Draft indicators for sustainable rural water supply services in Ghana

Draft, February 2012

International Water and Sanitation Centre

Introduction to the document

In order to develop a framework for analysing and documenting issues related to sustainability of rural water services in Ghana, the Community Water and Sanitation Agency (CWSA), in collaboration with International Water and Sanitation Centre (IRC) Ghana, within the framework of Sustainable Services at Scale (Triple-S) Project Ghana, has come up with a set of service level and sustainability indicators for rural water services in Ghana. This document gives an overview of these draft indicators.

This document has been the result of ongoing process of identifying and testing service level and sustainability indicators. Therefore the indicators presented in this document should be considered work in progress.

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Introduction to the indicators

The indicators presented in this document focus specifically on 2 service delivery models:

- Community Ownership and Management of a hand pump, managed by a Water and Sanitation(WATSAN) Committee.
- Community Ownership and Management of a small town piped system, managed by a Water and Sanitation Development Board (WSDB).
-

The *service level* indicator can be used to assess the level of water supply services, in relation to the minimum standards set by CWSA in terms of provided water quality and quantity and functionality, reliability and accessibility of facilities.

The *sustainability* indicators focus on systems, structures, procedures and practices which should be in place in order to ensure sustainable water services, according to guidelines for small towns and small communities, the CWSA Project Implementation Manual and the model bye-laws for the establishment and operation of Water and Sanitation Development Boards. The sustainability indicators are grouped into:

- Service provider indicators, related to WATSANs or WSDBs. These include:
    - governanceand management indicators;
    - financial management indicators;
    - operational indicators;
- Support function indicators, relating to support from Metropolitan, Municipal and District Assemblies (MMDAs), District Water and Sanitation Team (DWST) and regional level CWSA

For each indicator, a scoring system has been developed, going from 0 (worst case) to 100 (best case). Each indicator is scored based on a number of sub-indicators, derived from the guidelines for small towns and small communities, the CWSA Project Implementation Manual and the model bye-laws for the establishment and operation of Water and Sanitation Development Boards.

The process of development, verification and refinement of the indicators

The indicators and scoring systems developed based on the national guidelines, manuals and model by-laws,were reviewed by the Triple-S Technical Committee (Wednesday 10 November 2010) and the National Level Learning Alliance Platform[1] meeting (Thursday 11 November 2010). Based on the received suggestion and comments, the indicators and scoring systems were refined. The resulting indicators and scoring systems were used as framework for analysis of a “looking back in order to inform the way forward” study in Volta region and Northern Region (forthcoming), which led to minor adjustments to the indicators.

[1]The NLLAP is a WASH sector multi stakeholder platform with the overall goal of improving sector learning and dialogue. It is organised on a monthly basis by the Ghana WASH Resource Centre Network (RCN).

Furthermore, following the experience with these case studies, it was decided to develop standard 'assessment questions' in order to collect the required data to easily and unambiguously score the indicators on a larger scale. These questions were field tested in the second half of 2011, for the assessment of the current levels of services provided and performance of service providers and support functions in the 3 Triple-S focus districts: Sunyani-West, in BrongAhafo Region, East Gonja, in Northern region and Akatsi, in Volta region. This led to a further refinement of some of the indicators, the questions and the scoring systems, which were used for the collection of baseline data in the 3 Triple-S focus districts from November 2011 till January 2012.

At the time of writing of this document, discussions were on-going on how to aggregate and compile scores, per set of indicators (e.g. how to aggregate all scores related to the service provider indicators), and per geographical unit (e.g. how to aggregate a service level score per district, based on service level scores per facility). Also, discussions were on-going on how best to link this to the District Monitoring and Evaluation System (DiMES), which is the national monitoring system which is currently being rolled out in the districts in Ghana[2].

Based on these discussions and on the experiences with the Triple-S baseline data collection process, the service level and sustainability indicators and scoring system will be refined and finalised for general use.

This document

This document presents the indicators, the scoring systems and the assessment questions for the collection of data in order to score each indicator, as used for the Triple-S baseline data collection exercise, which took place from November 2011 till January 2012. Following this baseline data collection process, these indicators will be further refined and a such ,these indicators presented in this document should be considered work in progress.

Part 1 focuses on the service level indicator. Part 2 and 3 presents the service provider indicators for WATSAN committees (managing handpumps) and WSDBs respectively. Finally, the indicators related to support functions, are introduced in part 4.

[2] In order to facilitate compatibility for service level and sustainability indicators with DiMES, the terminology used in DiMES has been used as much as possible in the formulation of the assessment questions.

Part 1:Service level indicator

Successful stroke test:
Maximum number of strokes to fill a size 34 bucket (18 litres) within 1 minute is 40 strokes for Afridev and Ghana Modified India Mark II and 30 strokes for Nira AF-85 hand pump

Successful leakage test:
Water flows out of the pump within 5 strokes, when resuming pumping after 5 minutes rest following the stroke test

Service level indicator: Water services provided are in line with the CWSA standards

Sub-indicators:

- Functionality:
  - Handpump:
    - successful stroke and leakage test = functioning
    - either successful stroke or leakage test = partially functioning
    - neither successful stroke nor leakage test = non functioning
    - Not possibly to perform tests, because of breakdown = broken down
  - Piped system: the intake and / or borehole(s) are functioning satisfactorily (intake includes mechanical and electrical equipment for any type of head works including borehole, and hand dug wells (HDW), spring/river intake, treatment plant etc.) = functioning
- Capacity: 20 litres per capita per day (lpcd) for people using point sources / standpipes; 60 lpcd for people with household connections
- Crowding, based on the number of people per water point: Borehole or standpipe spout ≤ 300; hand dug well ≤ 150
- Distance to water point: maximum distance ≤ 500 m
- Quality: Ghana Standard Board water quality standards
- Reliability: Virtually uninterrupted water supply (at least 95% of the time), year round.

Scoring:

Score	Service level	Description
100	High (CWSA household connection standard)	People access a minimum of 60 lpcd of high quality water on demand. Reliability is 95%.
75	Intermediate service:	People access a minimum of 40 lpcd from water services that meet the basic standards on quality, reliability, crowding and distance.
50	Basic service (CWSA handpump and standpipe standard):	People access services that meets all basic standards for the entire population: quantity (20lpcd), quality, reliability, crowding, distance
25	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 (functionality (the system is only partially functional), quantity, quality, reliability, distance, max number of people served)
0	No service	People do not access improved water supply or only have access to non-functional or broken down system

Assessment questions:

Functionality hand pumps

Code	Question	Answer
HP-FU-1	Number of strokes needed to fill a bucket? (stroke test)	
HP-FU-2	Successful stroke test? (see above)	Yes / no
HP-FU-3	Successful leakage test? (see above)	Yes / no
HP-FU-3	What is the reason for the non-functioning of the system (No hand pump = 1/ Hand pump broken =2 / Water table too low (borehole dry) = 3/ Other reason =4 / Unknown = 5)	1 / 2 / 3 / 4 / 5

Service level hand pumps

Code	Question	Answer
HP-SL-1	In the last year, how many days was the facility not functioning?	
HP-SL-2	In the last quarter (last 3 months), how many days was the facility not functioning?	
HP-SL-3	What was the reason for non-reliability? (No funds =1/ Time to raise or access funds =2 / Time to get spare parts =3 / Time to get area mechanic =4 / Other reason = 5/ Unknown =6)	1 / 2 / 3 / 4 / 5 / 6
HP-SL-4	Is the water quality acceptable to the community?	Yes / no
HP-SL-5	What is the (estimated) number of people depending on the facilities as their main source of water supply?	
HP-SL-6	Estimated % of population within 500 m of facility	0 / 25 / 50 / 75 / 100
HP-SL-7	What is the estimated use of water per capita per day (in lpcd)?	none / less than 20 lpcd / more than 20 lpcd
HP-SL-8	Is water from the facility used for watering gardens?	Yes / no
HP-SL-9	Is water from the facility used for watering livestock?	Yes / no
HP-SL-10	Is water from the facility used for small industrial uses (brick making, pito making etc)	Yes / no

Functionality piped systems

Code	Question	Answer
PS-Fu-1	Is the intake and / or borehole(s) functioning satisfactorily)	Yes / partially / no
PS-Fu-2	How many standpipe **spouts** are functioning? (see standpipe data)	

Service level piped systems

Code	Question	Answer
PS-SL-1	How many days was the facility not functioning over the last year?	
PS-SL-2	How many days was the facility not functioning over the last quarter?	
PS-SL-3	Is the water quality acceptable?	Yes / no
PS-SL-4	Estimated % of population within 500 m of standpipes	0 / 25 / 50 / 75 / 100
PS-SL-5	Is there a bulk water meter?	Yes / no
PS-SL-6	Amount of water **produced** in last year (m^3)	
PS-SL-7	Are connections and standpipes metered?	Yes / no
PS-SL-8	Are meter records kept?	Yes / no
PS-SL-9	Amount of water **delivered** to **standpipes** in last year (m3)	
PS-SL-10	Amount of water **delivered** to **household connections** in last year (m3)	
PS-SL-11	Amount of water **delivered** to **institutions** in last year (m3)	
PS-SL-12	Actual **total population** depending on the system	
PS-SL-13	Number of people per household connection	
PS-SL-14	Is water from the facility used for watering gardens?	Yes / no
PS-SL-15	Is water from the facility used for watering livestock?	Yes / no
PS-SL-16	Is water from the facility used for small industrial uses (brick making, pito making etc)	Yes / no

