

Draft sustainable services indicators – Small town piped water services

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Service delivery indicators

Indicator 1. Water services provided are in line with the CWSA standards

Sub-indicators:

CWSA service level criteria for hand pumps (CWSA small community design guidelines, p.1 / CWSA small town design guidelines, p. 2):

- Capacity: 20 lpcd for people using point sources / standpipes; 60 lpcd for people with household connections
- Number of people per water point: Borehole or standpipe spout ≤ 300 ; hand dug well ≤ 150
- Distance to water point: maximum distance ≤ 500 m
- Quality: GSB water quality standards
- Reliability: Virtually uninterrupted water supply (at least 95% of the time) (general guidelines, p 17), year round (CWSA small town design guidelines, p.2).

Data collection method:

- Design documents
- WATSAN / WSDB records
- Focus group discussion / interviews with users

Scoring:

Options	% of population
No service: People access water from insecure or unimproved sources, or sources that are too distant (> 500 m), too time consuming, or are of poor quality (less than GSB standard)	
Sub standard service: People access service that is improvement on having no service at all, but that fails to meet the basic standards on one or more criteria (quantity, quality, reliability, distance, max number of people served)	
Basic service (Benchmark): People access a minimum of 20 lpcd of acceptable quality water (GSB) from an improved source, at a distance no more than 500 m. The number of people using the hand pump is 300 in the case of a bore hole and 150 in the case of a hand dug well and reliability is 95% (CWSA hand pump and standpipe standard)	
Intermediate service: people access a min of 40 lpcd of acceptable quality water from an improved source, at a distance less than 500m. The number of people using the hand pump is 300 in the case of a bore hole and 150 in the case of a hand dug well and reliability is 95%	
Ideal: People access a minimum of 60 lpcd of high quality water on demand. Reliability is 95% (CWSA hand pump household connection standard).	

Reason and evidence for scoring:

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Community mobilisation and planning

Indicator 2. Community mobilisation for O&M has taken place in line with the PIM

Sub-indicators:

Technical assistance for sub-project proposal formulation has to cover the following (PIM, p. 25-26):

- Technical, environmental and financial guidance to assist the community in making an informed choice about preferred service level;
- Community participation in monitoring of construction.
- Assistance in mobilizing community contribution towards capital investment;
- Awareness creation on the need to raise funds towards O & M of water and sanitation facilities (levies, harvests etc.);

Data collection method:

- interviews with WATSAN / WSDB members on TA received and whether they think it has been helpful
- Review of project reports

Scoring:

Options	Score
None of the critical issues in the PIM have been addressed	0
1 out of 4 critical issues in the PIM have been addressed	25
2 out of 4 critical issues in the PIM have been addressed	50
3 out of 4 critical issues in the PIM have been addressed	75
Community mobilisation for O&M has taken place in line with the PIM	100

Reason and evidence for scoring:

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If done differently, then how, and what has been the result (what works and what does not?)?

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Management and Governance Indicators

indicator: There is a WSDB, whose composition, qualifications, experience and training of its members is in line with the CWSA Small town O&M guidelines

Sub-indicators:

- A WSDB is in place, consisting of (CWSA, small town O&M guidelines, p 13):
 - System Manager, to be responsible for the overall management of Technical, Financial and Administrative Staff. The incumbent shall possess at least HND or equivalent academic qualification and shall have good oral and communication skills. A technical background may be advantageous. The Manager shall be accountable to the WSDB, and shall prepare and present reports at WSDB meetings.
 - An Operator, to carry out technical operations and routine maintenance (shall possess technical (NVTI) qualification – electrical or mechanical).
 - An Administrative/Financial Clerk (shall possess at least RSA stage II or equivalent).
 - A Revenue Collector (shall possess at least SSSCE).
 - Vendors, to be responsible for sale of water.
- The board consists of 10-15 members, of whom at least 1/3 are women and 1/3 are representatives of the MMDA or Town / Area council (WSDB model bye-laws, p 7)
- WSDB members receive training and regular re-training (at least every 3-5 years) (CWSA, small town O&M guidelines, p 15).

