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BASIC PRINCIPLES OF

SWAP

(STANDARDS IN WASH PROGRAMMING)

People in Need, Jan Faltus, February 2019





Intro & Rationale

The quality of WASH projects must be measurable by not only immediate results like infrastructure built or trainings provided but by long-term benefits, it provides to its final users. The following document describes the steps that should be taken in programming of interventions where a WASH component is present. It is applicable for project design, project review, capturing knowledge and learning. As not all standards will be relevant for all interventions, it should be used as menu choices. At the project planning stage, it should be decided which standards will be used and the quality of the intervention would be measured using these selected standards at 1. Proposal submission stage 2. Implementation stage (mid-term) 3. Finalization stage (reporting). A “project-specific” checklist will be created for every WASH project longer than 12 months.

QUALITY STANDARDS AND SUGGESTED ACTION OF PROOF

Applicable for **all projects**:

1. Stems from relevant sectoral strategies

(e.g. [PIN's Global Strategy for Nutrition Security](#) + country program strategy + [national sector strategy](#)).

Explanation: Follows strategy priorities, guiding principles

Indicator of compliance: Qualitative review of compliance with sector strategy and other local strategy documents

2. Uses Standard indicators ([Indikit](#)¹) or SPHERE standards

(emergencies) and complies with National WASH standards (if existent)

Indicator of compliance: Quantitative - Log frame includes at least one strategic/global indicator listed in Indikit (and/or other indicators listed in INDIKIT):

- number of children aged 10 - 24/ 59 months which in the past 2 weeks had more than 3 loose stools per day
- number of people using basic drinking water services
- number of caregivers following promoted WASH practices

3. Participatory design

Explanation: Assessment and planning involves three levels of stakeholders: a) service users; b) service providers; c) service authority;

Indicator of compliance: Qualitative – evaluation of intensity of involvement of all three stakeholder levels at planning stage, for example, at the service-user level, focus group discussions are held with men and women separately to understand gender dynamics and design the intervention?

4. Stakeholders capacity increase for improved good governance and/or private sector engagement

Explanation: Knowledge gained/held within the project is transferred to stakeholders through trainings, workshops.²

Indicator of compliance: Quantitative – number of trainings, workshops held for each subject (or more complex – qualitative: measure the level of knowledge gained by stakeholders)

5. Strengthens systems

Explanation: Includes (all or some of) nine blocks of [WASH systems](#)³. System strengthening approach ensures that the people, components and functions are in place to deliver WASH services. The WASH system includes all the actors (service users, providers and authorities) and all the factors (infrastructure, finances, policies and environmental conditions) that affect and drive the [system](#)⁴.

Indicator of compliance: Qualitative: measure to what extent nine building blocks of WASH systems were applied

² For example: increased capacity of WASHCos/District Water Offices in technical, administrative and financial water scheme management, increased capacity of health extension workers for hygiene and sanitation promotion (through small doable actions); increased capacity of local entrepreneurs to produce and promote hygiene and sanitation marketing; increased capacity of district/regional water offices to monitor water scheme functionality and manage databases etc.

³ Annex 4

⁴ For service delivery approach criteria refer to Annex 2

¹ Every project should include at least one Global indicator (www.indikit.net)

If there is **hygiene and sanitation promotion** component:

6. Includes formative research in order to define an effective Behavior Change Strategy on a limited number of behaviors

Explanation: Do not assume awareness raising is enough to change behaviors. Refer to [PIN's Behavior Change Toolkit](#) and conduct formative research (e.g. a [Barrier analysis](#)) to understand the key barriers and motivate that can really change behavior. The priority behaviors are:

- Hand washing in critical times⁵
- Use of improved sanitation facility⁶
- Use of safe water⁷
- Clean living areas for infants: % of households with children aged 6-23 months with no domestic animals present in the children's living areas⁸
- Feeding of fresh or reheated food: % of mothers of children aged 6-23/59 months who during the previous day fed their children only foods that were freshly prepared or reheated to boiling point⁹

Indicator of compliance: Qualitative – review if design of promotion activities/campaign is based on BA findings – bridges to activities, activities (Small doable actions).



5 <https://www.indikit.net/indicator/2-wash/68-hand-washing-practice>

6 <https://www.indikit.net/indicator/2-wash/75-use-of-improved-sanitation-facility>

7 <https://www.indikit.net/indicator/2-wash/51-access-to-drinking-water>

8 <https://www.indikit.net/indicator/2-wash/276-absence-of-domestic-animals-in-children-s-living-areas>

9 <https://www.indikit.net/indicator/2-wash/277-feeding-of-fresh-or-reheated-foods>

If there is **water infrastructure** component:

7. **Appropriate technology, technical feasibility (TAF) and quality**

Explanation:

- Create technology applicability framework (TAF) profile according to TAF guidelines¹⁰ before implementation starts
- Provide necessary studies, designing, surveying and researches (hydro)geological, geodetical, civil engineering)
- Carry out all technical calculations (e.g. delivery head, pressure, friction loss) based on known data (source yield + required daily water demand)

Indicator of compliance: Quantitative: provide TAF profile, studies and technical calculations

8. **Water quantity at household level meets national or SPHERE standards**

Explanation: Measure daily water usage through household surveys

Indicator of compliance: Quantitative. Provide data on amount of water available for users.

