAL CHARGE	(NRs/m^3)	(NRs/m^3)
Consumption (m^3)		
11 - 20	20.00	30.00
21 - 50	25.00	40.00
More than 50	35.00	45.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 247 new connections in 2012. Price of new domestic connection is NRs9,550 payable prior to connection.
3. The urban poor which comprise 19% of the service area population can avail of loans from the Micro Finance Fund to pay for connection charges.

Priority Need of Utility

1. Additional overhead tank.
2. Solid waste management program as mandated to the WSSCA.
3. Support to Micro Finance Fund (for funding services for the poor).

Consumer Service

Average monthly consumption is about 14.4 m^3 per connection. The water bill averages NRs274.18 per month per connection. Water is available 24 hours a day to most users in both wet and dry months. Average pressure has not been measured but is said to be adequate. Applicants have to wait for only 3 days for new connections to be made. Connection fee is paid all at the start. All of 162 water samples taken during the year passed the residual chlorine test. There were 27 consumer complaints recorded all related to the 27 leaks that were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider can arrange payment of connection charges by installment through a loan from the Micro Finance Fund.

Performance Highlights

PWSSCA provides water at only 47 lpcd, one among the lowest, to 86.8% of the population in its service area for an average of 24 hours per day both in dry and wet months. NRW of 16.4% is just above the median with both production and consumption fully metered. While operating ratio is good at 0.54, financial management still needs to be improved with the highest accounts receivable equivalent of 2.5 months and the lowest collection efficiency of only 79%. Average tariff of NRs19.01/m^3 is the fourth highest allowing the utility to cover its O&M expenses with sufficient revenues. Staff/1000 connections ratio at 5.2 is at the median. There is a need to increase the amount of water available to consumers. PWSSCA also needs to collect all its bills in a timely manner.

PARSA WATER SUPPLY

Population: 29,154 [1]

Production / Distribution

Average Daily Production	1,416 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Treated water storage	450 m^3
Service Area [3]	21 sq km
Distribution pipes	84.0 km

Service Connections

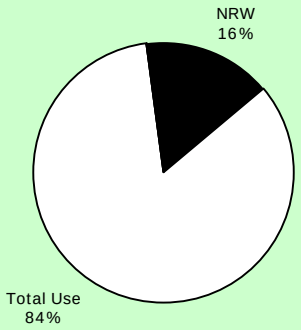
House (7 persons/HC)	2,441
Public Tap	12
Commercial	0
Industrial	0
Institutional	44
Other	0
Total	**2,497**

Service Indicators

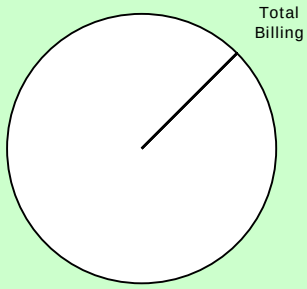
Service Coverage [4]	86.8%	
Water availability/day	24 hours in	dry months
	24 hours in	wet months
Per Capita Consumption [5]	47 l/c/d	
Average Tariff	NRs19.01/m^3	

Efficiency Indicators

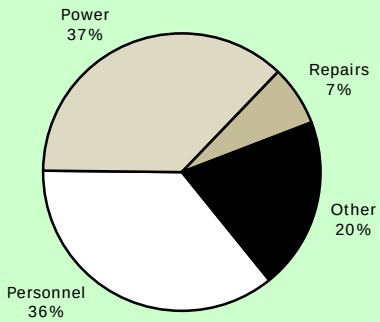
Non-Revenue Water [6]	16.4%
Unit Production Cost	NRs8.60/m^3
Operating Ratio [7]	0.54
Accounts Receivable	2.5 months
Staff/1,000 Connections	5.2



Annual Water Use[8]
516,790 m^3



Annual Water Billings[8]
NRs8,215,405



Annual O&M Costs[9]
NRs4,445,495

Notes:

1 The population is for the present area served by the utility.
2 All of 162 water samples taken in 2012 passed the residual chlorine test.
3 The area of responsibility was 10 sq km but has since been expanded to 21 sq km.
4 The population not served by the water utility draw water from tubewells.
5 This is for total consumption for all types of connections.
6 There were 27 leaks repaired in 2012 while 7 meters were either replaced or repaired.
7 Operating cost does not include debt service of NRs3,600,000.
8 No breakdown according to type of connection.
9 Other costs include transport and chemicals.

Data as of 2012.

Water Utility

PATHARI WATER SUPPLY USERS AND SANITATION ASSOCIATION

Address : Ward No.9, Pathari, Morang District
Telephone : +977 021 555406
Fax : none
E-mail : none
Head : Bir Bahadur Basnet, Chairman

Pathari Water Supply Users and Sanitation Association (PWSUSA) became fully operational in 1997. It is legally registered with the District Administration Office. PWSUSA is responsible for water supply for 4 urban and rural wards of Pathari which has a total population of 37,400 people. Its present service area has a population density of 2,500 persons/km^2. It draws water from one spring intake and one of 2 tubewells. It has a master development plan covering 2013 to 2017 but has no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Four personnel attended training provided by DWSS in 2012. PWSUSA has no management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,010	
Staff	: 5	
Annual O&M Costs	: NRs2,150,797	
Annual Collections	: NRs1,626,485	Other Revenues: NRs823,626
Annual Billings	: NRs1,671,685	
Annual Capital Expenditure	: NRs1,196,211	Average capital expenditure/connection/year: NRs1,184.37

Pathari Water Supply Users and Sanitation Association received assistance from JICA for capacity building (training) and water quality management.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	100.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
More than 10 m^3	15.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 57 new connections in 2012. Price of new domestic connection is NRs7,775 payable prior to connection.
3. The urban poor which comprise 10% of the service area population are not provided any special rates for connection fees or tariff charges.

Priority Need of Utility

1. Additional deep borehole. 2. Additional storage reservoir. 3. Additional roughing filter.

Consumer Service

Average monthly consumption is about 11.5 m^3 per connection. The water bill averages NRs137.93 per month per connection. Water is available 3 hours a day to most users in the wet months and dry months. Average pressure at the tap is 3 meters. Applicants have to wait for 15 days for new connections to be made. Connection fee is paid all at the start. The 2 water samples taken during the year passed the residual chlorine test. There were 115 consumer complaints recorded while the same number of leaks were repaired during the year. Consumers can complain by telephone or by writing a letter. The service provider has no policy for providing water to the urban poor.

Performance Highlights

PWSUSA provides water at only 38 lpcd to its consumers for an average of 3 hours per day throughout the year to only 26.7% of the population in its service area. Production is not metered although consumption is 100% metered rendering the 11.3% NRW figure as unreliable. Financial management needs to be improved with operating ratio of 1.29 and collection efficiency of 97.3% although accounts receivable equivalent is good at 0.3 month. Average tariff of NRs11.95/m^3 is below the average. Staff/1000 connections ratio at 5.0 is also just below the median. Customer service needs to be improved by increasing the amount of water delivered to the homes, expanding the coverage and making water available to more than 3 hours per day. Production will have to be increased with a new source to achieve this. Tariff may have to be increased to raise enough revenues to cover operating expenses and the cost of developing a new source.

PATHARI WATER SUPPLY

Population: 10,000 [1]

Production / Distribution

Average Daily Production	432 m^3/d
Groundwater	20%
Surface Water	80%
Treatment Type [2]	Pressure filter, sedimentaion
Total water storage	325 m^3
Service Area [3]	4.0 sq km
Distribution pipes	20.0 km

Service Connections

House (9.0 persons/HC)	1,010
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,010**

Service Indicators

Service Coverage [4]	26.7%
Water availability/day	3 hours in dry months
	3 hours in wet months
Per Capita Consumption [5]	38 l/c/d
Average Tariff	NRs11.95/m^3

Efficiency Indicators

Non-Revenue Water [6]	11.3%
Unit Production Cost	NRs13.64/m^3
Operating Ratio [7]	1.29
Accounts Receivable	0.3 month
Staff/1,000 Connections	5.0

Notes:

[1] The population is for the present area served by the utility.

[2] Both of only 2 water samples taken in 2012 passed the residual chlorine test.

[3] The total area of responsibility is 5.0 sq km.

[4] The population not served by the water utility draw water from tubewells and dug wells,

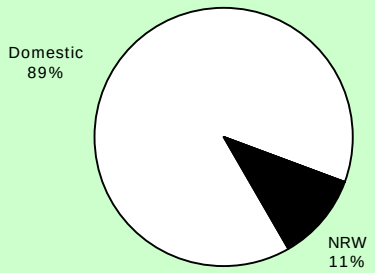
[5] This is for the total consumption which are all domestic.

