Fish-Bone Analysis

Sustaining Water, Sanitation & Hygiene Services for Long Term

There are numerous challenges to achieving sustained, universal access to safe water and sanitation. Sustaining Water, Sanitation and Hygiene Services for the Long-Term is one of the majors. Inadequacy, inaccessibility, lack of scale, integration etc. are the common problems which are to be concerned at the basic, but sustaining planning to support and catalyze this initiative is harder and should be focused simultaneously.

Focus over the past decades has been on water and sanitation infrastructure. This approach is costly in up-front capital, operations and ongoing maintenance. It requires a highly educated, skilled workforce and often doesn't reach the most marginalized communities, nor address specific contextual challenges. Sustained operation and maintenance of this infrastructure has been challenging. For example, 30% of water hand-pumps in Bangladesh are not working (Water Aid, 2018). The failure of community water and sanitation systems is often a failure of operation and maintenance, rather than a failure of the basic technology.

This implies the fact that instead of numerous initiatives to mitigate the WASH needs, the attempts are failing to accomplish its target just for want of long-term proper planning. Addressing this failure requires learning from the successes of those infrastructure that have been used and maintained for many years. Thus, this review attempts to scrutinize the factors behind the inability of long-term sustainability of WASH services through the Fishbone tool (Figure 1). These are the generalized roots to this global problem, which are to be concerned about and addressed accordingly in order to reach the ultimate goal of Sustainable Development: 'Sustainable management of Water and Sanitation for all.' (Tobergte & Curtis, 2013)
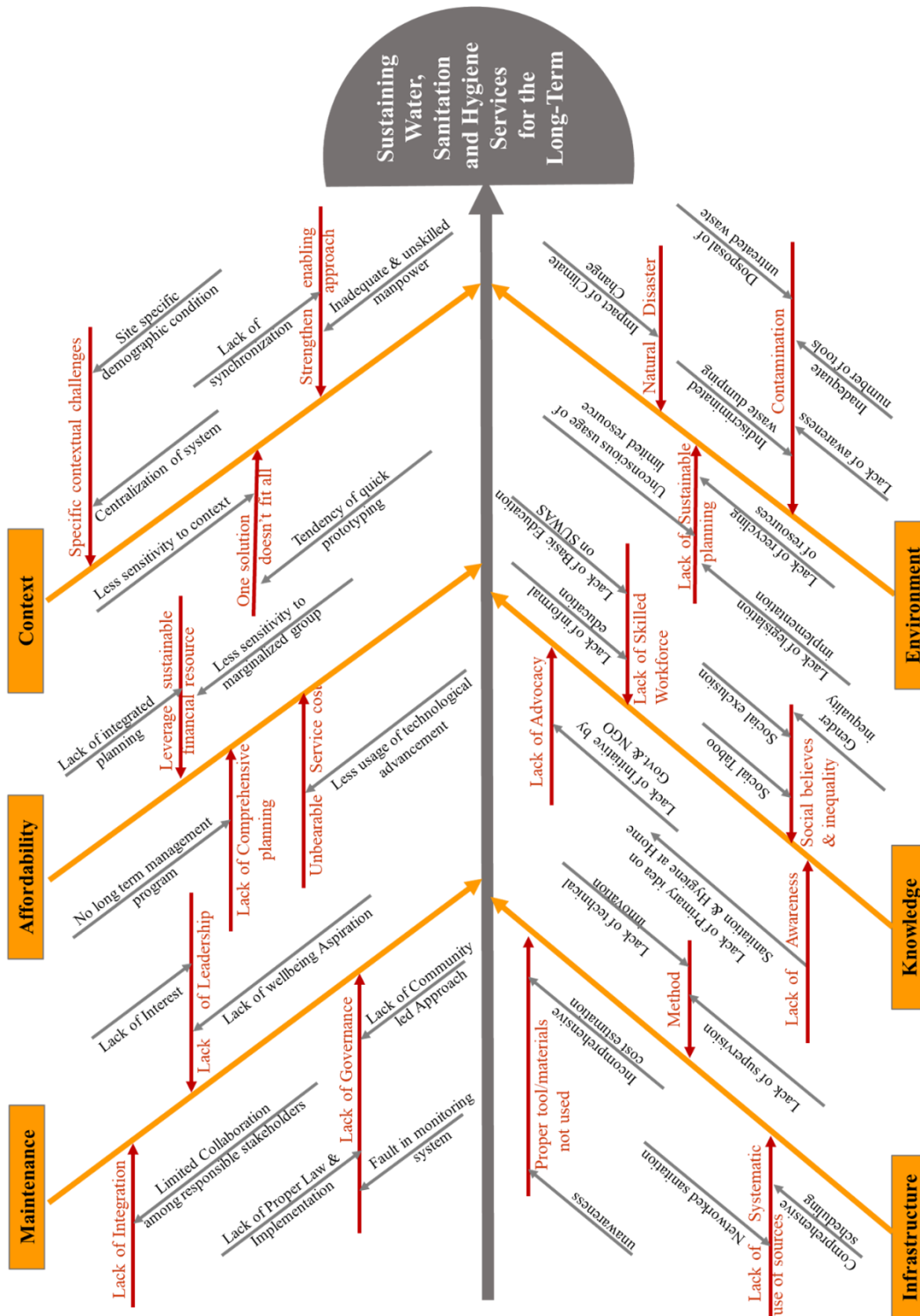
Figure 1: Fishbone Diagram of Sustaining WASH for the long term

This Fishbone analysis is based on 6 headings substantially to portray the fact of long-term sustainability of WASH. Each part has been branched further to scrutinize the issue. Here they are described briefly.

