

**Water Utility: Sibu Water Board (SWB)**

Sibu, Central Region, Sarawak, Malaysia

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**Services Provided:** Piped water, , , ,

**Utility Type:** , , Statutory organisation, , , ,

**Private Sector Involvement:** , Service Contract, , , , ,

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

**Treatment Method:** , Disinfection, Filtration, Flocculation and sedimentation, , , Other: Flouridation

**Water Supply System description:**

Production capacity = 120,650 m3/day		Distribution network = 874 km		Storage capacity = 57,648 m3	
Area of Responsibility		Present Service Area			
Area (sq km)	1,950	1,658			
Population	256,933	238,535			
No. of Towns = 1		Population served = 229,471			
<u>No. of connections:</u>		Domestic (Households) = 37,699		Non Domestic = 5,671	
Typical service connection length = 9 m		Connections with operating meter = 43,370		Total Connections = 43,370	
System input volumes:	Produced by W.U. = 29.3 million m3/year		Bulk water imported = zero		
Water consumption:	Metered cons. = 21.2 million m3/year		% Unmetered cons. = 18% of metered cons.		Ave. meter inaccuracy = 10% of metered cons.
Water Sales:	Domestic = 14.1 million m3/year		Non Domestic = 7.1 million m3/year		Bulk Water sales = zero
<u>System Performance:</u>	No. of connections with intermittent supply = 2,270		Typical duration of supply = 24.0 hours / day		
	No. of pipe breaks in distribution system = 329 / year		Typical water pressure in mains = 30 m.		
Chlorine Residuals:	Tests required = 33,774 / year		Tests carried out = 33,774 / year		Tests passed = 33,774 / year

**Human Resources (Staff)**

<u>Type of employment:</u>	Permanent staff: salaried Government employees, Permanent staff: with contract, Casual/part-time: contract staff, Casual/part-time: wages, Contracted out to				
<u>No. of staff (FTE):</u>	Corporate Services = 75	Water Supply = 131	Other = zero	Total = 206	
<u>Staff Training:</u>	No. Trained = 65 / year	Training days = 317 / year	Training costs = 1.00% of total operating budget		

**Customer information**

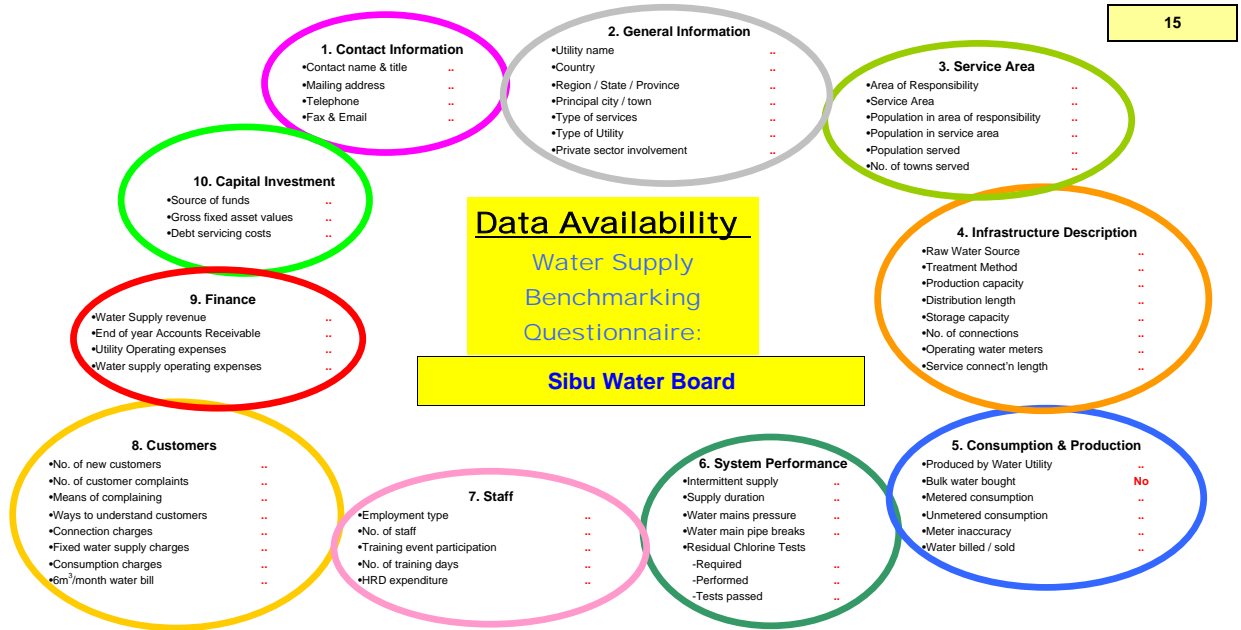
Customer interaction:	New connections = 2,254 / year	Customer complaints = 3,029 / year
Complaint method:	In person, By telephone, By email, By letter,	
Understanding customers by:	Customer interactions, Responding to complaints, Surveys, questionnaires, etc., Market research,	

