

SEAWUN Benchmarking Survey for 2003 - Base Data

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Water Utility: Hai Phong Water Supply Company (HPWSC)

Hai Phong, Hai Phong, Vietnam

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Services Provided: Piped water, . . .
Utility Type: . . . State Owned Enterprise, . . .

Private Sector Involvement: None,

Source of Raw Water: . . Direct river abstraction, . .

Treatment Method: . Disinfection, Filtration, . . .

Water Supply System description:

Production capacity = 176,000 m3/day		Distribution network = 1,300 km		Storage capacity = 23,000 m3	
Area (sq km)		Area of Responsibility		Present Service Area	
79		829,000		56	
Population		829,000		650,000	
No. of Towns = 12		Population served = 614,000			
<u>No. of connections:</u>		Domestic (Households) = 136,500		Non Domestic = 2,500	
		Typical service connection length = 4 m		Total Connections = 139,000	
				Connections with operating meter = 137,500	
System input volumes:		Produced by W.U. = 42.5 million m3/year		Bulk water imported = zero	
Water consumption:		Metered cons. = 30.0 million m3/year		% Unmetered cons. = 30% of metered cons.	
				Ave. meter inaccuracy = 2% of metered cons.	
Water Sales:		Domestic = 22.5 million m3/year		Non Domestic = 7.5 million m3/year	
				Bulk Water sales = zero	
<u>System Performance:</u>		No. of connections with intermittent supply = 14,560		Typical duration of supply = 24.0 hours / day	
		No. of pipe breaks in distribution system = 600 / year		Typical water pressure in mains = 25 m.	
Chlorine Residuals:		Tests required = 32,000 / year		Tests carried out = 32,000 / year	
				Tests passed = 32,000 / year	

Human Resources (Staff)

<u>Type of employment:</u> Permanent staff: salaried Government employees,					
<u>No. of staff (FTE):</u>		Corporate Services = 175		Water Supply = 596	
				Other = zero	
				Total = 771	
<u>Staff Training:</u>		No. Trained = 350 / year		Training days = 867 / year	
				Training costs = 0.76% of total operating budget	

Customer information

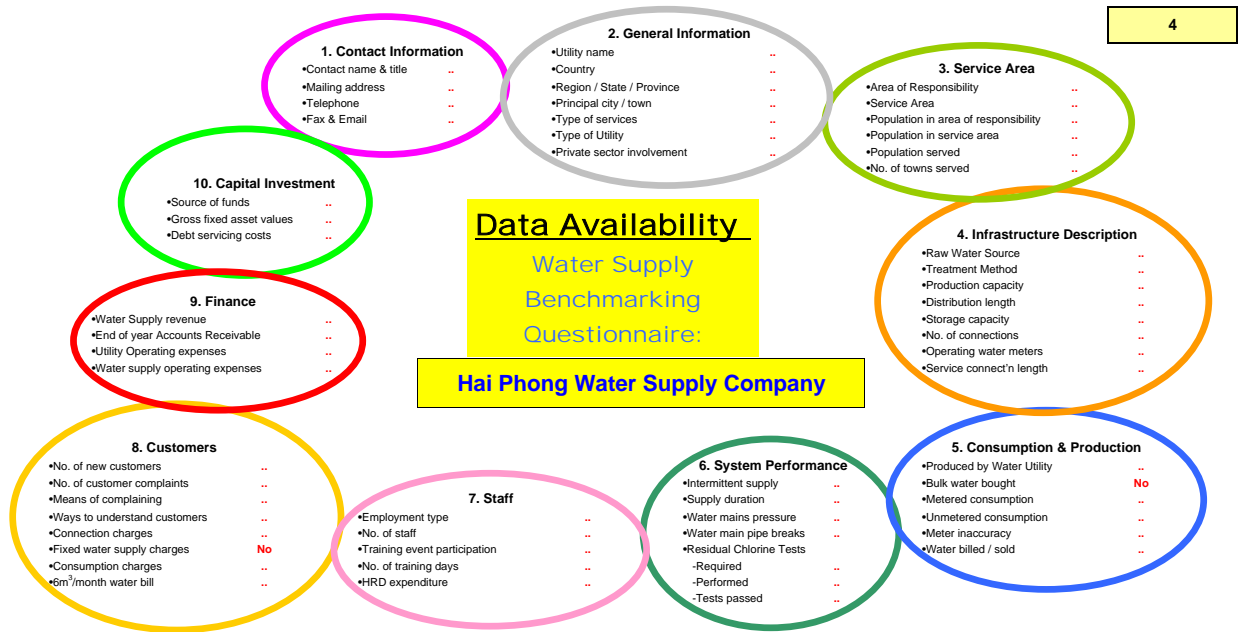
Customer interaction:		New connections = 8,300 / year		Customer complaints = 112 / year	
Complaint method:		In person, By telephone, , By letter,			
Understanding customers by:		Customer interactions, Responding to complaints, . .			