9. **Water quality at consumption point meets national or SPHERE standards**

Explanation: provide water quality testing either basic or complex:

- Basic: Measure water quality (biological) at consumption point using portable lab or Colilert (select realistic but representative sample of households e.g. 5 – 10%)
- Complex: Conduct a chemical and bacteriological testing at every point of extraction (e.g. water point, well)

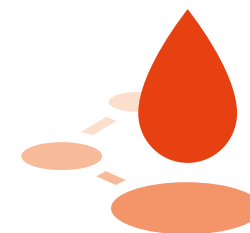
Indicator of compliance: Quantitative: provide results of tests.

10. **Infrastructure¹¹ remains user beneficial¹² - The multiple factors of sustainability are addressed**

Explanation: beneficial in terms of technical¹³, financial and institutional sustainability¹⁴

- Financial sustainability: Organize Cost recovery analysis (Life cycle cost analysis - LCCA) session with stakeholders in order to set up viable financial system (tariff)
- Enter the list of new or rehabilitated water sources into PIM database through ArcGIS system. Ground infrastructure is included in PIM database should be monitored within two or five years (short term/long term sustainability. Focus on measuring gaps in service provision within given time span (down time), analyze reasons of breakdown and measures of re-entering into the service.

Indicator of compliance: Quantitative – water sources are inserted in the database and monitored regularly (2/5 years). Measure ratio of functional and non-functional sources. Tariffs supported and based on Cost recovery analysis (provide copy of analysis). Qualitative – assess reasons for frequent defects (or continuous functionality), analyze and review tariff.



¹¹ Mostly water source

¹² For 2 years (minimum sustainability) or 5 years (long-term sustainability) in 70 % of cases.

¹³ See point 7

¹⁴ Adequate operation & maintenance support



If there is private or institutional **sanitation infrastructure** component:

11. **Safe excreta disposal is practiced according to national or SPHERE standards**

Explanation: Carry out latrine and other sanitation facility screening (within baseline/endline survey) focusing of following criteria¹⁵:

- sanitation infrastructure coverage,
- quality,
- accessibility,
- continuity and exclusivity of use,
- privacy,
- safety and security,
- children focus,
- maintenance and sustainability.



Indicator of compliance: Quantitative: number of infrastructure built according to standards + provide data on ODF status in target area

If there is **advocacy component**:

12. **Creates enabling environment (Good water governance)**



Indicator of compliance: Qualitative: evaluate impact of promoting selected issue (with target group – mostly authority, government) against PIN water governance strategy outline¹⁶

¹⁵ For detailed description, refer to the annex 1.

¹⁶ In Annex 3.

ANNEX 1 - EXPLANATORY NOTES:

Indicators for the results related to access to safe drinking water should capture the following criteria:

1. water in sufficient quantity,
2. safe,
3. reliable,
4. affordable,
5. accessible,
6. satisfying,
7. exclusivity of use,
8. sustainable.

Sufficient quantity:

to access enough water to cover basic minimum or standard requirement for drinking, cooking and personal hygiene all year round at the end of the project. Water should also be sufficient to cover needs of domestic animals and gardening. In practice, the water does not to be of drinking quality for other purposes than drinking, food preparation, and hygiene.

Safe:

whilst the official definition for an improved source makes direct reference to the need for it to be protected from contamination and "...in particular from contamination with faecal matter", this is not always the case. Tests should be conducted to ensure the water is safe from biological contamination: 0 faecal coliforms per 100ml of water. In some areas of intervention, chemicals (nitrates, fluoride, pH) and physical parameters (conductivity, turbidity) can also be very important. Ex: arsenic in Bangladesh. In many contexts, the main contamination occurs between the point of extraction and the point of use: Water quality should then be measured at the point of extraction and use (household level). If possible, as measuring biological contamination at the point of use can be resource and time-consuming. If not possible, then one should measure compliance to water safe transport and storage measures.