[6] There were 115 leaks repaired in 2012 while 25 meters were either replaced or repaired.

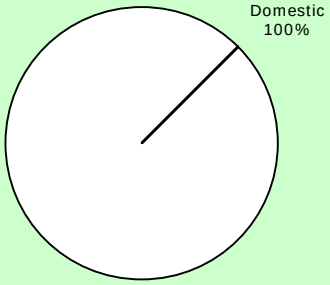
[7] The service provider has no debt service.

[8] Other costs include transport and chemicals expenses.

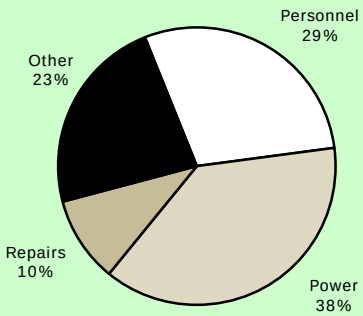
Data as of 2012.



Annual Water Use
157,680 m^3



Annual Water Billings
NRs1,671,685



Annual O&M Costs[8]
NRs2,150,797

Water Utility

PRITHVINARAYAN SMALL TOWN DRINKING WATER & SANITATION USERS' COMMITTEE

Address : Gorkha Municipality-3, Haramtari, Gorkha District
Telephone : +977 064 420 795
Fax : +977 064 421 539
E-mail : pnwuc60@hotmail.com
Head : Badri Bdr Maskey, Chairperson

Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee (PNSTDWSUC) became fully operational in 2008. It is legally registered with the District Water Resources Committee of Gorkha. PNSTDWSUC is responsible for water supply for 4 wards in urban and rural areas of Gorkha Municipality which has a total population of 7,000 people. Its present service area has a population density of 1,800 persons/km^2. It draws water from two stream intakes and one tubewell. It does not have a master development plan or a water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for 2012. One personnel attended training in 2012 provided free by DWSS. PNSTDWSUC has a partially developed management information system. Billing and pumping operations are computerized.

Mission Statement

To provide 24-hours drinking water supply with WHO norms .

General Data About Water Utility

Connections	: 787	
Staff	: 9	
Annual O&M Costs	: NRs5,519,326	
Annual Collections	: NRs4,599,641	Other Revenues: NRs2,048,456
Annual Billings	: NRs5,007,541	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Financial assistance is mostly provided by the government (STDWSSP, TDF, DDC) with contributions from the users' committee, technical assistance from STDWSSP and institutional assistance from DDC and the users' committee.

Tariff Structure

(Used since February 2013)*

Category	
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	450.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 20	60.00
21 - 30	80.00
More than 30	100.00

* Prior to these rates minimum charge was NRs300.00 and additional charges of NRs40.00/m^3 up to 20 m^3 and Nrs60.00/m^3 beyond 20 m^3.

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 65 new connections in 2012. Price of new domestic connection is NRs43,000 payable prior to connection.
3. The urban poor who comprise 13% of the service area population are provided with a 7% subsidy on connection charges on the recommendation of the municipal government.

Priority Need of Utility

1. Subsidy for electrical charges.
2. Electrical feeder line for each pump house.
3. Transfer of electrical transmission line to electrical authority.

Consumer Service

Average monthly consumption is about 11.3 m^3 per connection. The water bill averages NRs530.24 per month per connection. Water is available 5 hours a day to most users in the dry months and 8 hours a day during the wet months. Average pressure at the tap is 7 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken for residual chlorine test in 2012. There were 100 consumer complaints recorded while 30 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or letter. The service provider allows 7% subsidy on connections charges for the urban poor.

Performance Highlights

PNSTDWSUC provides water at only 54 lpcd to its consumers for an average of 5 hours per day in the dry months and 8 hours per day during the wet months to 77.1% of the population in its service area. NRW of 43.1% is second highest with production not metered although consumption is 100% metered making the NRW an estimate at best. Financial management needs to be improved with operating ratio at 1.10, accounts receivable equivalent of 1.0 month and collection efficiency of 91.9%. Average tariff of NRs46.90/m^3 is the highest yet it is not enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 11.4 is also the highest. There is a need to reduce NRW since a lot of expenses go into producing water but is eventually lost. With less losses more water can be supplied to consumers. The service provider also needs to fully meter its production to have a more accurate determination of water losses. It should send more staff to training courses to develop their capability and to make them more productive.

PRITHVINARAYAN WATER SUPPLY

Population: 5,400 [1]

Production / Distribution

Average Daily Production	514 m^3/d
Groundwater	17%
Surface Water	83%
Treatment Type [2]	Chlorination
Treated water storage	550 m^3
Service Area [3]	3.0 sq km
Distribution pipes	20.0 km

Service Connections

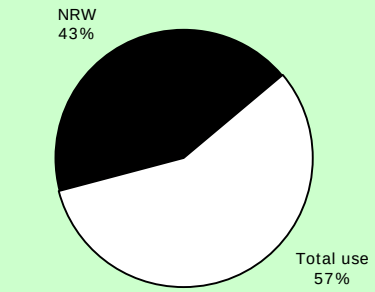
House (7 persons/HC)	762
Public Tap	0
Commercial	0
Industrial	0
Institutional	25
Other	0
Total	**787**

Service Indicators

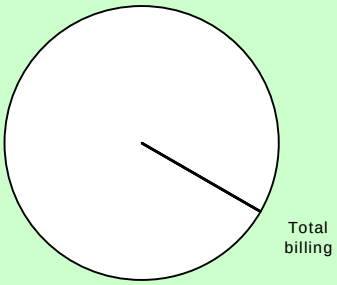
Service Coverage [4]	77.1%
Water availability/day	5 hours in dry months
	8 hours in wet months
Per Capita Consumption [5]	54 l/c/d
Average Tariff	NRs46.90/m^3

Efficiency Indicators

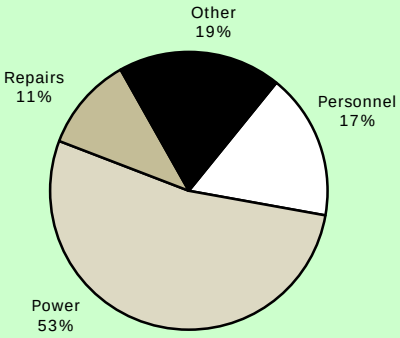
Non-Revenue Water [6]	43.1%
Unit Production Cost	NRs29.42/m^3
Operating Ratio [7]	1.10
Accounts Receivable	1.0 month
Staff/1,000 Connections	11.4



Annual Water Use[8]
187,592m^3



Annual Water Billings[8]
NRs5,007,541



Annual O&M Costs[9]
NRs5,519,326

Notes:

[1] The population is for the present area served by the utility.
[2] No residual chlorine test was made in 2012.
[3] Total area of responsibility is the same at 3.0 sq. km.
[4] The population not served by the water utility draw water from other piped water service providers, springs, rivers and streams.
[5] This is for total consumption for all types of connections.
[6] There were 30 leaks repaired in 2012 while no meter was either replaced or repaired.
[7] Operating cost does not include debt service of NRs.1,196,764.
[8] No breakdown according to type of connection.
[9] Other costs include transport and chemicals.

Data as of 2012.

RATNANAGAR *Utility Profile*

Water Utility

RATNANAGAR SMALL TOWN WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.2, Ratnanagar, Ramnagar Municipality, Chitwan District
Telephone : +977 056 561527
Fax : none
E-mail : none
Head : Yadav Prasad Mishra, Chairman

Ratnanagar Small Town Water Supply and Sanitation Users Association (RSTWSSUA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. RSTWSSUA is responsible for water supply for 17 urban and rural wards of Ratnanagar, Jutpani and Pithuwa VDCs which has a total population of 52,000 people. Its present service area has a population density of 1,786 persons/km^2. It draws water from 4 tubewells which are all operational. It has no master development plan or a water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Five personnel attended training provided by DWSS in 2012. RSTWSSUA has no management information system but billing and accounting operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 4,195	
Staff	: 12	
Annual O&M Costs	: NRs 9,632,849	
Annual Collections	: NRs11,140,250	Other Revenues: NRs4,284,115
Annual Billings	: NRs12,111,250	
Annual Capital Expenditure	: NRs 1,203,000	Average capital expenditure/connection/year: NRs286.77

Ratnanagar Small Town Water Supply and Sanitation Users Association received financial assistance from Ramnagar Municipal Government for its distribution system and from DWSS management support.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	110.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 20	14.00
21 - 30	17.00
31 - 40	20.00
41 - 50	23.00
More than 50 m^3	26.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were no new connections in 2012. Price of new domestic connection is NRs7,500 payable prior to connection.
3. The urban poor which comprise 10% of the service area population are provided community tap connections at 40% discount rate.

