

**Water Utility: PDAM Tirta Sakti Kab. Kerinci (PDAM Tirta Sakti)**

Kabupaten Kerinci, Jambi, Indonesia

**Contact Details:** Division head of planning : , Rais  
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**Services Provided:** Piped water, , , ,  
**Utility Type:** , Government with separate reporting for WS&S, Statutory organisation, , , ,

**Private Sector Involvement:** None, , , , ,

**Source of Raw Water:** , , Direct river abstraction, , Other: Spring and Lake

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

**Water Supply System description:**

Production capacity = 30,118 m3/day		Distribution network = 300 km		Storage capacity = N/A
Area (sq km)		Area of Responsibility	Present Service Area	
Population		42	20	
		310,757	256,666	
No. of Towns = 1		Population served = 146,125		
<u>No. of connections:</u>		Domestic (Households) = 27,715	Non Domestic = 951	Total Connections = 28,666
		Typical service connection length = 12 m		Connections with operating meter = 28,666
System input volumes:	Produced by W.U. = 6.4 million m3/year	Bulk water imported = zero		
Water consumption:	Metered cons. = 4.3 million m3/year	% Unmetered cons. = 30% of metered cons.	Ave. meter inaccuracy = 5% of metered cons.	
Water Sales:	Domestic = 3.9 million m3/year	Non Domestic = 0.5 million m3/year	Bulk Water sales = zero	
<u>System Performance:</u>	No. of connections with intermittent supply = 3,000		Typical duration of supply = 20.0 hours / day	
	No. of pipe breaks in distribution system = 4,500 / year		Typical water pressure in mains = 7 m.	
Chlorine Residuals:	Tests required = 430 / year	Tests carried out = 2,500 / year	Tests passed = 2,000 / year	

**Human Resources (Staff)**

<u>Type of employment:</u>	, Permanent staff: with contract, , , ,			
<u>No. of staff (FTE):</u>	Corporate Services = 177	Water Supply = 55	Other = zero	Total = 230
<u>Staff Training:</u>	No. Trained = 15 / year	Training days = 12 / year	Training costs = 0.17% of total operating budget	

**Customer information**

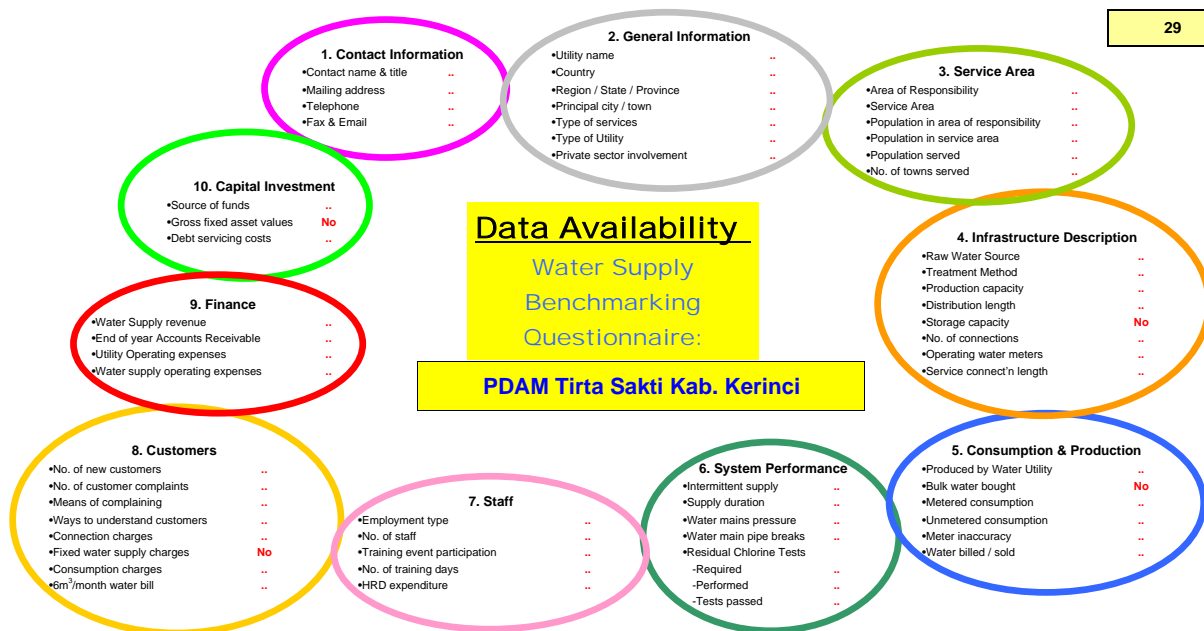
Customer interaction:	New connections = 1,000 / year	Customer complaints = 3,000 / year
Complaint method:	In person, By telephone, , , ,	
Understanding customers by:	Customer interactions, Responding to complaints, , , ,	