Part 2: Service provider indicators - WATSAN

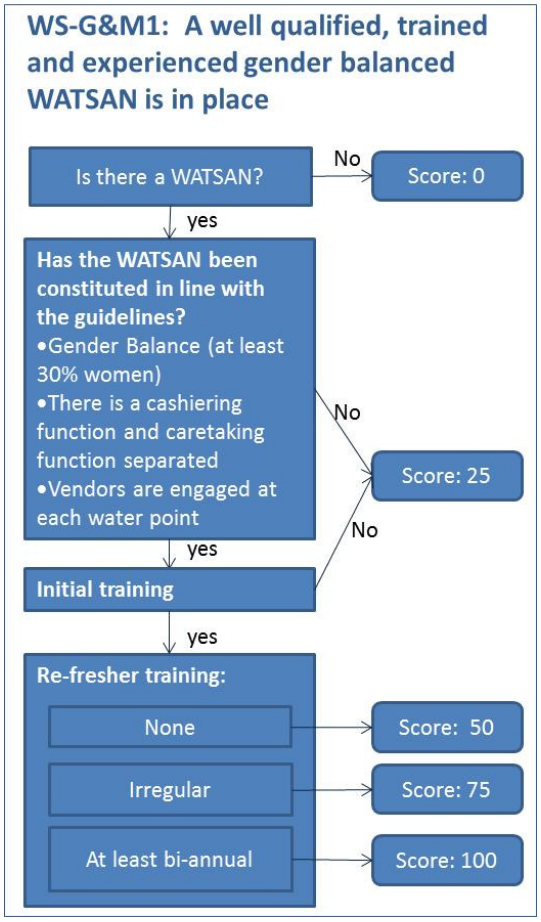
Governance and Management indicators

Indicator WS-G&M1: A well-qualified, trained and experienced gender balanced WATSAN is in place

Sub-indicators:

- A gender balanced WATSAN committee is in place, consisting of 5-9 members (CWSA, small communities., Operations and Maintenance(O&M), p 5)
- The WATSAN has been constituted in line with the guidelines (participatory process and selected members fulfil the selection criteria)
  - The WATSAN consists of people dealing with technical/operational aspects and financial/accounting aspects (there is a cashiering function and caretaking function separated) (CWSA, small communities., O&M, p 5)
  - Vendors are engaged at each water point (CWSA, small communities., O&M, p 5).
- WATSAN members have received initial training and regular re-fresher training.

Scoring:



Assessment questions:

Code	Question	Answer
WS-G&M1-1	Is there a WATSAN committee?	Yes / no
WS-G&M1-2	How many men does the WATSAN have?	
WS-G&M1-3	How many women does the WATSAN have?	
WS-G&M1-4	Does the WATSAN have a treasurer?	Yes / no
WS-G&M1-5	Is there a caretaker?	Yes / no
WS-G&M1-6	How many vendors are there?	
WS-G&M1-7	Has an initial training of the WATSAN taken place?	Yes / no
WS-G&M1-8	Has refresher training of the WATSAN taken place?	At least Bi-annual / irregular / no

Indicator WS-G&M2: 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
- Records of all maintenance activities are kept (CWSA, small comm., O&M, p9)

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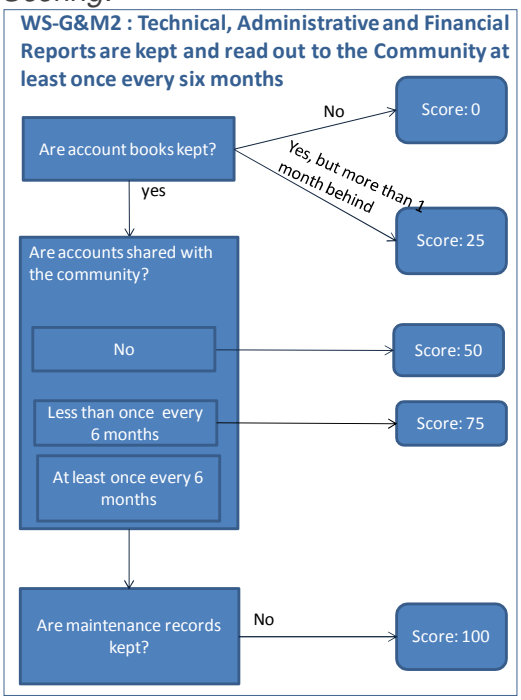

Assessment questions:

Code	Question	Answer
WS-G&M2-1	Are account books kept and up to date? (Check)	Yes / yes, but more than 1 month behind / no
WS-G&M2-2	Are records shared with the community?	Every 6 months / irregularly / no
WS-G&M2-3	Are maintenance records kept? (Check)	Yes / no

Indicator WS-G&M3: There is no political and chieftaincy influences in the composition of the WATSAN or WSDB

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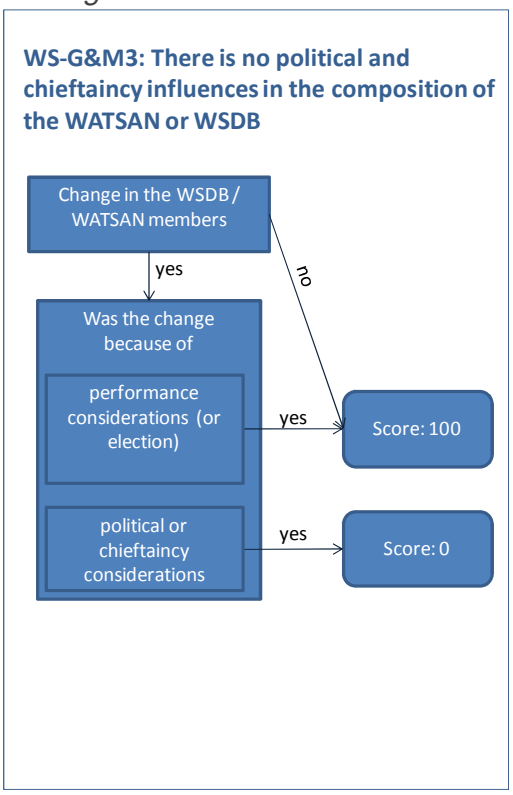

Assessment questions:

Code	Question	Answer
WS-G&M3-1	Has there been change in the WATSAN members over the last year?	Yes / no
WS-G&M3-2	If so, what has influenced this change? (if political or chieftaincy, than " yes" ; if something else, than " no")	Yes / no
WS-G&M3-3	If so, has the change been influenced by performance considerations (or re-election)?	Yes / no

Financial Managementindicators

Indicator WS-FM1: Annual income from water sales exceeds total annual expenditure

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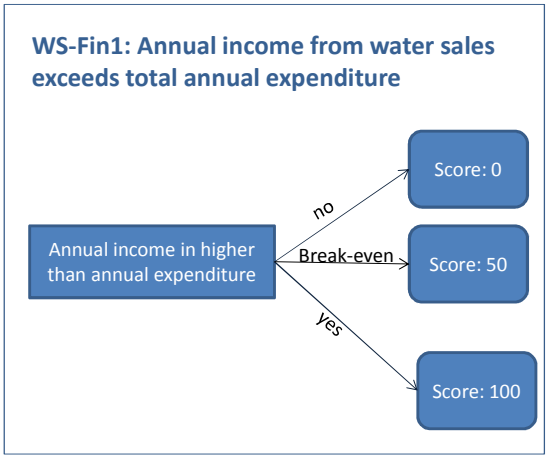

Assessment questions:

Code	Question	Answer
WS-FM1-1	What was last year's annual income (in GHC)? (check from records)	
WS-FM1-2	What was last year's annual expenditure (in GHC)? (check from records)	

Indicator WS-FM2: There is sound financial management, accounting and auditing

Sub-indicators:

- open and mange bank account
- Books are kept
- auditing is carried out at least once every year