Priority Need of Utility

1. Construction of office building.
2. Extension of service area to Wards 5 and 6.
3. Training for employees and WUSC members.

Consumer Service

Average monthly consumption is about 16.9 m^3 per connection. The water bill averages NRs240.59 per month per connection. Water is available 8 hours a day to most users in both wet and dry months. Average pressure at the tap is 5 meters. Applicants have to wait for 1 – 2 weeks for new connections to be made. Connection fee is paid all at the start. All 60 water samples taken during the year passed the residual chlorine test. There were 400 consumer complaints recorded while 200 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides water to the poor through connection to community taps at 40% discount rate.

Performance Highlights

RSTWSSUA provides water at 101 lpcd to its consumers for an average of 8 hours per day throughout the year to 44.2% of the population in its service area. NRW of 10.5% is lower than the median with production not metered although consumption is 99.4% metered making the NRW value an estimate at best. Financial management still needs some improvement with accounts receivable equivalent of 1.0 month and collection efficiency of 92% though operating ratio is good at 0.80. Average tariff of NRs14.27/m^3 is near the top quartile but is enough to cover operating costs. Staff/1000 connections ratio at 2.9 is the lowest among the utilities. More efforts should be made in collecting all bills in a timely manner. It should also collect its bills. RSTWSSUA needs to fully meter all its consumers and production to have a more accurate determination of water losses. While it is providing sufficient water per capita coverage must be increased as one of the service provider's priorities.

RATNANAGAR WATER SUPPLY

Population: 25,000 [1]

Production / Distribution

Average Daily Production	2,600 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	900 m^3
Service Area [3]	14.0 sq km
Distribution pipes	142.0 km

Service Connections

House (6.0 persons/HC)	4,155
Public Tap	0
Commercial	0
Industrial	0
Institutional	25
Other (community taps)	15
Total	**4,195**

Service Indicators

Service Coverage [4]	44.2%
Water availability/day	8 hours in dry months
	8 hours in wet months
Per Capita Consumption [5]	101 l/c/d
Average Tariff	NRs14.27/m^3

Efficiency Indicators

Non-Revenue Water [6]	10.5%
Unit Production Cost	NRs10.15/m^3
Operating Ratio [7]	0.80
Accounts Receivable	1.0 month
Staff/1,000 Connections	2.9

Notes:

[1] The population is for the present area served by the utility.

[2] All 60 water samples taken in 2012 passed the residual chlorine test.

[3] The total area of responsibility is 30.0 sq km.

[4] The population not served by the water utility draw water from tubewells and dug wells,

[5] This is for the total consumption.

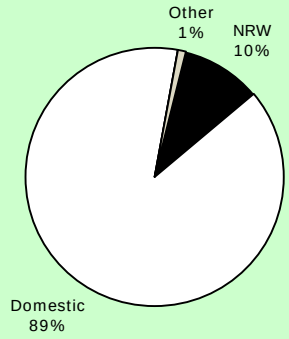
[6] There were 200 leaks repaired in 2012 while 100 meters were either replaced or repaired.

[7] The O&M cost does not include debt service of NRs5,000,000.

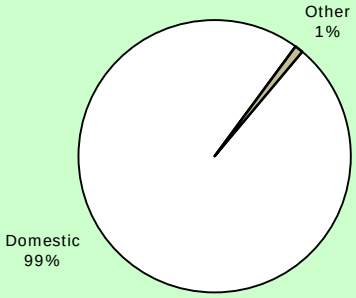
[8] Other use and billing are for institutional connections; community taps fall under domestic.

[9] Other costs include transport and chemicals expenses.

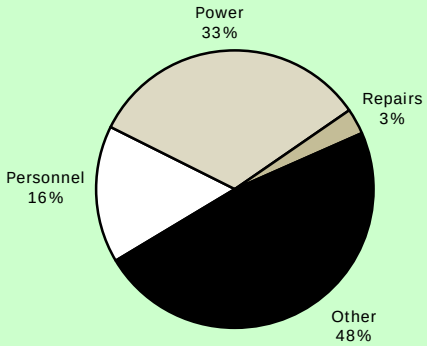
Data as of 2012.



Annual Water Use[8]
949,000 m^3



Annual Water Billings[8]
NRs12,111,250



Annual O&M Costs[9]
NRs9,632,849

Water Utility

SALAKPUR WATER SUPPLY AND SANITATION USERS COMMITTEE

Address : Ward No.9, Kaanepani Tole, Salakpur, Mrigauliya, Morang District
Telephone : +977 984 2136451
Fax : none
E-mail : none
Head : Govinda Bahadur Basnet, President

Salakpur Water Supply and Sanitation Users Committee (SWSSUC) became fully operational in 2002. It is legally registered with the District Water Resource Committee. SWSSUC is responsible for water supply for 7 urban and rural wards of Mrigauliya and Indrapur VDC which have a total population of 20,000 people. Its present service area has a population density of 387 persons/km^2. It draws water from 2 tubewells which are both operational. It has a master development plan covering 2013 to 2027 but no water safety plan in place. The service provider has an annual report for 2011 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by DWSS in 2012. SWSSUC has no management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,464	
Staff	: 7	
Annual O&M Costs	: NRs2,100,000	
Annual Collections	: NRs2,269,229	Other Revenues: NRs379,650
Annual Billings	: NRs2,269,229	
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil

Salakpur Water Supply and Sanitation Users Committee has not received any form of assistance from the government, NGOs or funding agencies in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 11 m^3 or less)	100.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
12 - 27	17.00
More than 27 m^3	23.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 80 new connections in 2012. Price of new domestic connection is NRs8,000 payable prior to connection.
3. The urban poor which comprise 5% of the service area population are not given any special tariff rates or connection charges.

Priority Need of Utility

1. Provision of safe water in subsidized rates. 2. Create awareness for sanitation. 3. Motivate users to use toilets.

Consumer Service

Average monthly consumption is about 13.1 m^3 per connection. The water bill averages NRs129.17 per month per connection. Water is available 17 hours a day to most users during both the wet months and the dry months. Average pressure at the tap is 5 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 36 consumer complaints recorded while 104 leaks were repaired during the year. Consumers can complain to the service provider by telephone. The service provider has no special policy for providing water supply to the urban poor.

Performance Highlights

SWSSUC provides water at only 53 lpcd to its consumers for an average of 17 hours per day throughout the year to 60% of the population in its service area. NRW of 6.1% is the fourth lowest with both production and consumption fully metered. Financial management is good with operating ratio at 0.93, no accounts receivable and collection efficiency of 100%. Average tariff of NRs9.84/m^3 is almost among the lowest but just enough to cover operating expenses. Staff/1000 connections ratio at 4.8 is lower than the average. Except for low coverage and per capita consumption, the service provider is doing quite well. The service provider may have to develop new sources since the per capita consumption is close to the limit of production. There is room for tariff increase with the present low average tariff. SWSSUC should send more staff to training courses to develop their capacity and increase their productivity.

SALAKPUR WATER SUPPLY

Population: 12,000 [1]

Production / Distribution

Average Daily Production	673 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	None
Raw water storage	225 m^3
Service Area [3]	31.0 sq km
Distribution pipes	31.0 km

Service Connections

House (8 persons/HC)	1,464
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,464**

Service Indicators

Service Coverage [4]	60.0%
Water availability/day	17 hours in dry months
	17 hours in wet months
Per Capita Consumption [5]	53 l/c/d
Average Tariff	NRs9.84/m^3

Efficiency Indicators

Non-Revenue Water [6]	6.1%
Unit Production Cost	NRs8.55/m^3
Operating Ratio [7]	0.93
Accounts Receivable	Nil
Staff/1,000 Connections	4.8

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] The original area of responsibility was 18.0 sq km.

[4] The population not served by the water utility draw water from dug wells, tubewells, springs, rivers and streams.

[5] This is for the total consumption which are all domestic.

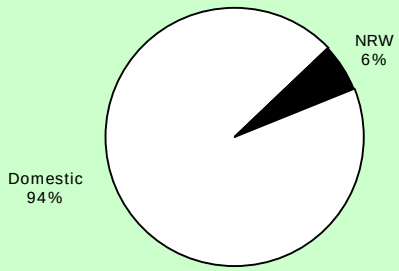
[6] There were 104 leaks repaired in 2012 while 36 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

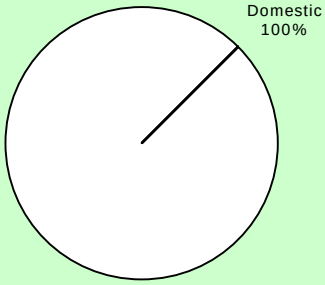
[8] All use and billings are for house connections.