**Charges & Fees**

<u>Typical connection charge:</u>	Domestic = 400,000IDR / conn. (44 US\$ / conn.)		Non Domestic = 400,000IDR / conn. (44 US\$ / conn.)		
<u>Fixed water charge:</u>	Domestic = N/A	Non Domestic = N/A		Bulk water sales = N/A	
	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 <sup>3</sup> )	0 - 10	10 - 20	20	
	Price (IDR / m <sup>3</sup> )	800	1,500	2,000	
	(US\$ / m <sup>3</sup> )	\$0.09	\$0.16	\$0.22	
Non Domestic	From - To (m <sup>3</sup> )	0 - 10	10 - 20	20	
	Price (IDR / m <sup>3</sup> )	2,500	3,000	4,000	
	(US\$ / m <sup>3</sup> )	\$0.27	\$0.33	\$0.44	
Bulk Water	From - To (m <sup>3</sup> )				
	Price (IDR / m <sup>3</sup> )				
	(US\$ / m <sup>3</sup> )				
Water bill for household consuming 6 m <sup>3</sup> /month =				9,300 IDR / month	(1.02 US\$ / month)

**Finances**

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable		
	IDR / year	5,143,102,865	459,878,765	zero		5,602,981,630	1,094,448,908
	US\$ / year	\$561,480	\$50,206	zero		\$611,686	\$119,483
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total			
	IDR / year	3,291,103,586	zero	2,215,950,041	5,507,053,627		
	US\$ / year	\$359,295	zero	\$241,919	\$601,213		
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses		
	IDR / year	1,105,869,255	428,942,600	326,810,765	2,276,331,967	zero	
	US\$ / year	\$120,729	\$46,828	\$35,678	\$248,511	zero	
<u>Investment funds source:</u> Own internal funds, , , , ,							
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs		
	IDR	20,652,384,138	zero	zero		20,652,384,138	11,584,097,032
	US\$	\$2,254,652	zero	zero		\$2,254,652	\$1,264,653



## Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	56.9%	(32 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	104.7	(18 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	83.3%	(39 / 47)
Residual Chlorine tests passed (%)	80.0%	(28 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	9.9	(12 / 26)

**Kabupaten Kerinci**  
**Indonesia**  
**Water Supply**  
 PDAM Tirta Sakti Kab. Kerinci  
**(PDAM Tirta Sakti)**  
**Overall Performance Indicator (OPI) = - 0.48**  
 Number of Standardized Indicators available = 12  
 Overall Ranking = (43 / 47)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	8.1	(26 / 38)
Investment in staff training (days / staff)	0.1	(30 / 33)
Ave. cost of employment / staff (% of per capita GNI)	64%	(36 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	0.93	(36 / 43)
Unit water cost (US\$ / m <sup>3</sup> of system input)	\$0.09	(14 / 43)
Water system asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	\$75	(9 / 35)
Debt servicing ratio (% of total operating revenue)		