Data collection methods:

- Interview with WATSAN
- Interview with community members
- Review of training reports

Scoring

Options	Score
There is no WSDB	0
There is a WSDB, but its composition is not in line with the model bye-laws and CWSA guidelines	25
Benchmark: There is a WSDB. Its composition is in line with the model bye-laws and CWSA guidelines. WSDB members have received initial training.	50
There is a WSDB, which has received initial training, and retraining every 3- 5 years. Its composition is in line with the model bye-laws and the CWSA guidelines. (CWSA standard).	75
Ideal: There is a WSDB. Its composition is in line with the model bye-laws and CWSA guidelines. WSDB members have received initial training, and bi-annual retaining (or retaining every time a new member joins).	100

Reason and evidence for scoring:

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If done differently, then how, and what has been the result (what works and what does not?)?

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Indicator 3. Piped water specific indicator: WSDB meetings are organised regularly and records are kept

Sub-indicators:

- The WSDB shall meet at least once every 3 months (WSDB model bye-laws, p 16)
- The Secretary of the WSDB shall keep correct records of decisions made each meeting.
- These records are posted on the community notice board (WSDB model bye-laws) or communicated in any other way to all communities

Data collection methods:

- Interview with WSDB committee
- Interview with community members
- Interview with DWST
- Interview with CWSA
- Review of meeting minutes

Scoring:

Options	Score
The WSDB never meets.	0
The WSDB meets occasionally (less than once every 6 months) or it meets more often, but no records are kept and decisions are not communicated to the community.	25
The WSDB meets at least every 6 month. The Secretary of the WSDB keeps correct records of decisions made each meeting.	50
The WSDB meets at least every 3 month. The Secretary of the WSDB keeps correct records of decisions made each meeting.	75
The WSDB meets at least every 3 month. The Secretary of the WSDB keeps correct records of decisions made each meeting. These records are posted on the community notice board or communicated in another way to all communities covered by the system.	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Indicator 4. There is no political or chieftaincy influences on the composition of the WSDB / WATSAN

Data collection methods:

- Interview with WSDB committee
- Interview with community members
- Interview with DWST
- Interview with CWSA

Scoring

Options	Score
There are major changes in WSDB / WATSAN members (more than 50% of members have been changed) as a result of political or chieftaincy influence	0
There are minor changes in WSDB / WATSAN members (less than 50% of members have been changed) as a result of political or chieftaincy influence, but these changes have not had a negative effect on the functioning of the WATSAN or WSDB	50
There are no changes in WSDB / WATSAN members as a result of political or chieftaincy influences	100

Reason and evidence for scoring:

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Indicator 5. Technical, Administrative and Financial Reports are kept and read out to the Community at least once every six months

Sub-indicator:

- Technical, Administrative and Financial Reports are kept
- Technical, Administrative and Financial Reports are read out to the Community at least once every six months

Data collection methods:

- Interview with WSDB committee
- Interview with community members
- Interview with DWST
- Interview with CWSA

Scoring:

Options	Score
No technical, administrative and financial reports are kept	0
Some technical, administrative and financial Reports are kept	25
Technical, administrative and financial reports are kept by not shared with the community	50
Technical, administrative and financial reports are kept and irregularly shared with the community	75
Technical, administrative and financial reports are kept and read out to the community at least once every 6 months (CWSA standard)	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Financial Management

Indicator 6. Annual income from water sales exceeds total annual expenditure

Data collection method:

- Review of financial records of the WSDB

Scoring

Options	Score
Total annual expenditure exceeds annual income from water sales	0
Annual income from water sales exceeds total annual expenditure	100

Reason and evidence for scoring:

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Indicator 7. There is sound financial management, accounting and auditing

Piped water sub-indicators:

- Tariff has been set in accordance with CWSA Small Town O&M / tariff setting guidelines and should be sufficient to cover all costs mentioned in the guidelines (Small town, O&M, p16):
 - o 1) All water production expenses
 - o 2) All distribution expenses
 - o 3) Routine maintenance and other contracts
 - o 4) Repair work (by staff and private maintenance contracts).
 - o 5) Water quality monitoring at plant level
 - o 6) Tariff collection expenses (vendors) (up to 20% of total tariff)
 - o 7) Replacement cost (20% of 1-6)
 - o 8) Rehabilitation and Expansion (5% of 1-6)total)
 - o 9) Sanitation Fund (8% of 1-6)
 - o 10) Contingency (2% of total (1) – (6)).
- Tariff has been approved by the MMDA (Small town, O&M, p16).