[9] Other costs include transport expenses.

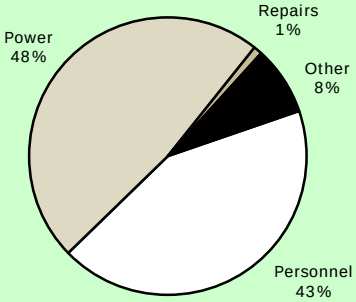
Data as of 2012.



Annual Water Use[8]
245,700 m^3



Annual Water Billings[8]
NRs2,269,229



Annual O&M Costs
NRs2,100,000

Water Utility

SHANISCHARE - ARJUNDHARA WATER SUPPLY AND SANITATION USERS COMMITTEE

Address : Ward No.2, Bazar, Shanischare, Jhapa District
Telephone : +977 023 465642
Fax : none
E-mail : none
Head : Chhatramani Dhakal, Chairman

Shanischare-Arjundhara Water Supply and Sanitation Users Committee (SAWSSUC) became fully operational in 1994. It is legally registered with the District Water Resource Committee. SAWSSUC is responsible for water supply for 12 rural wards of Shanischare and Arjundhara VDCs which has a total population of 15,000 people. Its present service area has a population density of 398 persons/km^2. It draws water from 3 tubewells of which 2 are operational. It has no master development plan but has a water safety plan in place since 2008. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Four personnel attended training funded from 10% of its operational budget. SAWSSUC has a well developed management information system. However, none of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,162	
Staff	: 7	
Annual O&M Costs	: NRs2,412,430	
Annual Collections	: NRs2,428,680	Other Revenues: NRs533,943
Annual Billings	: NRs2,428,680	
Annual Capital Expenditure	: NRs35,000	Average capital expenditure/connection/year: NRs30.12

Shanischare-Arjundhara Water Supply and Sanitation Users Association received full assistance from the DDC for pipe procurement and financial assistance from WSSDO for boundary wall construction.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 8 m^3 or less)	100.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
More than 8 m^3	12.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 20 new connections in 2012. Price of new domestic connection is NRs8,100 payable prior to connection.
3. The urban poor which comprise 30% of the service area population are not provided with any special rate consideration for tariff nor connection fees.

Priority Need of Utility

1. Additional overhead tank and deep well. 2. Extension of pipeline. 3. Filtration system and power generator.

Consumer Service

Average monthly consumption is about 14.7 m^3 per connection. The water bill averages NRs174.17 per month per connection. Water is claimed to be available 24 hours a day to most users in the wet months and dry months with backup power generators. Average pressure at the tap is 2 meters. Applicants have to wait for 5 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 150 consumer complaints recorded and the same number of leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing service to the urban poor.

Performance Highlights

SAWSSUC provides water at 49 lpcd to its consumers for an average of 24 hours per day throughout the year to 77% of the population in its service area. NRW of 33.3% is the fifth highest with production and consumption fully metered. Financial management is fine with operating ratio of 0.99, no accounts receivable and 100% collection efficiency. Average tariff of NRs11.85/m^3 is at the median and just enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 6.0 is higher than the average. There may be a need to increase tariff to allow the utility to cover its operating costs better. High NRW prevents the service provider from delivering more water per capita and has to be reduced. This can be complemented by developing additional water sources.

SHANISCHARE WATER SUPPLY

Population: 11,550 [1]

Production / Distribution

Average Daily Production	842 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Roughing & pressure filters
Treated water storage	225 m^3
Service Area [3]	29.0 sq km
Distribution pipes	23.0 km

Service Connections

House (9 persons/HC)	1,131
Public Tap (50 persons/PT)	31
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,162**

Service Indicators

Service Coverage [4]	77.0%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	49 l/c/d
Average Tariff	NRs11.85/m^3

Efficiency Indicators

Non-Revenue Water [6]	33.3%
Unit Production Cost	NRs7.85/m^3
Operating Ratio [7]	0.99
Accounts Receivable	Nil
Staff/1,000 Connections	6.0

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] The total area of responsibility is 39.0 sq km.

[4] The population not served by the water utility draw water from other service providers, tubewells, dug wells, springs, rivers and streams.

[5] This is for the total consumption which are all domestic.

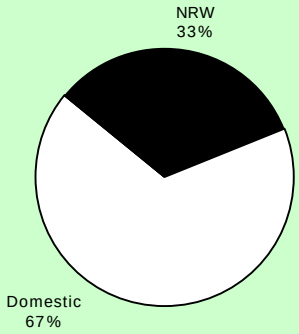
[6] There were 150 leaks repaired in 2012 while 50 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

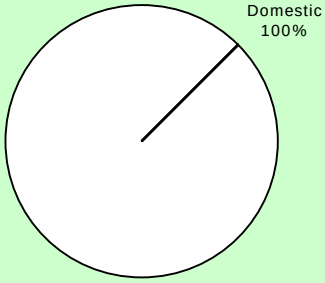
[8] All use and billings are for house connections and public taps classified as domestic.

[9] Other costs include chemical and transport expenses.

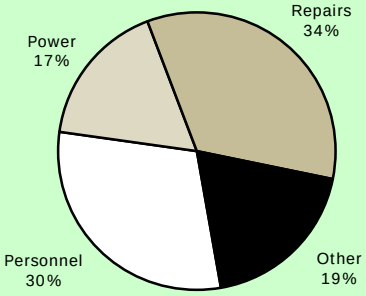
Data as of 2012.



Annual Water Use[8]
307,272 m^3



Annual Water Billings[8]
NRs2,428,680



Annual O&M Costs[9]
NRs2,412,430

SHANKARNAGAR *Utility Profile*

Water Utility

SHANKARNAGAR WATER USERS AND SANITATION ASSOCIATION

Address : Ward No.3, Jogikuti, Shankarnagar, Rupandehi District
Telephone : +977 071 437 986
Fax : none
E-mail : none
Head : Hari Prasad Tiwari, Chairman

Shankarnagar Water Users and Sanitation Association (SWUSA) became fully operational in 1999. It is legally registered with the District Water Resource Committee. SWUSA is responsible for water supply for 8 urban and rural wards of Shankarnagar which has a total population of 45,000 people. Its present service area has a population density of 2,994 persons/km^2. It has 13 wells of which only 4 are currently operational with the rest reserved for expansion of its service area. It has a master development plan covering 2013 to 2016 and a water safety plan that has been in place since 2010. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. None of its personnel has undergone training in 2012. SWUSA does not have a management information system. Billing and accounting operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 3,617	
Staff	: 14	
Annual O&M Costs	: NRs 7,676,302	
Annual Collections	: NRs11,970,492	Other Revenues: NRs7,999,782
Annual Billings	: NRs11,970,492	
Annual Capital Expenditure	: NRs 1,746,230	Average capital expenditure/connection/year: NRs482.78

Shankarnagar Water Users and Sanitation Association has not received any assistance from the government and non government organizations in recent years.

Tariff Structure

(Used in 2012)

Category	All Users ½" connection
MINIMUM CHARGE	(NRs)
(First 8 m^3 or less)	84.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
9 - 30 m^3	12.00
31 - 50 m^3	14.00
51 - 100 m^3	16.00
More than 100 m^3	17.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 299 new connections in 2012. Price of new domestic connection is NRs13,000 payable prior to connection.
3. The urban poor have no special rates for connection fee or tariff charges.

Priority Need of Utility

1. Water supply according to demand. 2. Cheaper water rates. 3. Water quality according to government standards.

Consumer Service

Average monthly consumption is about 30.2 m^3 per connection. The water bill averages NRs275.79 per month per connection. Water is available 18 hours a day to most users in both wet and dry months. Average pressure at the tap is 5 meters. Applicants have to wait for about 1 – 3 months for new connections to be made. Connection fee is paid all at the start. All 12 water samples taken in 2012 passed the residual chlorine test. There were 1,300 consumer complaints recorded while 650 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no special policy for providing water to the poor.

Performance Highlights

SWUSA provides water at 80 lpcd to its consumers for an average of 18 hours per day throughout the year to all of the population in its service area. NRW of 15.0% is at the median among the utilities with both production and consumption (99.9%) almost fully metered. Financial management is good with operating ratio at 0.64, no accounts receivable and collection efficiency of 100%. Average tariff of NRs9.13/m^3 is in the lowest quartile but still enough to cover operating expenses adequately. Staff/1000 connections ratio at 3.9 is fifth lowest. The service provider is doing well needing improvements in per capita water supply and availability to customers. This may require developing new sources as current production may not be sufficient to increase supply. SWUSA should send more staff to training courses to further develop their capacity and increase productivity.