**Charges & Fees**

<u>Typical connection charge:</u>		Domestic = 1,075MYR / conn. (283 US\$ / conn.)		Non Domestic = 1,675MYR / conn. (441 US\$ / conn.)	
<u>Fixed water charge:</u> estic = 6MYR / month (2 US\$ / conn.)		Non Domestic = 6MYR / month (2 US\$ / conn.)		Bulk water sales = 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 <sup>3</sup> )	0 - 15	15 - 50	50	
	Price (MYR / m3)	0	1	1	
	(US\$ / m <sup>3</sup> )	\$0.13	\$0.19	\$0.20	
Non Domestic	From - To (m <sup>3</sup> )	0 - 25	25		
	Price (MYR / m3)	1	1		
	(US\$ / m <sup>3</sup> )	\$0.22	\$0.28		
Bulk Water	From - To (m <sup>3</sup> )				
	Price (MYR / m3)				
	(US\$ / m <sup>3</sup> )				
Water bill for household consuming 6 m <sup>3</sup> /month =				5 MYR / month	(1.30 US\$ / month)

**Finances**

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable	
	MYR / year	16,900,000	2,860,000	760,000	20,520,000	3,230,000
	US\$ / year	\$4,448,363	\$752,800	\$200,045	\$5,401,208	\$850,190
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total		
	MYR / year	16,740,000	zero	5,510,000	22,250,000	
	US\$ / year	\$4,406,249	zero	\$1,450,324	\$5,856,573	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses	
	MYR / year	930,000	1,630,000	1,260,000	270,000	3,790,000
	US\$ / year	\$244,792	\$429,043	\$331,653	\$71,069	\$997,592
<u>Investment funds source:</u> Own internal funds, Grant from Government or ODA project, , , , Other method: Loans from both State and Federal Government						
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs	
	MYR	196,490,000	zero	17,950,000	214,440,000	4,690,000
	US\$	\$51,719,464	zero	\$4,724,741	\$56,444,205	\$1,234,487

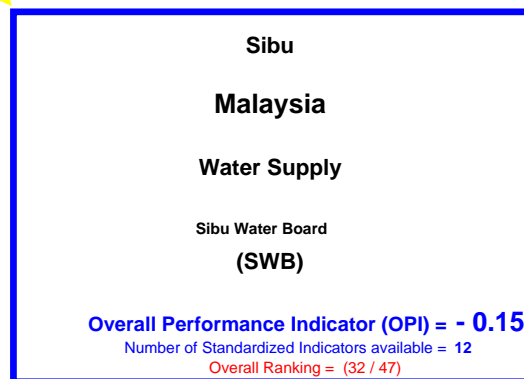


## Calculation of Overall Performance Indicator (OPI)

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Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	96.2%	(11 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	69.8	(23 / 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]	6.5	(6 / 26)



Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	4.7	(9 / 38)
Investment in staff training (days / staff)	1.5	(12 / 33)
Ave. cost of employment / staff (% of per capita GNI)	31%	(37 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	0.76	(40 / 43)
Unit water cost (US\$ / m <sup>3</sup> of system input)	\$0.21	(38 / 43)
Water system asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	\$429	(33 / 35)
Debt servicing ratio (% of total operating revenue)		