Reliable:

access to safe water should be secured all year round. In rural areas in particular, seasonality is important as many sources dry during the dry season or are inaccessible during the rainy season. Many people living in low income urban settlements may have access to water for a few hours per day, or even per week, at inconvenient times of the day or night. Discontinuity must be less than 2 days per 2 weeks (notion of continuity of service)

Affordable:

for financial viability, cost-recovery models by water tariffication are often put in place. It needs to be ensured that mechanisms are defined to prevent financial exclusion of the most vulnerables (specific work with the water committees to define exemption criteria)

Accessible:

distance to fetch water but also time spent queing in front of the borehole/hand dug well (if too long, people might revert back to unsafe water point)

Satisfying:

despite water being safe to drink, users might refuse to use a specific water point because they dislike the taste of it (ex: iron taste for instance)

Exclusivity of use:

if the aim of the programmes is to reduce diarrheal disease incidence, then people should not combine or revert back at all to unsafe sources (even once would be enough to mitigate the impact of providing access to a safe source ; because of direct contamination by ingestion of unsafe water but also afterwards because then the water recipients used would be contaminated). Cost of water must be taken into consideration; water people use for laundry (or personal hygiene) is often unsafe.

Sustainability:

sustainability being a very complex matter, it can only be measured using a scoring tool which aggregate the different elements to be taken into account: pump caretakers who can manage routine maintenance, sound administration of the water point (bookkeeping, cost-recovery scheme), access to support services for the big repairs, existence of an accessible spare part chain for the main elements.

The indicators chosen for the results related to the sanitation component “Safe disposal of feces” should capture the following criteria:

9. sanitation infrastructure coverage,
10. quality,
11. accessibility,
12. continuity and exclusivity of use,
13. privacy,
14. safety and security,
15. children focus,
16. maintenance and sustainability.

Sanitation infrastructure coverage:

To be effective in reducing diarrheal diseases incidence, sanitation infrastructure coverage should be adequate to number of users (it takes only a few households practicing open defecation to contaminate the environment). This is why open free defecation status is important.

Quality:

many latrines are collapsing during or just after their first rainy season, so quality is primordial.

Accessibility:

no more than 50m from dwelling.

Continuity and exclusivity of use:

many latrines built do not have roof which means they are not used during the rainy season, partial relapse to open defecation contaminates the environment and renders latrines useless

Privacy:

often, women are not using latrines because of a lack of privacy. Ensuring a lock (even if only two nails with a string) is in place will impact latrine rate of use by half of the population.

Safety and security:

Pits under latrines can be several meters deep so the slab (platform) should be solid and strong to prevent falling into the pit, especially children. Collapsing superstructure also deters people from using the latrine. Especially women should not be afraid to use the latrine after dark. Location should be within the compound and close to the house, with path ideally lit up.

Children focus:

children faeces are more harmful than those of adults (their immune system being more immature), plus, young children often defecate directly inside the household compounds, increasing the risk of contamination.

Maintenance and Sustainability:

evaluations show that latrines are often abandoned because of a lack of maintenance (they become dirty quickly). Also, they can filled quickly and need then to be decommissioned or a new latrine has to be digged elsewhere.

The indicators chosen for the results related to sound hygiene practice should capture the following criteria:

17. The knowledge behavior gap

The knowledge behavior gap

people are able to name the different messages received about hygienic behaviours but have not adopted them, the indicators chosen should distinguish in between knowledge about hygiene practices and the effective adoption of these practices. This can be done only through observation as self-report gives results that are 2 to 3 times higher than shown by actual observations in homes.

ANNEX 2 – SERVICE DELIVERY APPROACH CRITERIA

Professionalization of community management

Community management entities supported to move away from voluntary arrangements towards more professional service provision embedded in local and national policy, legal, and regulatory frameworks.

Recognition and promotion of alternative service provider options

A range of management options beyond community management, such as self-supply and public-private partnerships, formally recognized and supported in sector policy.

Monitoring service delivery and sustainability

Monitoring systems track indicators of infrastructure functionality, service provider performance, and levels of service delivered against nationally agreed norms and standards.

Harmonization and coordination

Improved harmonization and coordination among donors and government, and alignment of all actors (both government and nongovernment) with national policies and systems.

Support to service providers

Structured system of direct (post-construction) support provided to back up and monitor community management entities and other service providers.

Capacity support to local government

Ongoing capacity support provided to service authorities (typically local government) to enable them to fulfil their role (planning, monitoring, regulation, etc) in sustaining rural water services.

Learning and adaptive management

Learning and knowledge management supported at national and decentralized levels to enable the sector to adapt based on experience.

Asset management

Systematic planning, inventory updates, and financial forecasting for assets carried out, and asset ownership clearly defined.