Data collection method:

- Review of bank statement and records
- Interview with cashier
- Interview with DWST

Piped water scoring:

Options	Score
No tariff has been set	0
Tariff setting is done by WSDB and approved by MMDA, but is not based on projected/ planned costs	25
Tariff setting is done by WSDB and approved by MMDA and is based on projected/ planned costs of operation and maintenance (item 1-4 and 6))	50
Tariff setting is done by WATSAN and approved by MMDA. Tariff is based on projected/ planned costs of operation and maintenance (item 1-4 and 6), as well as either capita maintenance expenditure costs (item 7-8), or water quality testing costs (item 5) or provision has been made for a sanitation fund (item 9).	75
Tariff setting is done by WATSAN and approved by MMDA. Tariff is based on projected/ planned costs of operation and maintenance (item 1-4 and 6), as well as capita maintenance expenditure costs (item 7-8), water quality testing costs (item 5) and provision has been made for a sanitation fund (item 9).	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Indicator 8. Tariff setting is in line with CWSA guidelines

Sub-indicators:

- Tariff has been set in accordance with CWSA Small Town O&M / tariff setting guidelines and should be sufficient to cover all costs mentioned in the guidelines (Small town, O&M, p16):
 - o 1) All water production expenses
 - o 2) All distribution expenses
 - o 3) Routine maintenance and other contracts
 - o 4) Repair work (by staff and private maintenance contracts).
 - o 5) Water quality monitoring at plant level
 - o 6) Tariff collection expenses (vendors) (up to 20% of total tariff)
 - o 7) Replacement cost (20% of 1-6)
 - o 8) Rehabilitation and Expansion (5% of 1-6)total)
 - o 9) Sanitation Fund (8% of 1-6)
 - o 10) Contingency (2% of total (1) – (6)).
- Tariff has been approved by the MMDA (Small town, O&M, p16).

Data collection methods:

- Interviews with community members
- Interview with WSDB
- Interview with regional CWSA
- Interview with DWST
- Project reports on tariff setting, if available

Scoring:

Options	Score
No tariff has been set	0
Tariff setting is done by WSDB and approved by MMDA, but is not based on projected/ planned costs	25
Tariff setting is done by WSDB and approved by MMDA and is based on projected/ planned costs of operation and maintenance (item 1-4 and 6))	50
Tariff setting is done by WATSAN and approved by MMDA. Tariff is based on projected/ planned costs of operation and maintenance (item 1-4 and 6), as well as either capita maintenance expenditure costs (item 7-8), or water quality testing costs (item 5) or provision has been made for a sanitation fund (item 9).	75
Tariff setting is done by WATSAN and approved by MMDA. Tariff is based on projected/ planned costs of operation and maintenance (item 1-4 and 6), as well as capita maintenance expenditure costs (item 7-8), water quality testing costs (item 5) and provision has been made for a sanitation fund (item 9).	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Indicator 9. Interference of the MMDA in the setting of the tariff does not affect the revenues

In case of a reduction in expected tariff revenue as a result of action by the MMDA, e.g. reducing tariff, the MMDA pays the difference in revenue into the WSDB account. CWSA and RCC ensure compliance (general guidelines, p 7-8)

Data collection methods:

- Interview with WSDB
- Interview with regional CWSA
- Interview with DWST

Scoring:

Options	Score
The MMDA does not pay the difference in revenue into the WSDB account in case of a reduction in expected tariff revenue as a result of action by the MMDA	0
The MMDA pays part of the difference in revenue into the WSDB account in case of a reduction in expected tariff revenue as a result of action by the MMDA	50
The MMDA pays the difference in revenue into the WSDB account in case of a reduction in expected tariff revenue as a result of action by the MMDA	100

Reason and evidence for scoring:

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If done differently, then how, and what has been the result (what works and what does not?)?

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Operational Indicators

Indicator 10. Piped water specific indicator: The WSDB prepares a work plan and budget for O&M and provides a copy of this to the MMDA and the Towns / Area Council

(WSDB model bye-laws, p 16)

Data collection methods

- Interview WSDB
- Interview MMDA and Town / area council
- Review of work plan and budget for O&M

Scoring:

Options	Score
The WSDB does not prepare a workplan and budget for O&M	0
The WSDB prepares a workplan and budget for O&M, but does not submit it to the MMDA and town / area council	50
The WSDB prepares a work plan and budget for O&M and provides a copy of this to the MMDA and the Towns / Area Council	100

Reason and evidence for scoring:

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If done differently, then how, and what has been the result (what works and what does not?)?