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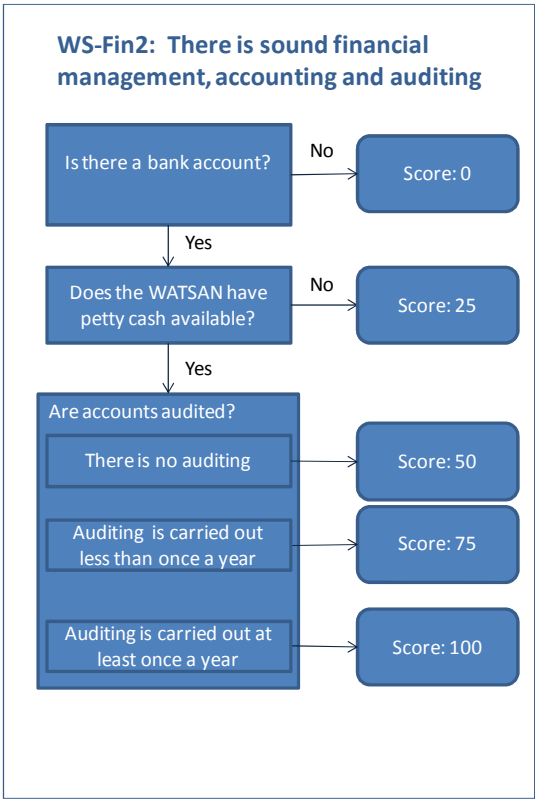

Assessment questions:

Code	Question	Answer
WS-FM2-1	Does the WATSAN have petty cash to its disposal?	Yes / no
WS-FM2-2	What is the amount of petty cash? (GHC)	
WS-FM2-3	What is the amount of cash in hand? (GHC)	
WS-FM2-4	Does the WATSAN have a bank account?	Yes / no
WS-FM2-5	What is the amount in Bank account (GHC)? (check)	
WS-FM2-6	Is external auditing carried out (by the DWST)?	At least once a year / Irregularly/ No

Indicator WS-FM3: Tariff setting is taking into account the lifecycle costs

Sub- indicators:

- tariff setting is done by WATSAN and approved by MMDA
- tariff is based on projected/ planned costs of operation (including payment of vendor, water quality tests), maintenance (payment of spare part and area mechanic and other services), replacement costs of hand pump

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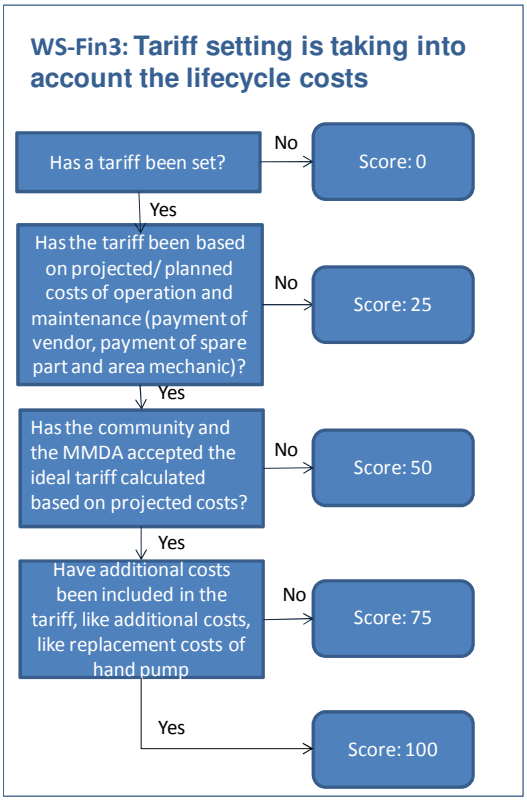

Assessment questions:

Code	Question	Answer
WS-FM3-1	Has a tariff been set?	Yes / no
WS-FM3-2	If PAYF, how much is the tariff (in GHp/m3)?	
WS-FM3-3	If monthly levy: how much is the tariff per month per household (in Ghana pesewas / household)?	
WS-FM3-4	Has the tariff been based on projected costs of operation and maintenance (vendor, spare part for minor maintenance etc),	Yes / no
WS-FM3-5	Have capita maintenance expenditure costs been included in the tariff (rehabilitation and replacement of the hand pump)	Yes / no
WS-FM3-6	Have support costs been included in the tariff (water quality tests)?	Yes / no
WS-FM3-7	Has the community and the MMDA accepted the ideal tariff calculated based on projected costs?	Yes / no

Operational Indicators

Indicator WS-Op1: Spare parts are available to enable maintenance

Sub- indicators:

- Spare parts for hand pump maintenance and repair are available at all levels at all times (small comm., O&M, p2)

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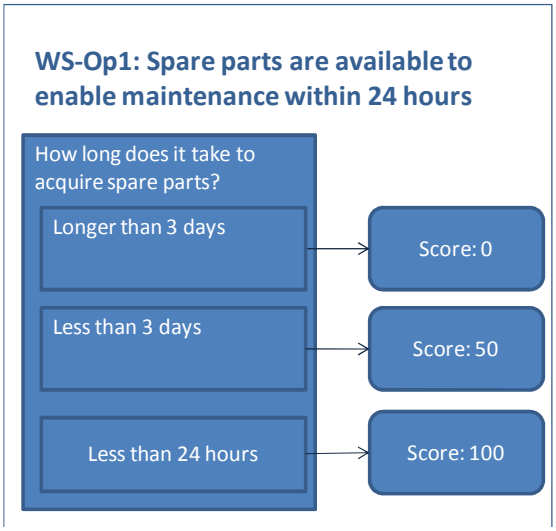

Assessment questions:

Code	Question	Answer
WS-Op1-1	How long does it normally take to acquire spare parts?	Longer than 3 days / less than 3 days / less than 24 hours

Indicator WS-Op2: Area mechanics are available to enable maintenance

Sub- indicators:

- Well trained area mechanics shall be available in every district (CWSA, small comm., O&M, p2 / general guidelines, p8)

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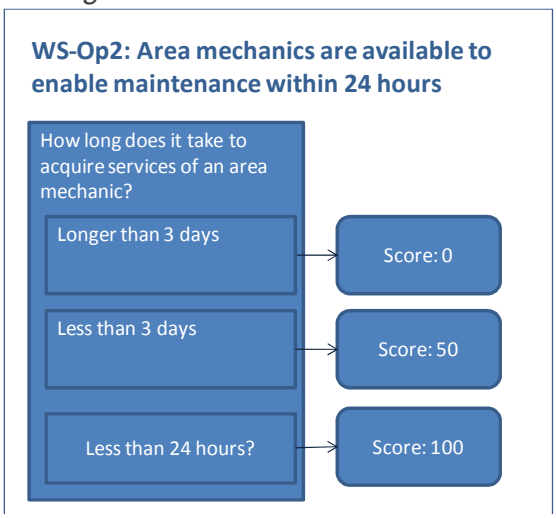

Assessment questions:

Code	Question	Answer
WS-Op2-1	How long does it normally take to acquire the services of an area mechanic?	Longer than 3 days / less than 3 days / less than 24 hours

Indicator WS-Op3a: Corrective maintenance is executed in an effective way
Indicator WS-Op3b: Periodic maintenance isexecuted in an effective way

Sub- indicators:

- Corrective maintenance is carried out within 24 hours
- Preventive maintenance is carried out by the area mechanic, at least once yearly (CWSA, small comm., O&M, p2)

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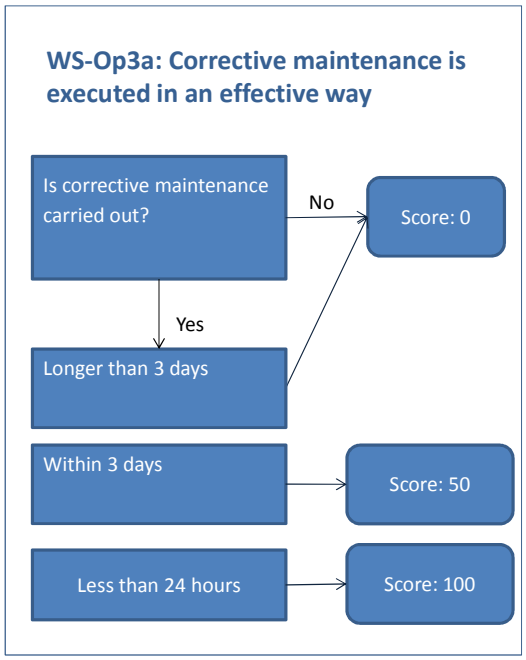

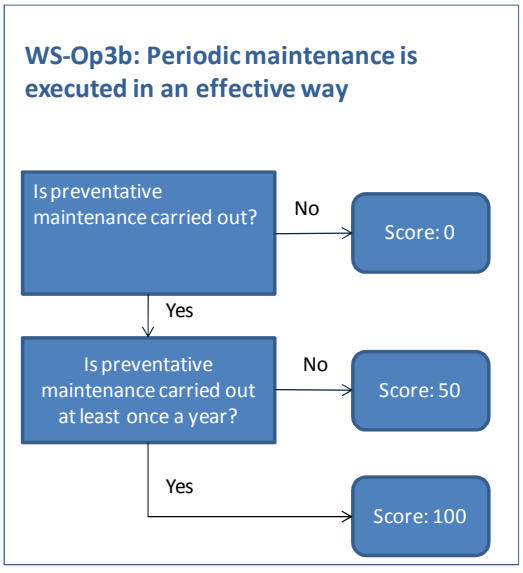

Assessment questions:

Code	Question	Answer
WS-Op3-1	Is corrective maintenance carried out?	Yes / no
WS-Op3-2	If yes, is it done within 24 hours?	Yes / no
WS-Op3-3	Is preventive maintenance normally carried out?	Yes / no
WS-Op3-4	If yes, is preventative maintenance carried out at least once a year?	Yes / no

Indicator WS-Op4: Water Quality Sampling and Analysis services are performed on half yearly basis by recognised institutions and paid for by each community through tariffs

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

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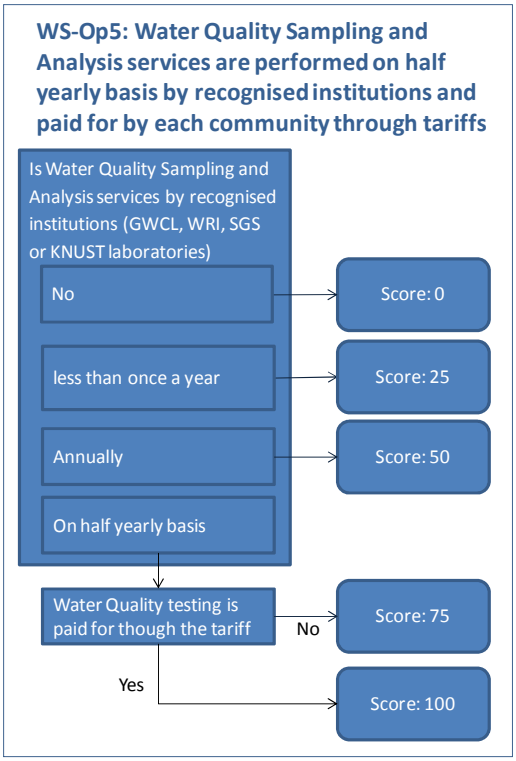

Assessment questions:

Code	Question	Answer
WS-Op4-1	Is Water Quality Sampling and Analysis done by recognised institutions (GWCL, WRI, GSB, SGS or KNUST laboratories)	No / less than once a year / once a year / on half yearly basis
WS-Op4-2	Is water Quality testing paid for through the tariff?	Yes / no

Part 3: Service provider indicators – WSDB

Management and Governance indicators

Indicator WB-G&M1: There is a WSDB, consisting a well-qualified and trained team

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 posses' at least Higher National Diploma (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 National Vocational Training Institute (NVTI) qualification – electrical or mechanical).
    - An Administrative/Financial Clerk (shall posses at least RSA stage II or equivalent).
    - A Revenue Collector (shall possess at least Senior Secondary School Certificate Examination (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).

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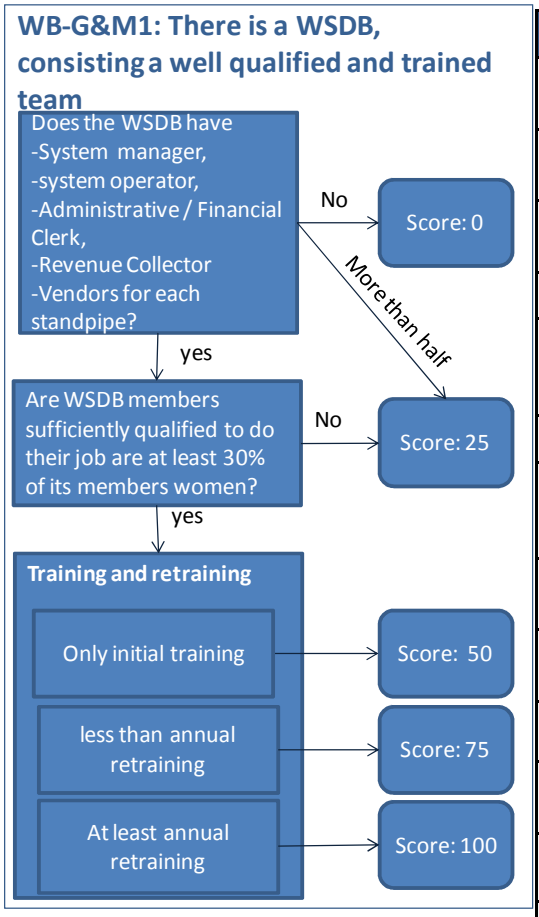

Assessment questions:

Code	Question	Answer
WB-G&M1-1	When was the WSDB established (Month and year)	
WB-G&M1-2 (DIMES B13)	How many men does the WSDB have?	
WB-G&M1-3 (DIMES B13)	How many women does the WSDB have?	
WB-G&M1-4	Is there a System manager?	Yes / no
WB-G&M1-5	Does the System manager have at least HND or equivalent academic qualification?	Yes / no
WB-G&M1-6	Is there a system operator?	Yes / no
WB-G&M1-7	Does the Operator have technical (NVTI) qualification – electrical or mechanical?	Yes / no
WB-G&M1-8	Is there an Administrative/Financial Clerk?	Yes / no
WB-G&M1-9	Does the Admin / finance clerk have at least RSA stage II or equivalent?	Yes / no
WB-G&M1-10	Is there a Revenue Collector?	Yes / no
WB-G&M1-11	Does the revenue collector have at least SSSCE?	Yes / no
WB-G&M1-12	Is there a vendor for each standpipe?	Yes / no
WB-G&M1-13	Has the WSDB and operational staff received initial training?	Yes / no
WB-G&M1-14	Has the WSDB and operational staff received re-training?	No / irregular / at least annual

Indicator WB-G&M2: 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

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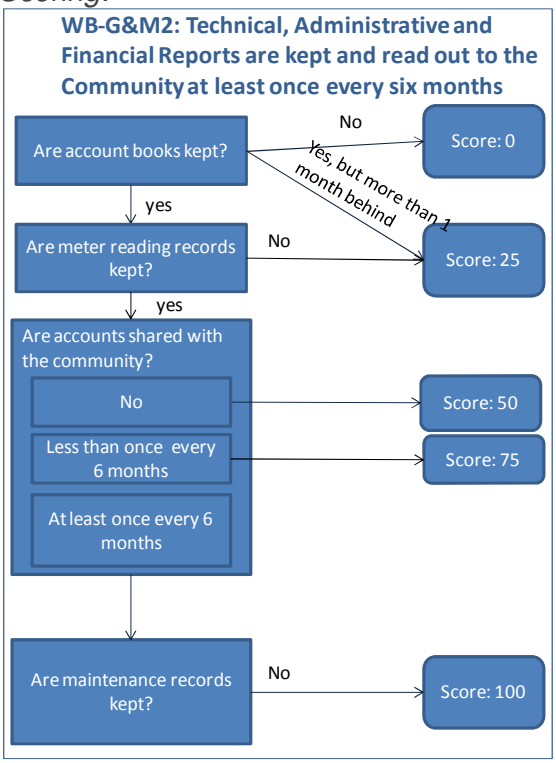

Assessment questions:

Code	Question	Answer
WB-G&M2-1	Are account books kept and up to date? (check)	Yes / yes, but more than 1 month behind / no
WB-G&M2-2	Are meter reading records kept? (check)	Yes / no
WB-G&M2-3	Are maintenance records kept? (check)	Yes / no
WB-G&M2-4	Last year, were records posted on the community notice board (or communicated in another way to all communities covered by the system)?	Every 6 months / less than every 6 months/ no

Indicator WB-G&M3: There is no political and chieftaincy influences in the composition of the membership of the WSDB

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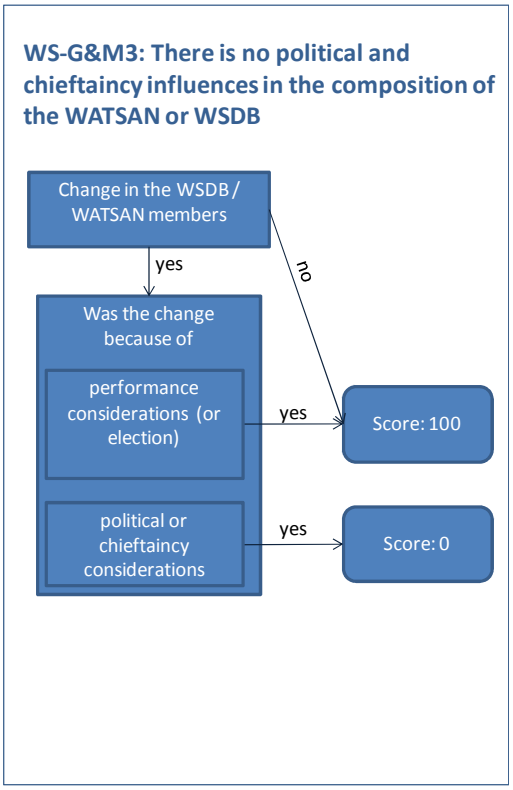

Assessment questions:

Code	Question	Answer
WS-G&M3-1	Has there been change in the WATSAN members over the last year?	Yes / no
WS-G&M3-2	If so, what has influenced this change? (if political or chieftaincy, than " yes" ; if something else, than " no")	Yes / no
WS-G&M3-3	If so, has the change been influenced by performance considerations (or re-election)?	Yes / no

Indicator WB-G&M4: WSDB meetings are organised regularly and minutes 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

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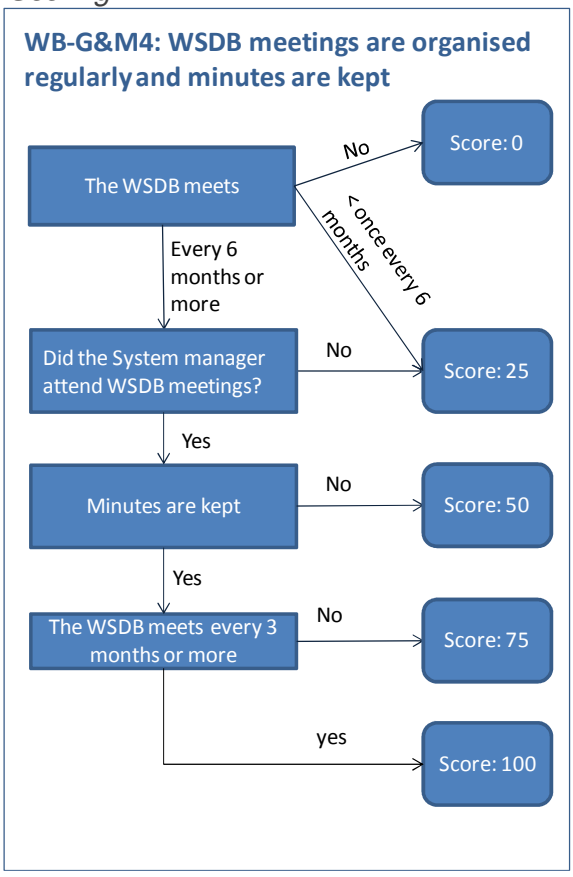

Assessment questions:

Code	Question	Answer
WB-G&M4-1	How often did the WSDB meet in last year?	Never / less than once every 6 months / every 6 months / every 3 months or more often
WB-G&M4-2	Did the System manager attend WSDB meetings?	always / sometimes / never
WB-G&M4-3	Were minutes kept from the meetings? (check)	Yes / no

Financial Managementindicators

Indicator WB-FM1: Annual income from water sales exceeds total annual expenditure

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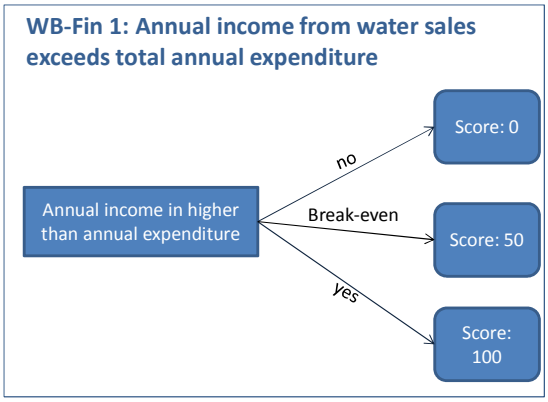

Assessment questions:

Code	Question	Answer
WS-FM1-1	What was last year's annual income (in GHC)? (check from records)	
WS-FM1-2	What was last year's annual expenditure (in GHC)? (check from records)	

Indicator WB-FM2: There is sound financial management, accounting and auditing

Sub-indicators:

- The WSDB has opened and manages 3 bank accounts according to the model bye-laws (p14-15):
  - Operational account: weekly payments into this account from water sales and other receipts. Regular operation and maintenance costs are paid from this account.
  - Capital account: to be used for major repairs, extension and rehabilitation. Monthly payment, no less that 20% of the net monthly revenue (after regular O&M has been paid). MMDA may allocate funds annually through its regular budgetary allocation to the capital fund.
  - Sanitation account: used to promote sound sanitation and hygiene practices, including household latrine construction. Monthly payment of at least 10% of the net monthly revenue. MMDA may allocate funds annually through regular budgetary allocation to the account.
- Books are kept (Model bye-laws. P 16).
- Auditing is carried out at least once every year (model bye-laws, p 16).

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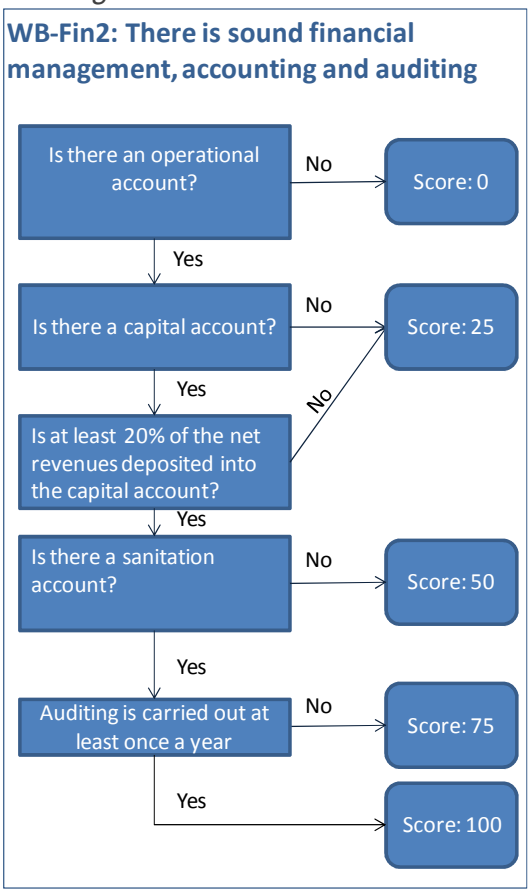

Assessment questions:

Code	Question	Answer
WB-FM2-1	Does the WSDB have an operational account?	Yes / no
WB-FM2-2	Does the WSDB have a capital account?	Yes / no
WB-FM2-3	How much money was deposited into the capital account last year (GHC)? (check)	
WB-FM2-4	Does the WSDB have a sanitation account?	Yes / no
WB-FM2-5	Is financial auditing carried out at least once a year?	Yes / no

Indicator WB-FM3: Tariff setting is taking into account the lifecycle costs

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):
    - 1) All water production expenses.
    - 2) All distribution expenses.
    - 3) Routine maintenance and other contracts.
    - 4) Repair work (by staff and private maintenance contracts).
    - 5) Water quality monitoring at plant level.
    - 6) Tariff collection expenses (vendors) (up to 20% of total tariff).
    - 7) Replacement cost (20% of 1-6).
    - 8) Rehabilitation and Expansion (5% of 1-6) total).
    - 9) Sanitation Fund (8% of 1-6).
    - 10) Contingency (2% of total (1) – (6)).
- Tariff has been approved by the MMDA (Small town, O&M, p16).

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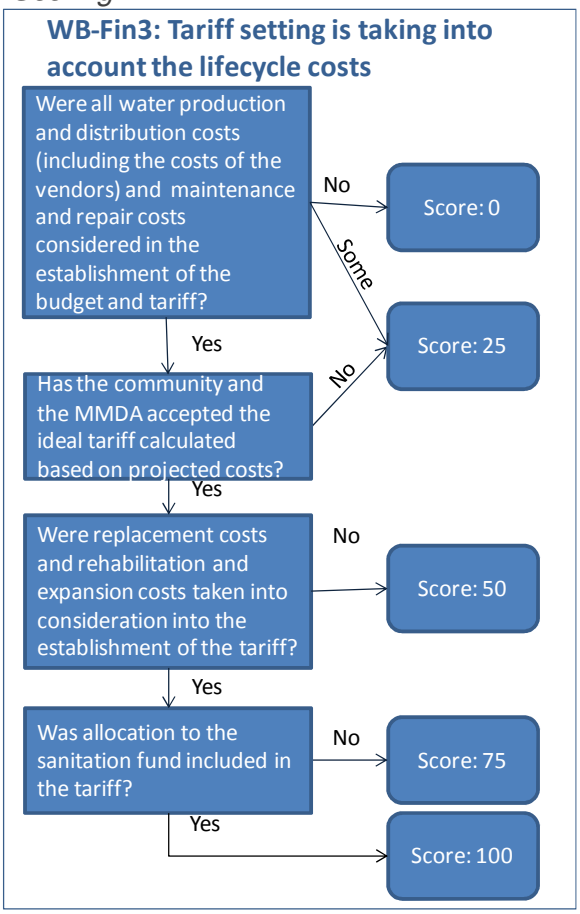

Assessment questions:

Code	Question	Answer
WB-FM3-1	Has an annual budget been prepared and a tariff set for this year?	Yes / no
WB-FM3-2	What is the standpipe tariff (GHp / m^3)?	
WB-FM3-3	What is the household connection tariff (GHp / m3)?	
WB-FM3-4	Were all water production and distribution costs (including the costs of the vendors) and maintenance and repair costs considered in the budget and establishment of the tariff?	Yes / no
WB-FM3-5	Were water quality monitoring costs at plant level considered in the budget and establishment of the tariff?	Yes / no
WB-FM3-6	Were replacement costs and rehabilitation and expansion costs taken into consideration into the budget and establishment of the tariff?	Yes / no
WB-FM3-7	Was allocation to the sanitation fund included in the budget and tariff?	Yes / no
WB-FM3-8	Has the community and the DWST/MMDA accepted the ideal tariff calculated based on projected costs?	Yes / no

Indicator WB-Fin4: Interference of the MMDA in the setting of the tariff does not affect the revenues

Sub-indicator

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 Regional Coordinating Committee ensure compliance (general guidelines, p 7-8).