**Financial Indicators: Annual expenses & revenue**

Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	0.93	Overhead expenses / Total Operating expenses ratio	0.40
Operating Cost Coverage (total revenue)	1.02	Labour costs / Water operating expenses	0.34
		Electricity costs / Water operating expenses	0.13
		Chemical & other materials costs / Water operating expenses	0.10
		Contracted out services costs / Water operating expenses	0.69
Revenue			
Water sales revenue / Total revenue ratio	0.92	Unit water cost (US\$ / m <sup>3</sup> of metered cons.)	0.14
Subsidies & Grants / Total revenue ratio	#N/A	(US\$ / m <sup>3</sup> of system input)	0.09
Revenue Collection period (months)	2.55	Debt servicing ratio (% of total operating revenue)	206.7%
Unit water price - ave. (US\$ / m <sup>3</sup> of metered cons.)	0.13		

**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 <sup>3</sup> /day)	75
Asset value / pipe length (US\$ / m. pipe)	8
Asset value / Customer (US\$ / conn.)	79

**System Input**

Production capacity utilization (%)	59%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	121
(m <sup>3</sup> /connection/month)	19.0
System Input / Distribution ratio (m <sup>3</sup> /day per km pipe)	59.0
System Input / Storage ratio (m <sup>3</sup> /day per m <sup>3</sup> storage)	#N/A
Supply Continuity (% customers with continuous supply)	90%
Supply Continuity (% of time water available)	83%

## Kabupaten Kerinci Indonesia Water Supply

PDAM Tirta Sakti Kab. Kerinci

(PDAM Tirta Sakti)

OPI Ranking = 43 / 47

**Human Resource Indicators**

Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	77%	Staff Training participation rate (% staff)	7%
Water supply staff ratio (% of total FTE staff)	24%	Staff Training duration rate (days / staff)	0.1
		Investment in staff training (% of direct labour costs)	0.51%
		Investment in staff training (% of total operating costs)	0.17%
Total water related staff / 1000 connections	8.10		
Direct water supply staff		Human Resources Costs	
Staff / 1000 connections	1.90	Ave. cost of employment / staff (% of per capita GNI)	0.64
Staff / 1000 m <sup>3</sup> /day system input	3.10	Contracting out services / in-house Labour costs ratio	2.10
Staff / 100 km of pipework	18.30		

**Distribution**

Distribution / customer (m. pipe per connection)	10.5
Storage / customer (m <sup>3</sup> per connection)	#N/A
Residual Chlorine	
Sampling compliance (%)	581%
Tests passed (%)	80%
Non Revenue Water (UFW)	
% of System Input	33%
m <sup>3</sup> / km / day	19.2
m <sup>3</sup> / connection / day	0.20
NRW adjusted for continuous supply (% of System Input)	35%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	25%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	5%
Total Unmetered Consumption (% of metered cons.)	30%
Infrastructure Leakage Index [ILI]	9.90
Mains failures ratio (breaks / km pipe / year)	15.00

**Water consumption**

Bulk water exported (% of total metered cons.)	0%
Average domestic water charges (% of per capita GNI)	1%
Metered consumption rate - Domestic (litres/person/day)	73
- Total Cons. (litres/person/day)	81
(m <sup>3</sup> /conn/month)	13
Total consumption - metered & unmetered (litres/person/day)	106.00
(m <sup>3</sup> /conn/month)	16.00
Domestic share of total metered consumption (%)	89%
Non Domestic share of total metered consumption (%)	11%

**Demography**

Average town / city size (persons / town)	310,757
Population density in area of responsibility (persons/sq.km)	7,399
Population density in existing service area (persons/sq.km)	12,833
Average Household size (persons / domestic connection)	5

**Customer Interactions**

Customer complaints / 1000 connections	105
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**Connections**

Service Coverage in area of responsibility (%)	47%
Service Coverage in existing service area (%)	57%
Domestic / Non-Domestic connections ratio	29.1
Domestic / Non-Domestic consumption rate ratio	8.4
New connection growth rate (% / year)	4%
New domestic connection cost (US\$ / connection)	44
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

## PDAM Tirta Sakti Kab. Kerinci