Charges & Fees

<u>Typical connection charge:</u>		Domestic = 750,000VND / conn. (48 US\$ / conn.)		Non Domestic = 2,500,000VND / conn. (159 US\$ / conn.)	
<u>Fixed water charge:</u>		Domestic = N/A		Non Domestic = N/A	
		N/A		N/A	
<u>Water consumption tariff</u> (typical of all towns and in each category):		Tariff Block 1		Tariff Block 2	
		Tariff Block 3		Tariff Block 4	
Domestic	From - To (m ³)	0 - 4		4	
	Price (VND / m ³)	2,500		3,000	
	(US\$ / m ³)	\$0.16		\$0.19	
Non Domestic	From - To (m ³)				
	Price (VND / m ³)	5,150			
	(US\$ / m ³)	\$0.33			
Bulk Water	From - To (m ³)				
	Price (VND / m ³)	3,700			
	(US\$ / m ³)	\$0.24			
		Water bill for household consuming 6 m ³ /month = 16,000 VND / month (1.01 US\$ / month)			

Finances

<u>Revenue:</u>					Year end Accounts Receivable
VND / year		Water Sales	Other water related	Subsidies & grants	Total
US\$ / year		88,400,000,000	7,700,000,000	zero	96,100,000,000
		\$5,605,936	\$488,300	zero	\$6,094,236
<u>Operating Expenses:</u>					
VND / year		Water supply	Other services	Company Overhead	Total
US\$ / year		77,500,000,000	zero	8,600,000,000	86,100,000,000
		\$4,914,706	zero	\$545,374	\$5,460,080
<u>Water Supply Operating breakup:</u>					
VND / year		Labor	Electricity	Chemicals & materials	Contracted out
US\$ / year		17,900,000,000	12,000,000,000	3,000,000,000	zero
		\$1,135,139	\$760,987	\$190,247	zero
<u>Investment funds source:</u> Own internal funds, , Loan from Government Bank, . . .					
<u>Fixed Assets value:</u>					Debt Servicing Costs
VND		Water supply	Other services	Company Overhead	Total
US\$		422,000,000,000	zero	4,000,000,000	426,000,000,000
		\$26,761,367	zero	\$253,662	\$27,015,029
					6,000,000,000
					\$380,493



Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	94.5%	(12 / 45)
Meter coverage (% with operating water meter)	98.9%	(45 / 46)
Customer complaints / 1000 connections	0.8	(39 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	100.0%	(1 / 47)
Residual Chlorine tests passed (%)	100.0%	(1 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	2.6	(2 / 26)



Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	5.5	(15 / 38)
Investment in staff training (days / staff)	1.1	(14 / 33)
Ave. cost of employment / staff (% of per capita GNI)	307%	(11 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	1.03	(29 / 43)
Unit water cost (US\$ / m ³ of system input)	\$0.13	(26 / 43)
Water system asset value / Prod'n capacity (US\$ / m ³ /day)	\$152	(22 / 35)
Debt servicing ratio (% of total operating revenue)		