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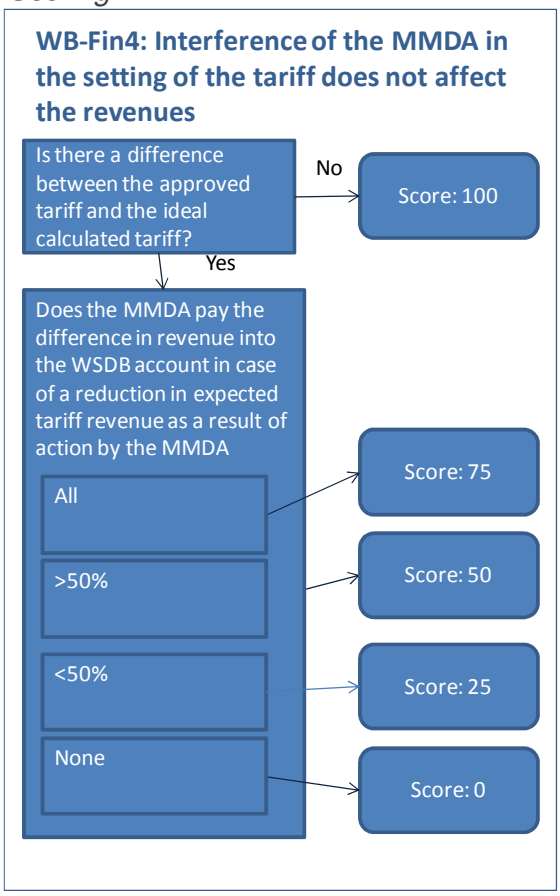

Assessment questions:

Code	Question	Answer
WB-FM4-1	Is there a difference between the approved tariff and the ideal calculated tariff?	Yes / no
WB-FM4-2	Does the MMDA 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?	All / > 50% / < 50% / none

Operational Indicators

Indicator WB-Op1: 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).

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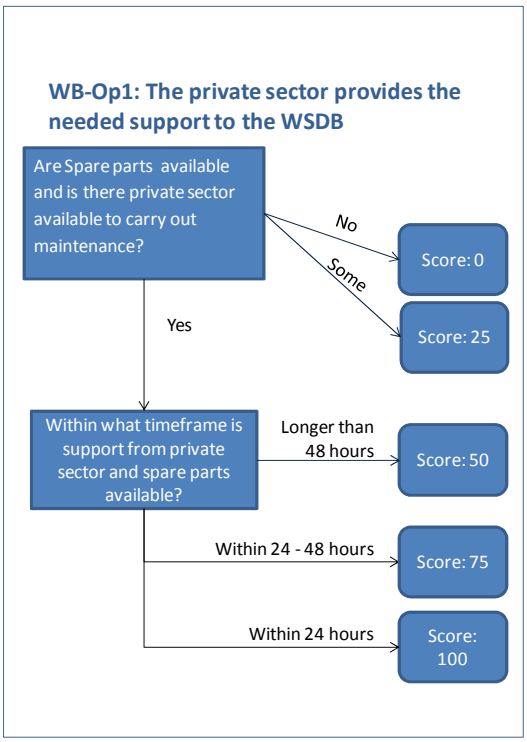

Assessment questions:

Code	Question	Answer
WB-Op1-1	Are spare parts available?	Yes / some / no
WB-Op1-2	Is support from the private sector for maintenance available?	Yes / some / no
WB-Op1-3	Within what timeframe is support from private sector and spare parts available?	Not within 48 hours / Within 48 hours / within 24 hours

Indicator WB-Op2: The WSDB prepares a work plan and budget for O&M and executes maintenance accordingly

Sub-indicators

- The WSDB prepares and implements Maintenance Schedules (small town O&M guidelines, p.6).
- Regular maintenance is carried out in accordance with the O&M manuals.
- System specific O&M maintenance manuals have been prepared and submitted by the consultant to the community (small town O&M guidelines, p.15).
- Relevant personnel have been trained in the effective use of the manuals (small town O&M guidelines, p.15).

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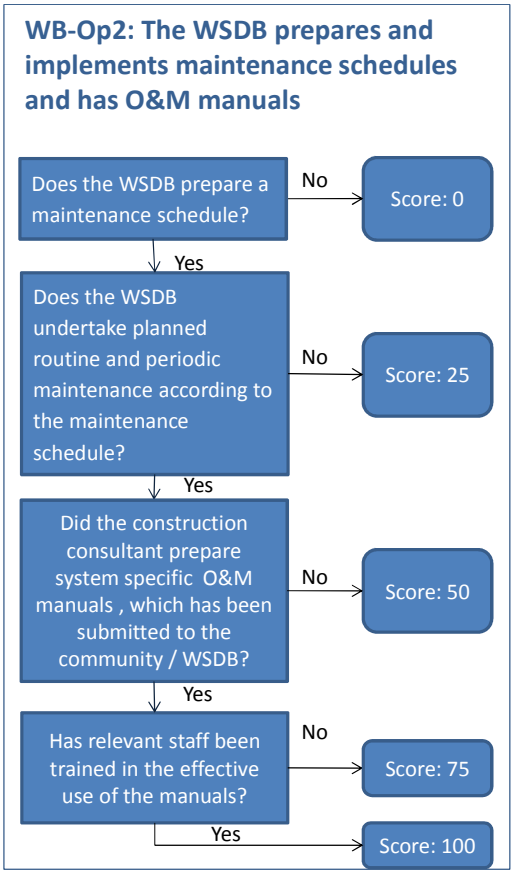

Assessment questions:

Code	Question	Answer
WB-Op2-1	Does the WSDB prepare maintenance schedules?	Yes / no
WB-Op2-2	Does the WSDB undertake planned routine and periodic maintenance according to the maintenance schedule?	Yes / no
WB-Op2-3	Did the construction consultant prepare systemspecific O&M manuals, which has been submitted to the community / WSDB?	Yes / no
WB-Op2-4	Has relevant staffs been trained in the effective use of the manuals?	Yes / no

Indicator WB-Op3: Water Quality Sampling and Analysis services are performed on half yearly basis by recognised institutions and paid for by each community through tariffs

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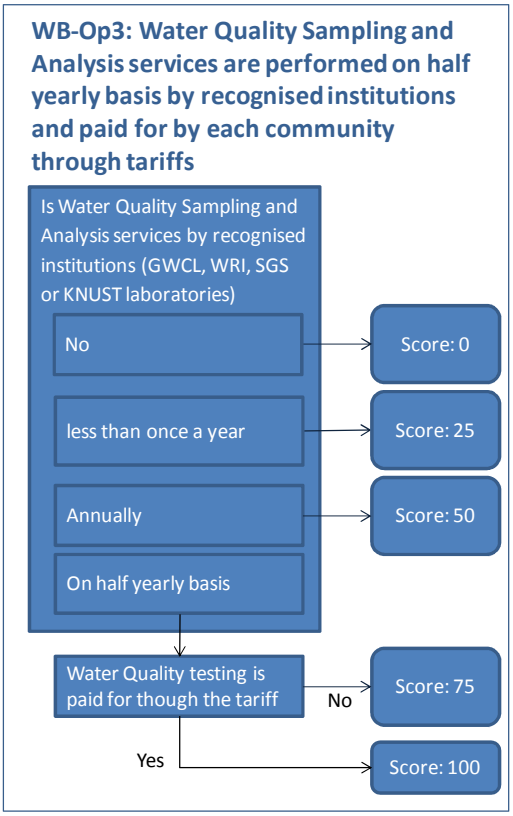

Assessment questions:

Code	Question	Answer
WB-Op3-1	Is Water Quality Sampling and Analysis services by recognised institutions (GWCL, WRI, SGS or KNUST laboratories)	No / less than once a year / once a year / on half yearly basis
WB-Op3-2	Is water Quality testing paid for though the tariff?	Yes / no

Part 4: Support function indicators

Indicator WS-Sup1 /WB-Sup1: DWST monitors O&M of water facilities in terms of financial, technical and administrative performance, including periodic audits, and provides support where needed.