SHANKARNAGAR WATER SUPPLY

Population: 45,000 [1]

Production / Distribution

Average Daily Production	4,227 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	450 m^3
Service Area [3]	15.0 sq km
Distribution pipes	100.0 km

Service Connections

House (12.4 persons/HC)	3,617
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**3,617**

Service Indicators

Service Coverage [4]	100.0%
Water availability/day	18 hours in dry months
	18 hours in wet months
Per Capita Consumption [5]	80 l/c/d
Average Tariff	NRs9.13/m^3

Efficiency Indicators

Non-Revenue Water [6]	15.0%
Unit Production Cost	NRs4.98/m^3
Operating Ratio [7]	0.64
Accounts Receivable	Nil
Staff/1,000 Connections	3.9

Notes:

[1] The population is for the present area served by the utility.

[2] All 12 water samples taken in 2012 passed the residual chlorine test.

[3] This is also the area of responsibility.

[4] Total population is served by house connections.

[5] This is for total consumption which is all domestic.

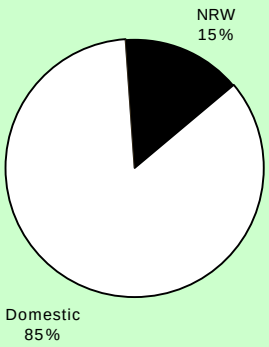
[6] There were 650 leaks repaired in 2012 while 580 meters were replaced and 70 repaired.

[7] The water service provider has no debt service.

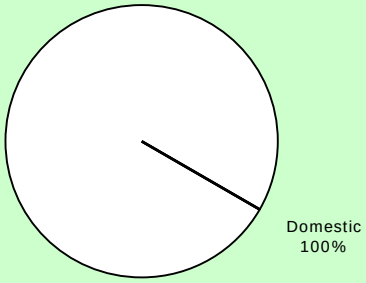
[8] Only domestic users are being served through house connections.

[9] Other costs include miscellaneous expenses.

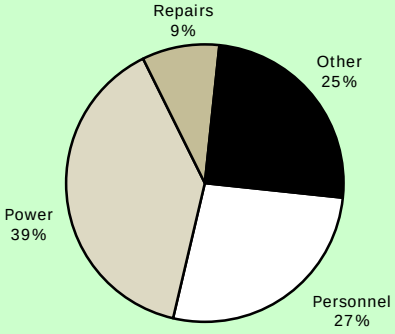
Data as of 2012.



Annual Water Use[8]
1,542,720 m^3



Annual Water Billings[8]
NRs11,970,492



Annual O&M Costs[9]
NRs7,676,302

Water Utility

SHIVALAYA WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.6, Shivalaya-6, Kushma, Parbat District
Telephone : +977 067 420465
Fax : +977 067 420424
E-mail : kushmakhanepani@yahoo.com
Head : Taranath Sharma, Chairman

Shivalaya Water Supply and Sanitation Users Association (SWSSUA) became fully operational in 2000. It is legally registered with the District Water Resource Committee. SWSSUA is responsible for water supply for 9 urban wards of Shivalaya which has a total population of 13,200 people. Its present service area has a population density of 1,597 persons/km^2. It draws water from 2 intakes from the Pati and Kyadi Rivers. It has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Four personnel attended training provided by the government in 2012. SWSSUA has a well developed management information system. Its billing and accounting systems are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,802	
Staff	: 16	
Annual O&M Costs	: NRs5,361,682	
Annual Collections	: NRs8,017,173	Other Revenues: NRs13,741,812
Annual Billings	: NRs8,017,173	
Annual Capital Expenditure	: NRs2,342,950	Average capital expenditure/connection/year: NRs1,300.19

Shivalaya Water Supply and Sanitation Users Association received financial assistance from the government (DWSSDO, TDF) and the project management office for source development, project construction, respectively.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	120.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
11 - 20	18.00
21 - 30	20.00
31 - 40	22.00
41 - 50	25.00
More than 50 m^3	30.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 309 new connections in 2012. Price of new domestic connection is NRs29,500 payable prior to connection.
3. The urban poor which comprise 4% of the service area population are provided with community taps with subsidized payments for tariffs.

Priority Need of Utility

1. Development of new sources.
2. Increased storage capacities.
3. Roughing filter for water quality improvement.

Consumer Service

Average monthly consumption is about 20.5 m^3 per connection. The water bill averages NRs370.75 per month per connection. Water is available 8 hours a day to most users in the wet months and 9 hours a day in the dry months. Average pressure at the tap is 5 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 87 consumer complaints recorded while no leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the urban poor through community taps at subsidized rates.

Performance Highlights

SWSSUA provides water at 97 lpcd to its consumers for an average of 8 hours per day during the dry months and 9 hours per day in the wet months to 95.2% of the population in its service area. NRW of 23.3% is in the highest quartile with consumption fully metered but only 4% of production is metered making the NRW value an estimate at best. Financial management is good with operating ratio at 0.67, accounts receivable of 0.9 month and collection efficiency of 100%. Average tariff of NRs18.06/m^3 is sixth highest which is sufficient enough to raise revenue that covers O&M expenses well. Staff/1000 connections ratio at 8.9 is fourth highest. NRW needs to be lowered with more efforts put in leak detection and repair. It should meter its production to have a better determination of its losses. SWSSUA should consider sending more staff to training courses to develop their capacity and increase their productivity. Backup generators may be considered to increase water availability per day.

SHIVALAYA WATER SUPPLY

Population: 12,772 [1]

Production / Distribution

Average Daily Production	1,585 m^3/d
Groundwater	Nil
Surface Water	100%
Treatment Type [2]	SSF, aeration, sedimentation
Total water storage	1,765 m^3
Service Area [3]	8.0 sq km
Distribution pipes	29.0 km

Service Connections

House (6.85 persons/HC)	1,696
Public Tap	0
Commercial	15
Industrial	0
Institutional	83
Other (community taps)	8
Total	**1,802**

Service Indicators

Service Coverage [4]	95.2%
Water availability/day	8 hours in dry months
	9 hours in wet months
Per Capita Consumption [5]	97 l/c/d
Average Tariff	NRs18.06/m^3

Efficiency Indicators

Non-Revenue Water [6]	23.3%
Unit Production Cost	NRs9.27/m^3
Operating Ratio [7]	0.67
Accounts Receivable	0.9 month
Staff/1,000 Connections	8.9

Notes:

[1] The population is for the present area served by the utility.

[2] No water samples were taken in 2012 for residual chlorine test.

[3] This is also the original total area of responsibility.

[4] The population not served by the water utility draw water from springs, rivers and streams.

[5] This is for the total consumption.

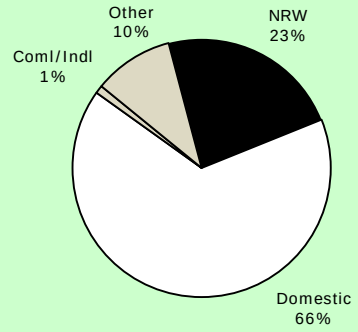
[6] There were no leaks repaired in 2012 while 87 meters were either replaced or repaired.

[7] The O&M cost does not include debt service of NRs3,068,099.

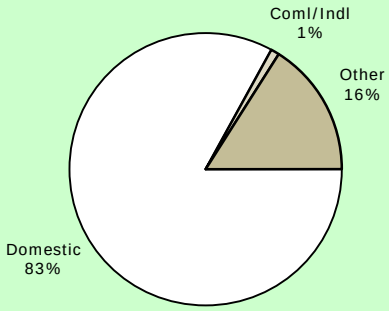
[8] Other use and billings are for instutional connections; community taps were included under domestic.

[9] Other costs include transport expenses.

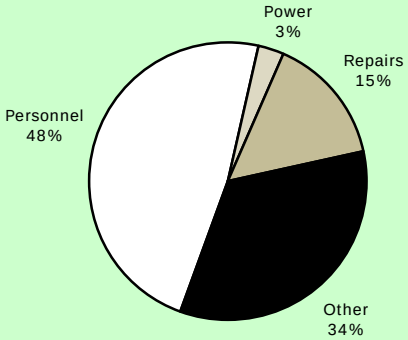
Data as of 2012.



