

Water Utility: PDAM Bandarmasih Banjarmasin (Banjarmasin)

Banjarmasin, South Kalimantan, Indonesia

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Services Provided: Piped water, Wastewater, , ,

Utility Type: , , , State Owned Enterprise, , ,

Private Sector Involvement: None, , , , ,

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

Treatment Method: , Disinfection, Filtration, Flocculation and sedimentation, , ,

Water Supply System description:

Production capacity = 92,448 m3/day		Distribution network = 836 km		Storage capacity = 23,500 m3	
Area (sq km)		Area of Responsibility		Present Service Area	
Population		591,615		429,845	
No. of Towns = 2		Population served = 400,145			
<u>No. of connections:</u>		Domestic (Households) = 65,029		Non Domestic = 1,396	
Typical service connection length = 12 m		Connections with operating meter = 66,425		Total Connections = 66,425	
System input volumes:	Produced by W.U. = 28.9 million m3/year	Bulk water imported = zero			
Water consumption:	Metered cons. = 19.4 million m3/year	% Unmetered cons. = 0% of metered cons.		Ave. meter inaccuracy = 0% of metered cons.	
Water Sales:	Domestic = 17.4 million m3/year	Non Domestic = 1.9 million m3/year		Bulk Water sales = zero	
<u>System Performance:</u>	No. of connections with intermittent supply = 5,314		Typical duration of supply = 23.5 hours / day		
	No. of pipe breaks in distribution system = 3,844 / year		Typical water pressure in mains = 20 m.		
Chlorine Residuals:	Tests required = 1,928 / year	Tests carried out = 508 / year		Tests passed = 454 / year	

Human Resources (Staff)

<u>Type of employment:</u>	Permanent staff: salaried Government employees, , Casual/part-time: contract staff, , ,				
<u>No. of staff (FTE):</u>	Corporate Services = 54	Water Supply = 20	Other = zero	Total = 74	
<u>Staff Training:</u>	No. Trained = 74 / year	Training days = 304 / year	Training costs = 0.35% of total operating budget		

Customer information

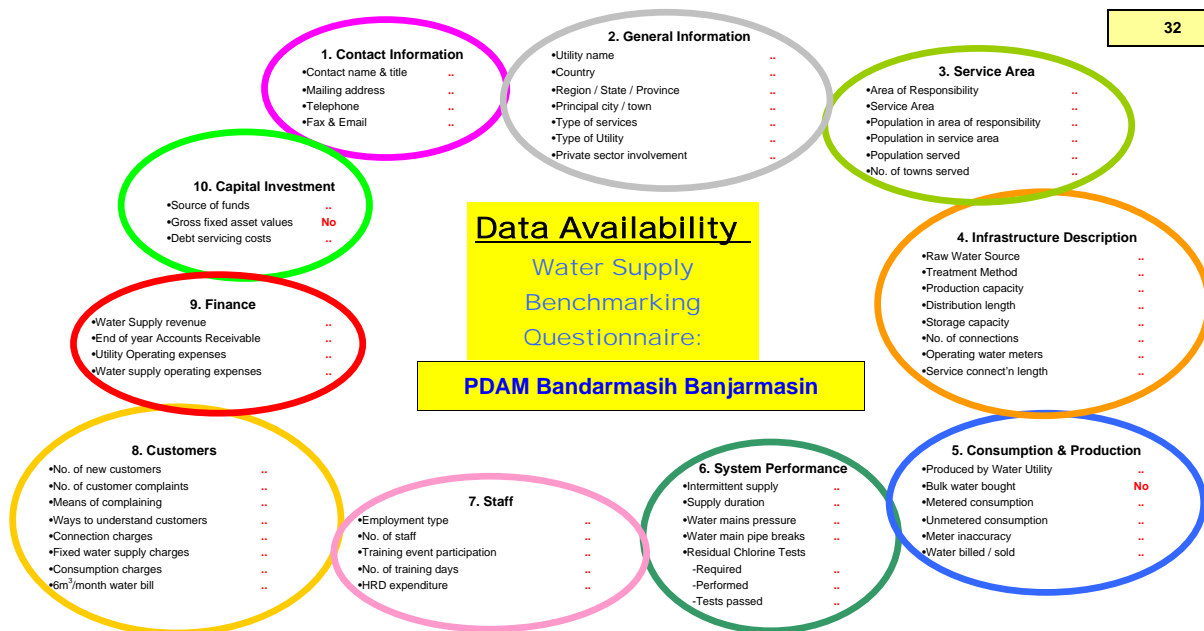
Customer interaction:	New connections = 6,995 / year	Customer complaints = 27,083 / year
Complaint method:	In person, By telephone, , , Other method: Short message service (SMS)	
Understanding customers by:	Customer interactions, , Surveys, questionnaires, etc., ,	

Charges & Fees

<u>Typical connection charge:</u>	Domestic = 780,000IDR / conn. (85 US\$ / conn.)		Non Domestic = 2,400,000IDR / conn. (262 US\$ / conn.)		
<u>Fixed water charge:</u>	= 11,000IDR / month (1 US\$ / conn.)		Non Domestic = 35,000IDR / month (4 US\$ / conn.)		Bulk water sales = 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 - 11	11 - 21	21	
	Price (IDR / m ³)	1,210	2,180	3,270	
	(US\$ / m ³)	\$0.13	\$0.24	\$0.36	
Non Domestic	From - To (m ³)	0 - 11	11 - 21	21	
	Price (IDR / m ³)	2,020	3,380	4,410	
	(US\$ / m ³)	\$0.22	\$0.37	\$0.48	
Bulk Water	From - To (m ³)				
	Price (IDR / m ³)				
	(US\$ / m ³)				
Water bill for household consuming 6 m ³ /month =				18,000 IDR / month	(1.97 US\$ / month)