Sub-indicators:

- Responsibilities of the MMDAs include:
  - To periodically audit WSDB and WATSAN accounts;
  - To support District Works Department (DWD)/DWST to provide technical support to WSDBs and WATSANs;

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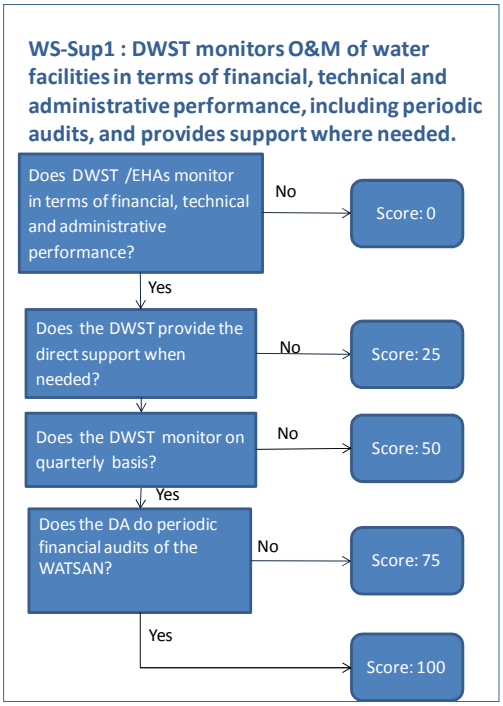

Assessment questions:

Code	Question	Answer
WS/WB-Sup1-1	Over the course of last year, has the DWST monitored O&M of water facilities in terms of financial, technical and administrative performance on a regular basis?	Yes / ad hoc / no
WS/WB-Sup1-2	Did the DWST provide the direct support when needed (monitoring performance of WATSAN / WSDB, giving technical assistance to WATSAN / WSDB,etc)?	Yes / no
WS/WB-Sup1-3	Did the MMDA / DWST do periodic financial audits of the WATSAN?	Yes / no

Indicator WS-Sup2- MMDA assists the community in case of major repairs and borehole rehabilitation.

Sub-indicator:

- Major repairs or borehole rehabilitation outside the technical and financial capability of the communities are undertaken with the assistance of the MMDA. This includes borehole flushing and redevelopment. (CWSA small community, O&M, p4).

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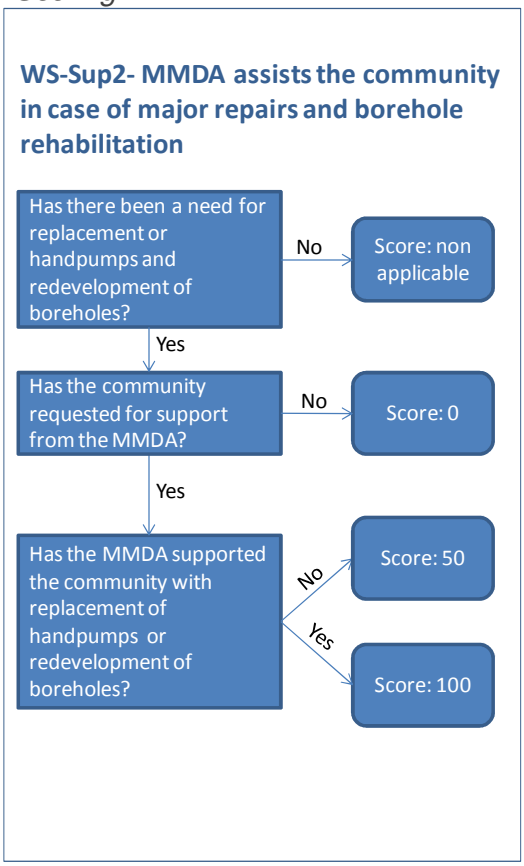

Assessment questions:

Code	Question	Answer
WS-Sup2-1	Has there ever been a need for major repairs or rehabilitation of facilities?	Yes /no
WS-Sup2-2	Has the community / WATSAN requested for support from the MMDA?	Yes /no
WS-Sup2-3	If yes, has the MMDA supported the community with replacement or hand pumps and redevelopment of boreholes?	Yes /no

Indicator SUP1: There is a well resourced DWST, consisting of 3 well qualified and experienced staff members, receiving the needed support by CWSA and MMDA.

Sub-indicators:

- There is a DWST consisting of 3 staff members (EHA, Engineer, community mobilisation officer).
- MMDA ensures that DWST members have access to facilities like computers, transport facilities, fuel, allowances (T&T) needed in order to do their job.
- Back stopping support from CWSA, including routine retraining of the DWST.

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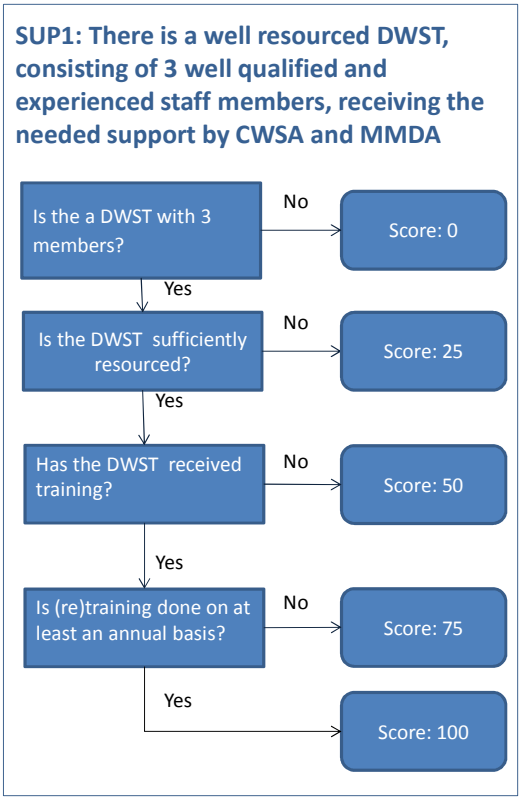

Assessment questions:

Code	Question	Answer
SUP1-1	Is there a DWST?	Yes / no
SUP1-2	When was the DWST established (year and month)?	
SUP1-3	Is there an engineer in the DWST?	Yes / no
SUP1-4	Is there a community development officer in the DWST?	Yes / no
SUP1-5	Is there an Environmental Health and Sanitation Officer (EHSO) in the DWST?	Yes / no
SUP1-6	Is the DWST sufficiently resourced to perform its functions? (in terms of transport, travel allowances, logistical facilities, like computers, etc)?	Yes / no
SUP1-7	Has the DWST received training?	Yes / no
SUP1-8	Is there at least annual (re-)training of the DWST?	Yes / no

Indicator SUP2: There are efficient monitoring and data flows

Sub-indicators:

- CWSA regional level collects and compiles data and feeds it into DiMESon quarterly basis (small comm., O&M, p 6).
- DWST submits quarterly MOM reports to the regional CWSA office. Regional CWSA office compiles quarterly MOM reports and feeds it into DiMES and submits it to CWSA HQ. (CWSA small comm., O&M, p 6).

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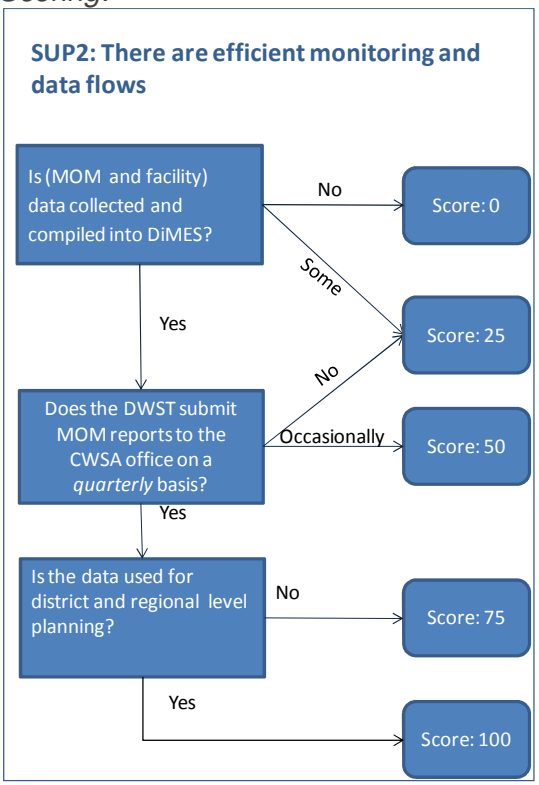

Assessment questions:

Code	Question	Answer
SUP2-1	Is facility data (static information about facilities) collected and stored in DiMES	Yes / some / no
SUP2-2	Is data on operation and maintenance (MOM) collected and stored in DiMES	Yes / some / no
SUP2-3	Does the DWST send MOM reports to the CWSA regional office on a quarterly basis?	Yes / occasionally / yes
SUP2-4	Is data used for district and regional planning?	Yes / no

Indicator SUP3: District Water and Sanitation Plan is incorporated into Medium Term Development Plans and budget of the assembly, which is used to guide implementation.