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Indicator 11. Maintenance is executed in line with the CWSA O&M guidelines and system O&M manuals

Piped water Sub-indicators:

- System specific O&M maintenance manuals have been prepared and submitted by the consultant (based on the generic manual available from CWSA) to the community (small town O&M guidelines, p.15)
- Relevant personnel has been trained in the effective use of the manuals (small town O&M guidelines, p.15)
- Regular maintenance is carried out in accordance with the O&M manuals

Data collection methods:

- Interview with WATSAN /WSDB
- Interview with DA
- Interview with local private sector that supports piped systems
- Interview with CWSA Regional

Piped water Scoring:

Options	Score
O&M manuals are not available or are not being used. Maintenance does not take place.	0
O&M manual are available. Ad hoc maintenance takes place.	50
Relevant personnel has been trained in the effective use of O&M manuals and execute regular maintenance in accordance with these manuals which are available.	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Indicator 12. Piped water specific indicator: The private sector provides the needed support to the WSDB

Sub-indicators:

- Spare parts are available for purchase (CWSA guidelines not clear)
- WSDB can access the services of the private sector in case of breakdown (CWSA guidelines not clear)

Data collection method:

- Interview with WSDB
- Interview with regional CWSA staff
- Interview with local private sector

Scoring:

Options	Score
Spare parts are not readily available and there is no private sector available to carry out maintenance.	0
Spare parts and private sector to support repairs and maintenance are available within a week	50
Benchmark: Spare parts and private sector to support repairs and maintenance are available within 48 hours	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Indicator 13. Water Quality Sampling and Analysis services are performed on half yearly basis by recognised institutions (GWCL, WRI, SGS or KNUST laboratories) and paid for by each community through tariffs

(CWSA small comm. O&M guidelines, p 8)

Data collection methods:

- Review of financial records
- Review of water quality reports
- Interview with WSDB
- Interview with regional CWSA

Scoring:

Options	Score
No quality sampling has taken place since installation	0
Water Quality Sampling and Analysis services are performed irregularly (less than once a year) by recognised institutions (GWCL, WRI, SGS or KNUST laboratories) and paid for by each community through tariffs (CWSA small comm., O&M, p 8)	25
Water Quality Sampling and Analysis services are performed on yearly basis by recognised institutions (GWCL, WRI, SGS or KNUST laboratories)	50
Water Quality Sampling and Analysis services are performed on half yearly basis by recognised institutions (GWCL, WRI, SGS or KNUST laboratories)	75
Water Quality Sampling and Analysis services are performed on half yearly basis by recognised institutions (GWCL, WRI, SGS or KNUST laboratories) and paid for by each community through tariffs (CWSA standard: CWSA small comm., O&M, p 8)	100

Reason and evidence for scoring:

If done differently, then how, and what has been the result (what works and what does not?)?

Enabling Environment

Indicator 14. Good support from DWST to WSDB

Sub-indicators:

- DWST monitors O&M of water facilities in terms of financial, technical and administrative performance (general CWSA, p 9), including periodic audits, and provides support where needed.

Data collection methods:

- Interview with DWST
- Interview with WSDB

Scoring:

Options	Score
DWST does not monitor O&M of water facilities in terms of financial, technical and administrative performance.	0
DWST monitors O&M of water facilities in terms of financial, technical and administrative performance, to some extent, but not on a regular basis.	25
DWST monitors O&M of water facilities in terms of financial, technical and administrative performance on a regular basis, but does not (immediately) provide the direct support where needed when challenges are identified.	50
DWST monitors O&M of water facilities in terms of financial, technical and administrative performance on a regular basis, and provides direct support where needed when challenges are identified.	75
DWST monitors O&M of water facilities in terms of financial, technical and administrative performance on a regular basis, including periodic audits, and provides direct support where needed. (CWSA standard)	100

Reason and evidence for scoring:

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If done differently, then how, and what has been the result (what works and what does not?)?

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Indicator 15. Bye-laws for the WSDB exist and are enforced effectively

(general guidelines, p 9 / small comm. ,O&M, p 4)

Data collection methods:

- Interview with DWST
- Interview with WSDB
- Interview with CWSA
- Review of bye-law

Options	Score
Bye-laws do not exist	0
Bye-laws exist but are not enforced	50
Bye-laws exist and are enforced effectively (CWSA standard)	100

Reason and evidence for scoring:

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