Finances

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable
IDR / year	44,870,630,000	328,570,000	zero	45,199,200,000	10,100,830,000
US\$ / year	\$4,898,594	\$35,870	zero	\$4,934,464	\$1,102,723
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total	
IDR / year	26,254,220,000	zero	zero	26,254,220,000	
US\$ / year	\$2,866,213	zero	zero	\$2,866,213	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
IDR / year	2,766,970,000	7,774,350,000	15,712,900,000	zero	zero
US\$ / year	\$302,074	\$848,737	\$1,715,401	zero	zero
<u>Investment funds source:</u>	Own internal funds, Grant from Government or ODA project, , , ,				
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs
IDR	140,498,260,000	zero	zero	140,498,260,000	12,609,330,000
US\$	\$15,338,405	zero	zero	\$15,338,405	\$1,376,579



Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	93.1%	(13 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	407.7	(5 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	97.9%	(37 / 47)
Residual Chlorine tests passed (%)	89.4%	(26 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	15.1	(15 / 26)

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Overall Performance Indicator (OPI) = 0.83
Number of Standardized Indicators available = 12
Overall Ranking = (2 / 47)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	1.1	(1 / 38)
Investment in staff training (days / staff)	4.1	(4 / 33)
Ave. cost of employment / staff (% of per capita GNI)	504%	(4 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	1.71	(4 / 43)
Unit water cost (US\$ / m ³ of system input)	\$0.10	(18 / 43)
Water system asset value / Prod'n capacity (US\$ / m ³ /day)	\$166	(23 / 35)
Debt servicing ratio (% of total operating revenue)		

Financial Indicators: Annual expenses & revenue

Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	1.71	Overhead expenses / Total Operating expenses ratio	#N/A
Operating Cost Coverage (total revenue)	1.72	Labour costs / Water operating expenses	0.11
		Electricity costs / Water operating expenses	0.30
		Chemical & other materials costs / Water operating expenses	0.60
		Contracted out services costs / Water operating expenses	#N/A
Revenue		Unit water cost	(US\$ / m ³ of metered cons.) 0.15
Water sales revenue / Total revenue ratio	0.99		(US\$ / m ³ of system input) 0.10
Subsidies & Grants / Total revenue ratio	#N/A	Debt servicing ratio (% of total operating revenue)	27.9%
Revenue Collection period (months)	2.70		
Unit water price - ave. (US\$ / m ³ of metered cons.)	0.25		

Fixed Assets

Corporate Fixed Assets / Total Fixed Assets	#N/A
Water system asset values	
Asset value / Total water related assets	#N/A
Asset value / Prod'n capacity (US\$ / m ³ /day)	166
Asset value / pipe length (US\$ / m. pipe)	18
Asset value / Customer (US\$ / conn.)	231

System Input

Production capacity utilization (%)	86%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	198
(m ³ /connection/month)	36.0
System Input / Distribution ratio (m ³ /day per km pipe)	95.0
System Input / Storage ratio (m ³ /day per m ³ storage)	3.4
Supply Continuity (% customers with continuous supply)	92%
Supply Continuity (% of time water available)	98%

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OPI Ranking = 2 / 47

Human Resource Indicators

Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	73%	Staff Training participation rate (% staff)	100%
Water supply staff ratio (% of total FTE staff)	27%	Staff Training duration rate (days / staff)	4.1
Total water related staff / 1000 connections	1.10	Investment in staff training (% of direct labour costs)	3.32%
Direct water supply staff		Investment in staff training (% of total operating costs)	0.35%
Staff / 1000 connections	0.30	Human Resources Costs	
Staff / 1000 m ³ /day system input	0.30	Ave. cost of employment / staff (% of per capita GNI)	5.04
Staff / 100 km of pipework	2.40	Contracting out services / in-house Labour costs ratio	#N/A

Distribution

Distribution / customer (m. pipe per connection)	12.6
Storage / customer (m ³ per connection)	0.40
Residual Chlorine	
Sampling compliance (%)	26%
Tests passed (%)	89%
Non Revenue Water (UFW)	
% of System Input	33%
m ³ / km / day	31.7
m ³ / connection / day	0.40
NRW adjusted for continuous supply (% of System Input)	34%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	0%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	0%
Total Unmetered Consumption (% of metered cons.)	1%
Infrastructure Leakage Index [ILI]	15.10
Mains failures ratio (breaks / km pipe / year)	4.60

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)	119
- Total Cons. (litres/person/day)	132
(m ³ /conn/month)	24
Total consumption - metered & unmetered	
(litres/person/day)	132.00
(m ³ /conn/month)	24.00
Domestic share of total metered consumption (%)	90%
Non Domestic share of total metered consumption (%)	10%

Demography

Average town / city size (persons / town)	295,808
Population density in area of responsibility (persons/sq.km)	8,217
Population density in existing service area (persons/sq.km)	7,541
Average Household size (persons / domestic connection)	6

Customer Interactions

Customer complaints / 1000 connections	408
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Connections

Service Coverage in area of responsibility (%)	68%
Service Coverage in existing service area (%)	93%
Domestic / Non-Domestic connections ratio	46.6
Domestic / Non-Domestic consumption rate ratio	9.1
New connection growth rate (% / year)	11%
New domestic connection cost (US\$ / connection)	85
New domestic connections (% of per capita GNI)	2%
Meter coverage (% with operating water meter)	100%
Billed unmetered consumption (% of metered cons.)	-1%

Water Sales & Production Information

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