(General CWSA guidelines, p 9)

Sub-indicators:

- Participatory nature of the development of the District Water and Sanitation Plan.
- Presence of a District Water and Sanitation Plan in line with NDPC/CWSA planning guidelines.
- Plan incorporated into District Medium term development plan and budget.
- District Water and Sanitation Plan guides annual planning and implementation.

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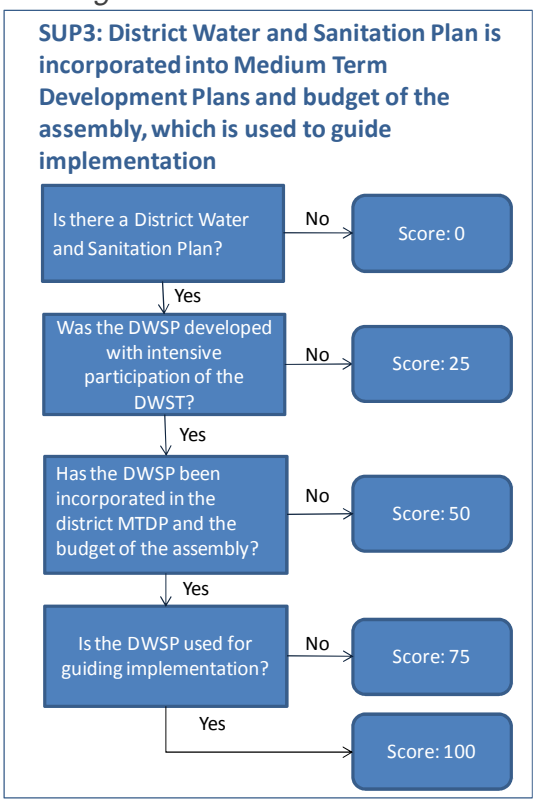

Assessment questions:

Code	Question	Answer
SUP3-1	Is there a District Water and Sanitation Plan (DWSP)?	Yes / no
SUP3-2	Was the DWSP developed with intensive participation of the DWST?	Yes / no
SUP3-3	Is the DWSP used to guide implementation?	Yes / no
SUP3-4	Has the DWSP been incorporated in the district MTDP and the budget of the assembly?	Yes / no

Indicator SUP4: Districts are able to allocate and utilise financial resources for water and sanitation services.

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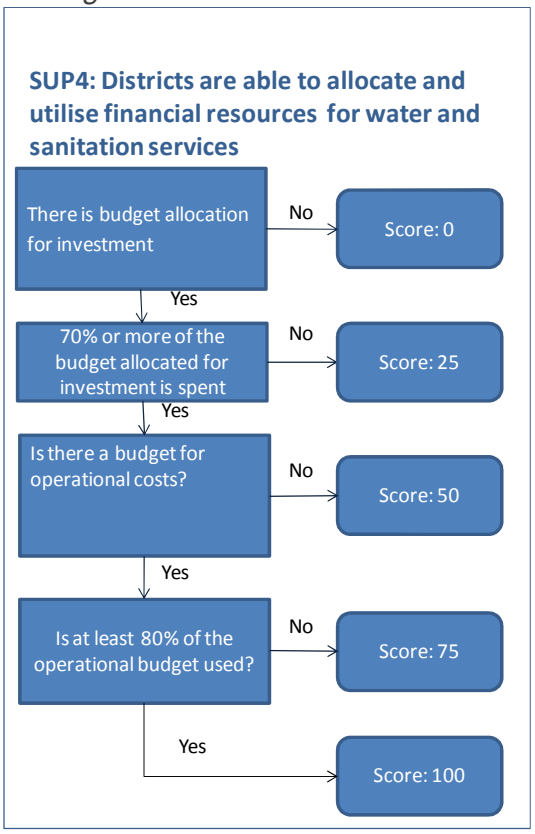

Assessment questions:

Code	Question	Answer
SUP4-1	What was the budget **allocated** on water and sanitation *operational activities* (transport, fuel etc) for last year? (GHC)	
SUP4-2	What was the budget **allocated** on water and sanitation *capital investment* for last year? (GHC)	
SUP4-3	What was the budget **spent** on water and sanitation *operational activities* for last year? (GHC)	
SUP4-4	What was the budget **spent** on water and sanitation *capital investment* for last year? (GHC)	

Indicator SUP5: Bye-laws for the WATSANs and WSDBs exist and are enforced effectively.

Sub-indicator:

- Each MMDA is responsible for providing legal backing for WATSANs and approve bye-laws proposed by WATSANs / WSDBs (general guidelines, p 9; small communities; O&M, p 4, small towns, O&M, p 17).

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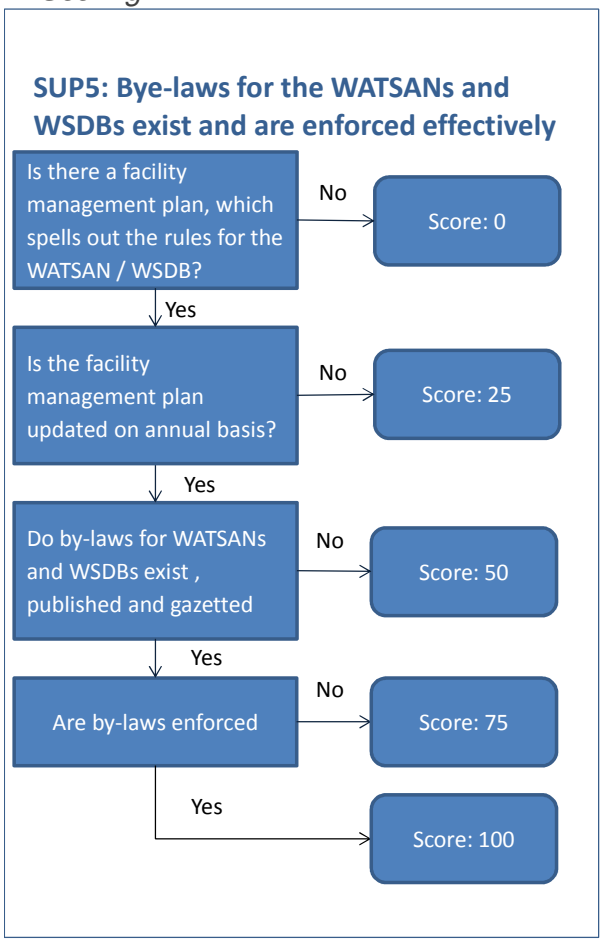

Assessment questions:

Code	Question	Answer
SUP5-1	Is there a facility management plan, which spells out the rules for the WATSAN / WSDB?	Yes / no
SUP5-2	Is the facility management plan updated on annual basis?	Yes / no
SUP5-3	Do by-laws for WATSANs and WSDBs exist in the district, which have been published and gazetted?	Yes / no
SUP5-4	Are by-laws revised every 2 years?	Yes / no
SUP5-5	Are by-laws enforced?	Yes / no

Indicator SUP6: NGOs and Civil Society Organisations (CSO) providing water facilities do so in coordination with the MMDA

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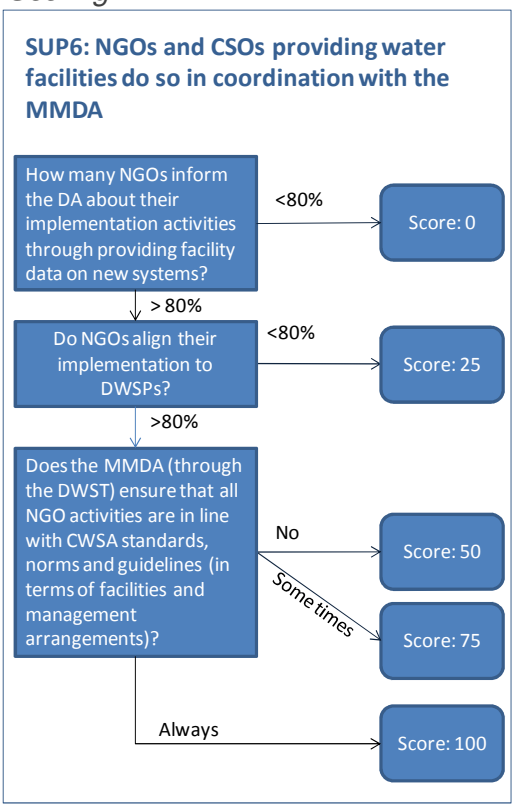

Assessment questions:

Code	Question	Answer
SUP6-1	How many NGOs are active in implementing Water and sanitation in the district?	
SUP6-2	How many NGOs inform the DA about their implementation activities through providing facility data on new systems?	
SUP6-3	How many NGOs align their implementation to DWSPs?	
SUP6-5	Does the MMDA (through the DWST) ensure that all NGO activities are in line with CWSA standards, norms and guidelines (in terms of facilities and management arrangements)?	Always / sometimes / never