**Financial Indicators: Annual expenses & revenue**

Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	0.76	Overhead expenses / Total Operating expenses ratio	0.25
Operating Cost Coverage (total revenue)	0.92	Labour costs / Water operating expenses	0.06
		Electricity costs / Water operating expenses	0.10
		Chemical & other materials costs / Water operating expenses	0.08
		Contracted out services costs / Water operating expenses	0.02
Revenue			
Water sales revenue / Total revenue ratio	0.82	Unit water cost (US\$ / m <sup>3</sup> of metered cons.)	0.26
Subsidies & Grants / Total revenue ratio	0.04	(US\$ / m <sup>3</sup> of system input)	0.21
Revenue Collection period (months)	2.29	Debt servicing ratio (% of total operating revenue)	22.9%
Unit water price - ave. (US\$ / m <sup>3</sup> of metered cons.)	0.21		

**Fixed Assets**

Corporate Fixed Assets / Total Fixed Assets	0.08
Water system asset values	
Asset value / Total water related assets	0.92
Asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	429
Asset value / pipe length (US\$ / m. pipe)	59
Asset value / Customer (US\$ / conn.)	1,193

**System Input**

Production capacity utilization (%)	67%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	350
(m <sup>3</sup> /connection/month)	56.0
System Input / Distribution ratio (m <sup>3</sup> /day per km pipe)	92.0
System Input / Storage ratio (m <sup>3</sup> /day per m <sup>3</sup> storage)	1.4
Supply Continuity (% customers with continuous supply)	95%
Supply Continuity (% of time water available)	100%

**Sibu  
Malaysia  
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**OPI Ranking = 32 / 47**

**Human Resource Indicators**

Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	36%	Staff Training participation rate (% staff)	32%
Water supply staff ratio (% of total FTE staff)	64%	Staff Training duration rate (days / staff)	1.5
Total water related staff / 1000 connections	4.70	Investment in staff training (% of direct labour costs)	18.00%
Direct water supply staff		Investment in staff training (% of total operating costs)	1.00%
Staff / 1000 connections	3.00		
Staff / 1000 m <sup>3</sup> /day system input	1.60	Human Resources Costs	
Staff / 100 km of pipework	15.00	Ave. cost of employment / staff (% of per capita GNI)	0.31
		Contracting out services / in-house Labour costs ratio	0.30

**Distribution**

Distribution / customer (m. pipe per connection)	20.2
Storage / customer (m <sup>3</sup> per connection)	1.30
Residual Chlorine	
Sampling compliance (%)	100%
Tests passed (%)	100%
Non Revenue Water (UFW)	
% of System Input	28%
m <sup>3</sup> / km / day	25.4
m <sup>3</sup> / connection / day	0.51
NRW adjusted for continuous supply (% of System Input)	28%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	8%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	10%
Total Unmetered Consumption (% of metered cons.)	18%
Infrastructure Leakage Index [ILI]	6.50
Mains failures ratio (breaks / km pipe / year)	0.40

**Water consumption**

Bulk water exported (% of total metered cons.)	0%
Average domestic water charges (% of per capita GNI)	0%
Metered consumption rate	
- Domestic (litres/person/day)	169
- Total Cons. (litres/person/day)	253
(m <sup>3</sup> /conn/month)	41
Total consumption - metered & unmetered	
(litres/person/day)	299.00
(m <sup>3</sup> /conn/month)	48.00
Domestic share of total metered consumption (%)	67%
Non Domestic share of total metered consumption (%)	33%

**Demography**

Average town / city size (persons / town)	256,933
Population density in area of responsibility (persons/sq.km)	132
Population density in existing service area (persons/sq.km)	144
Average Household size (persons / domestic connection)	6

**Customer Interactions**

Customer complaints / 1000 connections	70
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**Connections**

Service Coverage in area of responsibility (%)	89%
Service Coverage in existing service area (%)	96%
Domestic / Non-Domestic connections ratio	6.6
Domestic / Non-Domestic consumption rate ratio	2.0
New connection growth rate (% / year)	5%
New domestic connection cost (US\$ / connection)	283
New domestic connections (% of per capita GNI)	1%
Meter coverage (% with operating water meter)	100%
Billed unmetered consumption (% of metered cons.)	0%

# Water Sales & Production Information

## Sibu Water Board