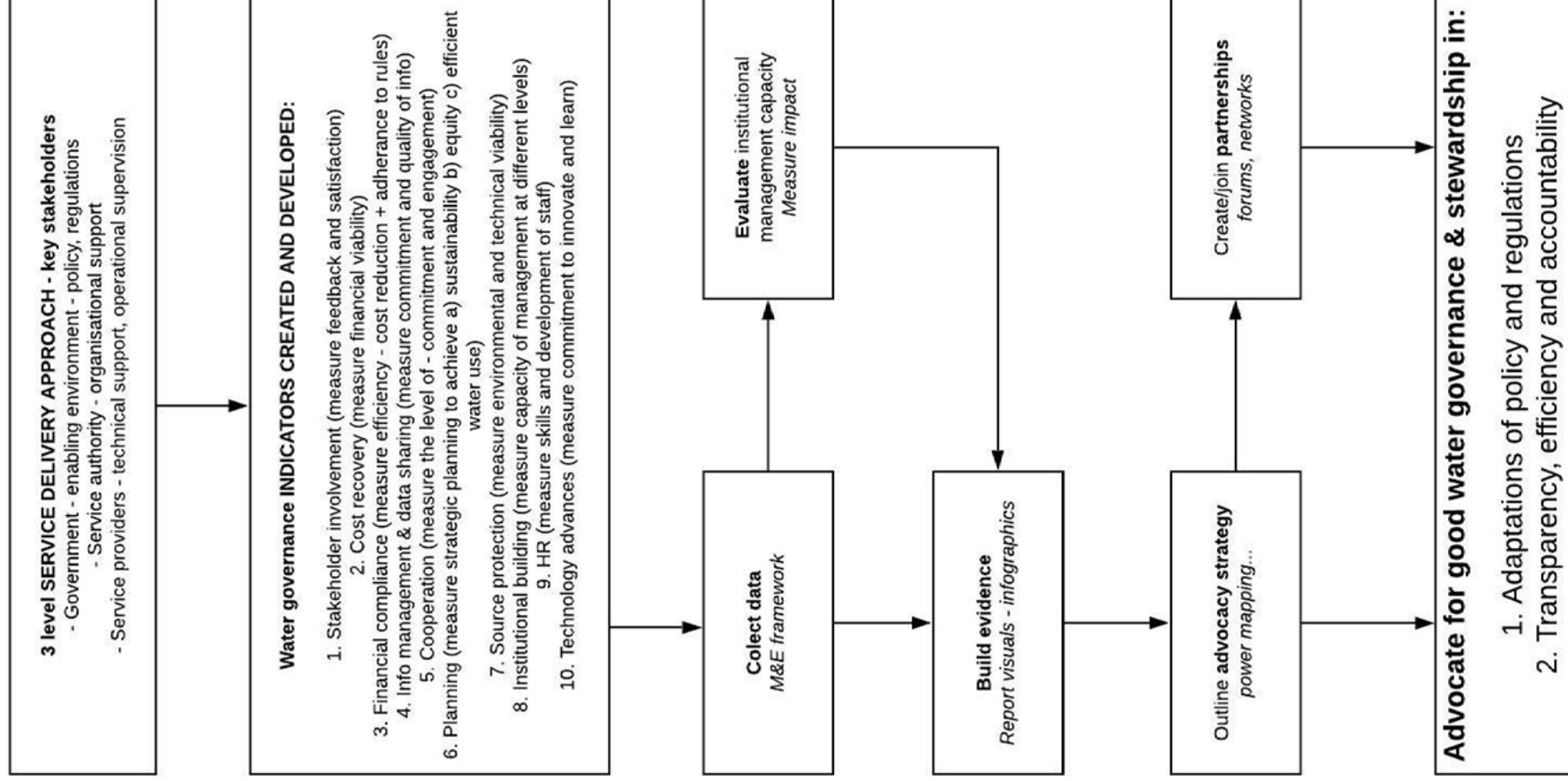
Regulation of rural services and service providers

Regulation of the service delivered and service provider performance through mechanisms appropriate for small rural operators.

Financing to cover all life-cycle costs

Financial frameworks account for all life-cycle costs, especially major capital maintenance, support to service authorities and service providers, monitoring and regulation.

PIN WATER GOVERNANCE STRATEGY OUTLINE



ANNEX 4 – 9 WASH BUILDING BLOCKS

WASH System



Policy & legislation: sector policy & strategy, legal framework, norms & standards, by-laws



Planning: planning & budgeting, capacity & frameworks for planning



Institutions: coordination, roles, responsibilities, capacity, sector mechanisms



Finance: flows & responsibilities, clear frameworks including life-cycle costs & source identification



Infrastructure: development & maintenance, project cycles, asset management, roles



Regulation & accountability: accountability mechanisms, regulatory framework & capacity



Monitoring: framework & routine implementation, service levels, use of data



Water resources management: allocation & management of resource abstraction, water quality, coordinated efforts



Learning & adaptation: capacity & frameworks to capture and feedback lessons learned, update & adapt various building blocks

Nine essential building blocks of the wash system, as defined by IRC Wash