Annual Water Use[8]
578,584 m^3



Annual Water Billings[8]
NRs8,017,173



Annual O&M Costs[9]
NRs5,361,682

Water Utility

SUNWAL WATER USERS AND SANITATION ORGANIZATION

Address : Ward No.1, Banaha, Sunwal, Nawalparasi District
Telephone : +977 078 570530
Fax : +977 078 570206
E-mail : sunwalwatersupply@yahoo.com
Head : Than Prasad Gaire, Chairman

Sunwal Water Users and Sanitation Organization (SWUSO) became fully operational in 2008. It is legally registered with the District Water Resource Committee. SWUSO is responsible for water supply for 6 urban wards of Sunwal Municipality which has a total population of 20,000 people. Its present service area has a population density of 147 persons/km^2. It draws water from 3 tubewells. SWUSO has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by DWSS in 2012. SWUSO has a partly developed management information system. Its billing system is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 1,600	
Staff	: 12	
Annual O&M Costs	: NRs3,447,890	
Annual Collections	: NRs2,869,740	Other Revenues: NRs1,614,573
Annual Billings	: NRs2,931,366	
Annual Capital Expenditure	: NRs 370,209	Average capital expenditure/connection/year: NRs231.38

Sunwal Water Users and Sanitation Organization received financial assistance from the Sunwal Municipality, Nawalparasi DDC and DWSSDO for completion of the project, for landslide protection and for expansion and maintenance.

Tariff Structure

(Used in 2012)

Category	All Users ½" connection	Community Taps	
MINIMUM CHARGE	(NRs)	**MINIMUM CHARGE**	(NRs)
(First 10 m^3 or less)	150.00	(First 15 m^3 or less)	150.00
ADDITIONAL CHARGE		**ADDITIONAL CHARGE**	
Consumption (m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
11 – 20	15.00	More than 15 m^3	30.00
21 – 30	16.00		
More than 30 m^3	18.00		

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 440 new connections in 2012. Price of new domestic connection is NRs10,010 payable prior to connection.
3. The urban poor which comprise 20% of the service area population have no special tariff rates or connection charges.

Priority Need of Utility

1. Supply of water as per national quality standard.
2. Consumer awareness of service provider's water supply service.
3. Spring water source from hill.

Consumer Service

Average monthly consumption is only 6.9 m^3 per connection. The water bill averages NRs152.68 per month per connection. Water is available 10 hours a day to most users both in the wet months and the dry months. Average pressure at the tap is 3 meters. Applicants have to wait for 15 days for new connections to be made. Connection fee is paid all at the start. Only 2 water samples were taken during the year and both passed the residual chlorine test. There were 500 consumer complaints recorded and 800 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider has no policy for providing water to the urban poor.

Performance Highlights

SWUSO provides water at only 31 lpcd, the third lowest, to its consumers for an average of 10 hours per day throughout the year and to 57.5% of the population in its service area. NRW of 16.6% is lower than the average with consumption 90% metered and production not metered at all making the NRW value an estimate at best. Financial management needs improvement with operating ratio at 1.18, collection efficiency of 97.9% and accounts receivable equivalent of 1.0 month. Average tariff of NRs22.10/m^3 is third highest yet it is not enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 7.5 is in the highest quartile. SWUSO should provide more water for longer hours and expanding its coverage which will require new water sources. It should be more efficient in managing its finances by lowering O&M expenses. SWUSO has a difficult task of developing new sources and increasing tariff as its tariff is already among the highest.

SUNWAL WATER SUPPLY

Population: 11,500 [1]

Production / Distribution

Average Daily Production	434 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Treated water storage	800 m^3
Service Area [3]	78.0 sq km
Distribution pipes	82.0 km

Service Connections

House (7 persons/HC)	1,600
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**1,600**

Service Indicators

Service Coverage [4]	57.5%
Water availability/day	10 hours in dry months
	10 hours in wet months
Per Capita Consumption [5]	31 l/c/d
Average Tariff	NRs22.10/m^3

Efficiency Indicators

Non-Revenue Water [6]	16.6%
Unit Production Cost	NRs21.75/m^3
Operating Ratio [7]	1.18
Accounts Receivable	1.0 month
Staff/1,000 Connections	7.5

Notes:

[1] The population is for the present area served by the utility.

[2] Only 2 water samples taken in 2012 and both passed the residual chlorine test.

[3] The original area of responsibility was only 68.0 sq km.

[4] The population not served by the water utility draw water from tubewells.

[5] This is for the total consumption which are all domestic.

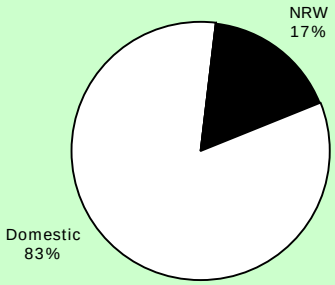
[6] There were 800 leaks repaired in 2012 while 400 meters were either replaced or repaired.

[7] Operating cost does not include debt service of NRs1,095,834.

[8] All use and billings are for house connections.

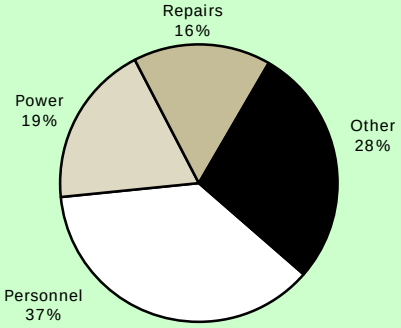
[9] Other costs include chemical and transport expenses.

Data as of 2012.



Annual Water Use[8]
158,490 m^3

Annual Water Billings[8]
NRs2,921,366



Annual O&M Costs[9]
NRs3,447,890

Water Utility

SURUNGA WATER SUPPLY AND SANITATION USERS ASSOCIATION

Address : Ward No.5, Surunga, Jhapa District
Telephone : +977 023 550 095
Fax : +977 023 550 495
E-mail : none
Head : Prem Prasad Dahal, Chairman

Surunga Water Supply and Sanitation Users Association (SWSSUA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. SWSSUA is responsible for water supply for 4 urban and rural wards of Surunga VDC which has a total population of 21,632 people. Its present service area has a population density of 385 persons/km^2. It draws water from two wells both of which are currently operational. It has a master development plan covering 2012 to 2016 and a water safety plan in place since 2009. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2012. SWSSUA has a partially developed management information system while its billing operations are computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 2019	
Staff	: 10	
Annual O&M Costs	: NRs3,075,376	
Annual Collections	: NRs5,938,666	Other Revenues: NRs943,756
Annual Billings	: NRs6,429,262	
Annual Capital Expenditure	: NRs 248,335	Average capital expenditure/connection/year: NRs123.00

Surunga Water Supply and Sanitation Users Association received financial assistance from the local VDC, district development committee and UN-Habitat while the project management office provided technical assistance.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 6 m^3 or less)	120.00
ADDITIONAL CHARGE	
Consumption (m^3)	(NRs/m^3)
7 - 10 m^3	20.00
11 - 20 m^3	28.00
21 - 30 m^3	36.00
31 - 40 m^3	44.00
More than 40 m^3	52.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 250 new connections in 2012. Price of new domestic connection is NRs8,500 payable prior to connection.
3. The urban poor which comprise 12% of the service area population benefits from a micro finance program of SWSSUA allowing 53 households from the poor community to connect to the system.

Priority Need of Utility

1. 24 hours supply of quality water.
2. Provide water to the rest of the wards of Surunga VDC.
3. Government support for new projects.

Consumer Service

Average monthly consumption is about 10.5 m^3 per connection. The water bill averages NRs265.36 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of power generators as backup. Average pressure at the tap is 5 meters. Applicants have to wait for about 2-5 days for new connections to be made. Connection fee is paid all at the start. All 59 water samples taken in 2012 passed the residual chlorine test. No data for consumer complaints were reported and no leaks were reported either during the year. No information was provided on how to make complaints to the service provider. The service provider has a micro finance program to help the urban poor connect to the water system.

Performance Highlights

SWSSUA provides water at only 63 lpcd to its consumers for an average of 24 hours per day throughout the year to 51.1% of the population in its service area. NRW of 9.1% is good at the top quartile with consumption fully metered but not for production rendering the NRW value unreliable. Operating ratio is third lowest at 0.48, accounts receivable still good at 0.9 month although collection efficiency at 92.4% is sixth lowest. Average tariff of NRs25.17/m^3 is second highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 5.0 is a little lower than the average. With a low operating ratio, SWSSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should also meter its production to have a better determination of its losses. SWSSUA should send its staff to training courses to develop their capacity and increase their productivity.