Financial Indicators: Annual expenses & revenue			
Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	1.03	Overhead expenses / Total Operating expenses ratio	0.10
Operating Cost Coverage (total revenue)	1.12	Labour costs / Water operating expenses	0.23
		Electricity costs / Water operating expenses	0.16
		Chemical & other materials costs / Water operating expenses	0.04
		Contracted out services costs / Water operating expenses	#N/A
Revenue			
Water sales revenue / Total revenue ratio	0.92	Unit water cost (US\$ / m ³ of metered cons.)	0.18
Subsidies & Grants / Total revenue ratio	0.00	(US\$ / m ³ of system input)	0.13
Revenue Collection period (months)	0.02	Debt servicing ratio (% of total operating revenue)	6.2%
Unit water price - ave. (US\$ / m ³ of metered cons.)	0.19		

Fixed Assets	
Corporate Fixed Assets / Total Fixed Assets	0.01
Water system asset values	
Asset value / Total water related assets	0.99
Asset value / Prod'n capacity (US\$ / m ³ /day)	152
Asset value / pipe length (US\$ / m. pipe)	21
Asset value / Customer (US\$ / conn.)	193

System Input	
Production capacity utilization (%)	66%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	190
(m ³ /connection/month)	25.0
System Input / Distribution ratio (m ³ /day per km pipe)	90.0
System Input / Storage ratio (m ³ /day per m ³ storage)	5.1
Supply Continuity (% customers with continuous supply)	90%
Supply Continuity (% of time water available)	100%

Hai Phong Vietnam Water Supply

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OPI Ranking = 26 / 47

Human Resource Indicators			
Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	23%	Staff Training participation rate (% staff)	45%
Water supply staff ratio (% of total FTE staff)	77%	Staff Training duration rate (days / staff)	1.1
Total water related staff / 1000 connections	5.50	Investment in staff training (% of direct labour costs)	3.29%
Direct water supply staff		Investment in staff training (% of total operating costs)	0.76%
Staff / 1000 connections	4.30	Human Resources Costs	
Staff / 1000 m ³ /day system input	5.10	Ave. cost of employment / staff (% of per capita GNI)	3.07
Staff / 100 km of pipework	45.80	Contracting out services / in-house Labour costs ratio	#N/A

Distribution	
Distribution / customer (m. pipe per connection)	9.4
Storage / customer (m ³ per connection)	0.20
Residual Chlorine	
Sampling compliance (%)	100%
Tests passed (%)	100%
Non Revenue Water (UFW)	
% of System Input	29%
m ³ / km / day	26.3
m ³ / connection / day	0.25
NRW adjusted for continuous supply (% of System Input)	29%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	28%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	2%
Total Unmetered Consumption (% of metered cons.)	30%
Infrastructure Leakage Index [ILI]	2.60
Mains failures ratio (breaks / km pipe / year)	0.50

Water consumption			
Bulk water exported (% of total metered cons.)			0%
Average domestic water charges (% of per capita GNI)			2%
Metered consumption rate	- Domestic (litres/person/day)	100	
	- Total Cons. (litres/person/day)	134	
	(m ³ /conn/month)	18	
Total consumption - metered & unmetered	(litres/person/day)	174.00	
	(m ³ /conn/month)	23.00	
Domestic share of total metered consumption (%)			75%
Non Domestic share of total metered consumption (%)			25%

Demography	
Average town / city size (persons / town)	69,083
Population density in area of responsibility (persons/sq.km)	10,547
Population density in existing service area (persons/sq.km)	11,525
Average Household size (persons / domestic connection)	5
Customer Interactions	
Customer complaints / 1000 connections	1

Connections	
Service Coverage in area of responsibility (%)	74%
Service Coverage in existing service area (%)	95%
Domestic / Non-Domestic connections ratio	54.6
Domestic / Non-Domestic consumption rate ratio	3.0
New connection growth rate (% / year)	6%
New domestic connection cost (US\$ / connection)	48
New domestic connections (% of per capita GNI)	2%
Meter coverage (% with operating water meter)	99%
Billed unmetered consumption (% of metered cons.)	0%

Water Sales & Production Information

Hai Phong Water Supply Company