SURUNGA WATER SUPPLY

Population: 17,306 [1]

Production / Distribution

Average Daily Production	770 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter, chlorination
Treated water storage	450 m^3
Service Area [3]	45.0 sq km
Distribution pipes	45.0 km

Service Connections

House (5.5 persons/HC)	2,019
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	**2,019**

Service Indicators

Service Coverage [4]	51.1%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	63 l/c/d
Average Tariff	NRs25.17/m^3

Efficiency Indicators

Non-Revenue Water [6]	9.1%
Unit Production Cost	NRs10.95/m^3
Operating Ratio [7]	0.48
Accounts Receivable	0.9 month
Staff/1,000 Connections	5.0

Notes:

[1] The population is for the present area served by the utility.

[2] All 59 water samples were taken in 2012 passed the residual chlorine test.

[3] This service area expanded from the original area of responsibility of 35.0 sq. km.

[4] The population not served by the water utility draw water from tubewells.

[5] This is for total consumption which is all from domestic connections.

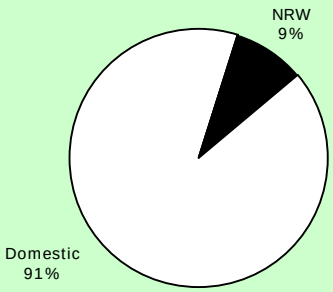
[6] There were no reported leaks repaired and meters replaced nor repaired in 2012.

[7] This does not include debt service of NRs1,199,090.

[8] The only use and billings come from domestic household connections.

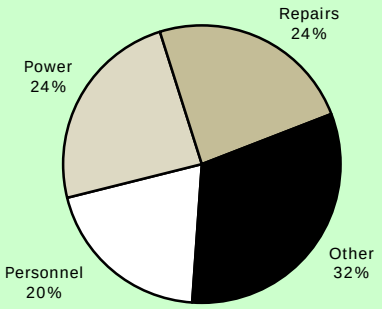
[9] Other costs include chemicals and transport expenses.

Data as of 2012.



Annual Water Use[8]
280,927 m^3

Annual Water Billings[8]
NRs6,429,262



Annual O&M Costs[9]
NRs3,075,376

TANKISINWARI *Utility Profile*

Water Utility

TANKISINWARI WATER USERS AND SANITATION COMMITTEE

Address : Ward No.6, Nemuwa, Tankisinwari, Morang District
Telephone : +977 021 421 100
Fax : none
E-mail : none
Head : Shiva Narayan Mandal, Chairperson

Tankisinwari Water Users and Sanitation Committee (TWUSC) became fully operational in 2008. It is legally registered with the District Development Committee. TWUSC is responsible for water supply for 10 rural wards of Tankisinwari and Hattimuda VDCs which has a total population of 16,000 people. Its present service area has a population density of 734 persons/km^2. It draws water from two wells of which only one is currently operational. It has no master development plan but has a water safety plan in place since 2008. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Six personnel attended training in 2012 spending 1% of the total operating budget. TWUSC has a partially developed management information system. None of its operations is computerized.

Mission Statement

No mission statement.

General Data About Water Utility

Connections	: 828	
Staff	: 7	
Annual O&M Costs	: NRs1,820,500	
Annual Collections	: NRs2,250,000	Other Revenues: NRs150,000
Annual Billings	: NRs2,250,000	
Annual Capital Expenditure	: NRs 250,000	Average capital expenditure/connection/year: NRs301.93

Tankisinwari Water Users and Sanitation Committee has not received any assistance from the government and non government organizations in recent years.

Tariff Structure

(Used in 2012)

Category	All Users
MINIMUM CHARGE	(NRs)
(First 10 m^3 or less)	90.00
COMMODITY CHARGE	
Consumption (m^3)	(NRs/m^3)
More than 10 m^3	14.00

Notes:

1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office or its bill collector.
2. There were 38 new connections in 2012. Price of new domestic connection is NRs2,000 payable prior to connection.
3. The urban poor which comprise 30% of the service area population have no special rates for connection fee or tariff charges.

Priority Need of Utility

1. Additional and deeper wells. 2. Water filter treatment facility. 3. Generator for backup power.

Consumer Service

Average monthly consumption is about 17.3 m^3 per connection. The water bill averages NRs226.45 per month per connection. Water is available 11 hours a day to most users in both wet and dry months. Average pressure at the tap is 5 meters. Applicants have to wait for about one week for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2012. There were only 4 consumer complaints recorded while no leaks were reported during the year. Consumers can complain in person at the water utility office or by telephone. The service provider has no policy for providing water to the poor.

Performance Highlights

TWUSC provides water at only 64 lpcd to its consumers for an average of 11 hours per day throughout the year to 45.9% of the population in its service area. NRW of 23.1% is in the highest quartile. Both production and consumption are fully metered. Financial management is good with operating ratio at 0.81, no accounts receivable and collection efficiency of 100%. Average tariff of NRs13.08/m^3 is just below average but still enough to cover O&M costs. Staff/1000 connections ratio at 8.5 is fourth highest. TWUSC rates low in customer satisfaction and may need to develop new sources to provide more water to its customers, increase coverage and have longer water availability. This may require increasing tariff to cover development costs. Reducing NRW may help augment the needed increase in production.

TANKISINWARI WATER SUPPLY

Population: 7,344 [1]

Production / Distribution

Average Daily Production	613 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Chlorination
Raw water storage	225 m^3
Service Area [3]	10.0 sq km
Distribution pipes	40.0 km

Service Connections

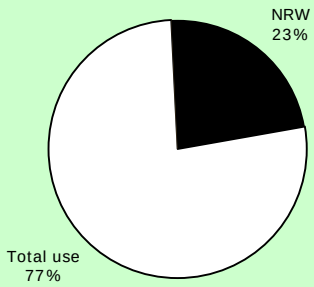
House (9 persons/HC)	816
Public Tap	0
Commercial	0
Industrial	0
Institutional	12
Other	0
Total	**828**

Service Indicators

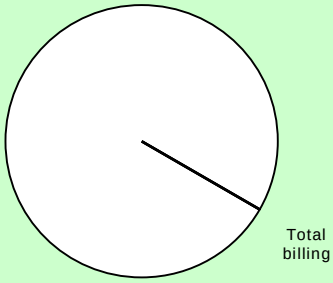
Service Coverage [4]	45.9%
Water availability/day	11 hours in dry months
	11 hours in wet months
Per Capita Consumption [5]	64 l/c/d
Average Tariff	NRs13.08/m^3

Efficiency Indicators

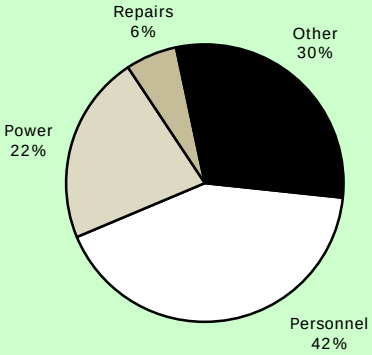
Non-Revenue Water [6]	23.1%
Unit Production Cost	NRs8.14/m^3
Operating Ratio [7]	0.81
Accounts Receivable	Nil
Staff/1,000 Connections	8.5



Annual Water Use[8]
223,600 m^3



Annual Water Billings[8]
NRs2,250,000



Annual O&M Costs[9]
NRs1,820,500

Notes:

[1] The population is for the present area served by the utility.
[2] No water samples were taken in 2012 for residual chlorine test.
[3] The total area of responsibility is 18 sq km.
[4] The population not served by the water utility draw water from tubewells.
[5] This is for total consumption which is mostly domestic.
[6] There were no leaks reported in 2012 while 12 meters were either replaced or repaired.
[7] The water service provider has a debt service of NRs300,000 in 2012.
[8] Institutional use and billing were not reported.
[9] Other costs include transport and miscellaneous expenses.

Data as of 2012.

URLABARI *Utility Profile*

Water Utility

URLABARI WATER SUPPLY USERS AND SANITATION ASSOCIATION

Address : Ward No.3, Urlabari, Morang District
Telephone : +977 021 540 390 or 021 541 890
Fax : none
E-mail : khanepaniurlabari@yahoo.com
Head : Bhupal Sing Rai, Chairman

Urlabari Water Supply Users and Sanitation Association (UWSUSA) became fully operational in 2002. It is legally registered with the District Water Resource Committee. UWSUSA is responsible for water supply for 5 urban and rural wards of Urlabari which has a total population of 43,000 people. Its present service area has a population density of 2,208 persons/km^2. It draws water from 2 tubewells all of which are currently operational. UWSUSA has a master development plan covering 2013 to 2027 and a water safety plan in place since 2010. The service provider has an annual report for 2012 but is not available to the public. It has an audited financial report for the same year. Three personnel attended training provided by DWSS in 2012. UWSUSA has a partly developed management information system and a computerized accounting system.

Mission Statement

No mission statement.

General Data About Water Utility

Connections : 1,963
Staff : 13
Annual O&M Costs : NRs6,522,825
Annual Collections : NRs6,954,248 Other Revenues: NRs4,629,302
Annual Billings : NRs6,954,248
Annual Capital Expenditure : Nil Average capital expenditure/connection/year: Nil

Urlabari Water Supply Users and Sanitation Association received assistance for leak repair from the government (WSSDO) and for management improvement from JICA and Peace Action Group Nepal, a non government organization.

Tariff Structure

(Used in 2012)

Category	½" connection		1" connection	
	House	Comm'l/ind'l	Comm'l/ind'l	
MINIMUM CHARGE	(NRs)	(NRs)	**MINIMUM CHARGE**	(NRs)
(First 10 m^3 or less)	100.00	100.00	(First 50 m^3 or less)	1,750.00
ADDITIONAL CHARGE			**ADDITIONAL CHARGE**	
Consumption (m^3)	(NRs/m^3)	(NRs/m^3)	Consumption (m^3)	(NRs/m^3)
11 - 30 m^3	13.00	18.00	More than 50 m^3	24.00
31 - 50 m^3	17.00	22.00		
More than 50 m^3	19.00	24.00		
	(NRs)	(NRs)		(NRs)
SERVICE CHARGE	10.00/month	25.00/month	**SERVICE CHARGE**	50.00/month

Notes:
1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.
2. There were 307 new connections in 2012. Price of new domestic connection is NRs1,000 payable prior to connection.
3. The poor which comprise 36% of the service area population are provided community taps with connection charge payable in 12 months and tariff charges at subsidized minimum charge of NRs150 for 50 cu m.

Priority Need of Utility

1. Treated water supply. 2. Sufficient water supply. 3. Waste management.

Consumer Service

Average monthly consumption is about 22.2 m^3 per connection. The water bill averages NRs295.22 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of backup generators. Average pressure at the tap is 3.0 meters. Applicants have to wait for only 2 days for new connections to be made. Connection fee is paid all at the start. All 4 water samples taken in 2012 passed the residual chlorine test. There were 15 consumer complaints recorded while 85 leaks were reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides water to the poor through community taps with subsidized tariff.

Performance Highlights

UWSUSA provides water at 81 lpcd to its consumers for an average of 24 hours per day throughout the year to only 41.1% of the population in its service area. NRW of 8.3% is the fifth lowest with both production and consumption fully metered. Financial management is good with operating ratio at 0.94, no accounts receivable and collection efficiency of 100%. Average tariff of NRs13.27/m^3 is just about the average just enough for revenues to cover operating costs. Staff/1000 connections ratio at 6.6 is higher than average. Except for low coverage and per capita consumption, the service provider is doing well. UWSUSA may need to develop additional sources to increase coverage and provide more water to its customers but it may also have to increase tariff to be able to finance the cost of developing new water sources and improving its finances.

URLABARI WATER SUPPLY

Population: 17,667 [1]

Production / Distribution

Average Daily Production	1,565 m^3/d
Groundwater	100%
Surface Water	Nil
Treatment Type [2]	Pressure filter & aeration
Raw water storage	450 m^3
Service Area [3]	8.0 sq km
Distribution pipes	50.0 km

Service Connections

House (9 persons/HC)	1,422
Public Tap	0
Commercial	515
Industrial	0
Institutional	26
Other	0
Total	**1,963**

Service Indicators

Service Coverage [4]	41.1%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption [5]	81 l/c/d
Average Tariff	NRs13.27/m^3

Efficiency Indicators

Non-Revenue Water [6]	8.3%
Unit Production Cost	NRs11.42/m^3
Operating Ratio [7]	0.94
Accounts Receivable	Nil
Staff/1,000 Connections	6.6

Notes:

[1] The population is for the present area served by the utility.

[2] All 4 water samples taken in 2012 passed the residual chlorine test.

[3] This is also the total area of responsibility.

[4] The population not served by the water utility draw water from tubewells and dug wells.

[5] This is for the total consumption.

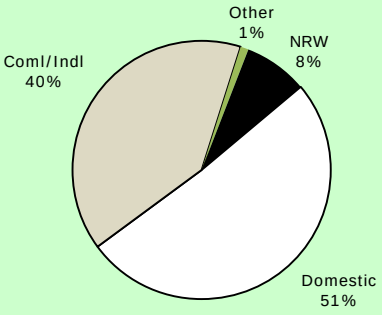
[6] There were 85 leaks repaired in 2012 while 115 meters were either replaced or repaired.

[7] The water service provider has no debt service in 2012.

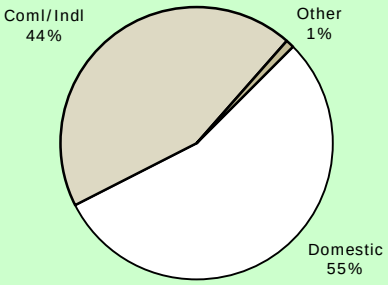
[8] Other use and billings are for institutional connections.

[9] Other costs include transport and chemicals expenses.

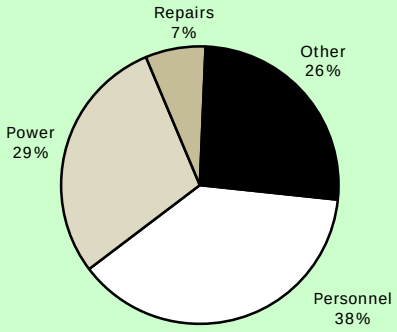
Data as of 2012.



Annual Water Use[8]
571,225 m^3



Annual Water Billings[8]
NRs6,954,248



Annual O&M Costs[9]
NRs6,522,825

LAHMEYER IDP CONSULT

Project: Sector Efficiency Improvement Unit Consultancy Services (SEIUC)
Client: Government of Nepal - Ministry of Urban Development (MoUD)

The Ministry of Urban Development, as the lead WASH sector agency, established the Sector Efficiency Improvement Unit under the Water and Environment Division of the MoUD in 2009 and institutionalized it as a permanent unit in June 2012.

The Nepal WASH sector objective as formulated by the Government of Nepal (NPC 2010) states as its aim *"to improve public health and increase living standard of the people by providing safe, reliable and sustainable drinking water and sanitation services"*.

The Nepal WASH sector is characterized by a large number of projects implemented by a diverse set of agencies. It is a vibrant, pro-active sector, which needs harnessing of all energies through a coordinated and harmonized process. On behalf of MoUD SEIU has been providing the secretariat function to WASH sector coordination, consultation and review activities.

To arrive at a transparent, accountable, service-oriented and responsive WASH Sector, SEIU aims to:

- engender consultation through inclusive platforms for harmonizing stakeholders' inputs and approaches;
- suggest measures to achieve better coordination, uniformity and more effective use of resources and the adoption of a common sector-wide approach at national and district level;
- support reviews of (program) policies and priorities, institutional structures, subsidy arrangements and implementation modalities and
- increasingly manage learning processes to enhance sector knowledge.

SEIU receives Technical Assistance from SEIUC provided by Lahmeyer IDP Consult Inc. of Manila, in collaboration with Total Management Services (TMS) of Kathmandu.

Grant financing is provided by ADB under Second Small Towns Water Supply and Sanitation Project.

Specifically, SEIUC services will address

(1) policy formulation and implementation,
(2) operating efficiency and management performance, and
(3) WASH sector coordination.

Outputs during 2013 and 2014

SEIUC will deliver the following major outputs in raising effectiveness and equity of service delivery, through:

- Assisting SEIU in drafting a comprehensive WASH Act, refining policies in water supply and sanitation sector and facilitating implementation and compliance. This will include support for sector assessment, implementation of water safety plans, development and testing of guidelines on output-based aid, and standards and policies for waste water management;
- Efficiency improvement of water supply and sanitation service providers (mostly in small towns) through (capacity development) for benchmarking, performance improvement planning and developing business plans. The key performance indicators will focus on consumer satisfaction, water resources, revenue collection and human resources.
- Contribution to sector coordination and harmonization of implementation procedures through a Sector-wide Approach (SWAP) and the formulation of a WASH Sector Development Plan linked to Medium Term Investment Plan.

SEIUC Office
DWSS, Panipokhari, Kathmandu
Phone: +977 1 4424168,
Email: wash.seiuc@gmail.com