1. Environment:

    Less durability due to environmental hazards are prominent. Often supplied WASH services seems to fall due to failure to cope up with the environmental challenges.

    1.1. Contamination:

    The contamination of natural resources is threatening. Lack of awareness lead to disposal of untreated waste to the environment. As well as inadequacy in the tool numbers forces the people to contaminate the environment with indiscriminate waste disposal. Resulting into declining condition of natural resources like surface water, ground water etc.

    1.2. Natural Disaster:

    Natural disasters are common and are important concerns for this era of climate change. The WASH services often fail to be strong enough to sustain and adopt to remain usable during natural disasters.

    1.3. Lack of Sustainable planning:

    The stakeholders often lack the sustainable long-term planning for the services. To most of them provision of the WASH services is the end of the need, whereas the most important part lies in the later process. Unconscious usage of limited resources is leading the environment to ultimate threat. And the lack of legislation implementation is the key catalyst behind this. Whereas proper knowledge and initiative to recycling the resources for long term is also absent in most cases.

2. Knowledge:

    Lack of knowledge is the root which consecutively gives birth to all the other issues. Since it is the proper knowledge on anything which acts as the inner force to overcome any obstacle.

2.1. Lack of Awareness:

The lack of awareness begins with the inadequacy of primary WASH idea at home. The social system often makes it less important to exchange knowledge on the primary and basic idea of WASH to the children within the family, even being the first institution.

2.2. Social Believe & Inequality:

The social system and prevailing believe many times lead to improper usage and maintenance of the WASH services. There are socio-cultural norms and taboos leading to inequality and less durability of the services.

2.3. Lack of skilled workforce:

At its core, we need to increase skills and knowledge of people to use and maintain the technology and/or service. The lack of skilled workforce to implement and maintain the process is a serious constraint to the sustainability of WASH services.

2.4. Lack of advocacy:

The deficiency in advocacy for improved people's integration and consciousness is another barrier for the durability.

3. Infrastructure:

This is at the center of the failure loop. The inconvenience of the infrastructures affects the long-term durability of the services to a great extent.

3.1. Method:

The methods used for service provision is often cheap, inconvenient and mass produced, while the need for context specific, technologically updated is huge. Lack of technical innovation as well as the absence of proper and skilled supervision thus affects the method.

3.2. Lack of systematic use of sources:

There is a bog gap in limit of resource usage and the wastage of it. Since there is limited

Resource with unlimited need, networked WASH service can affect the long-term plan to a great extent. Integration is the key with comprehensive scheduling.

3.3. Proper tool/materials not used:

Often the proper tools for sustainable WASH service provision is not used. Lack of financing, corruption, incomprehensive cost estimation and last but not the least, unawareness results into improper usage of tools.

4. Context:

WASH services are not universal. The climate, culture, societal need etc. vary from place to place as well as the WASH service demands to be contextual.

4.1. Specific Contextual Challenges:

Each context possesses some specific challenges. Some deal with affordability, while the other with climatic hazards. Thus, the WASH service should also coincide with the site-specific conditions. Decentralization of the system can help in being contextual.

4.2. Strengthen enabling approach:

Users should be enabled. It is the stakeholder who retain the substantial hold for the sustaining term of the WASH services. Lack of synchronization, inadequate and unskilled manpower are the barriers in this path.

4.3. One solution doesn't fit all

There cannot be a generalized solution for all the problems. Selection of water and sanitation products and services – including household-level solutions – which are affordable to implement, operate and maintain and appropriate to the context.

5. Affordability:

The affordability of the services is of great concern. Instead of well-equipped WASH services it can remain unserved for want of affordability of the target group.

5.1. Leverage sustainable financial resources:

The fact of financial resources is often ignored. Lack of integrated planning, less sensitivity to marginalized group lead to this impact.

5.2. Lack of comprehensive planning:

There is merely any comprehensive long-term planning. Instant solutions are frequently preferred. While long term management program may affect the sustainability.

5.3. Unbearable service cost:

The matter of service cost is merely considered. Besides the lack of usage of technological advancement turns out with unbearable service cost for most of the users.

6. Maintenance:

Maintenance is the root of long-term planning. This the sector which proves the WASH provision as a continuous process.

6.1. Lack of Integration:

There is seldom collaboration among the stakeholders to maintain the WASH. This limited cooperativeness results into individuality withing a complex network of WASH.

6.2. Lack of Leadership:

The social settings results into lack of interest on this issue which shallow downs the proper leaders. The lack of wellbeing aspiration to work for the long-term sustainability of WASH is alarming.

6.3. Lack of Governance

There is a serious lack of proper law and implantation process to sustain what is provided. The fault in monitoring system acts as a catalyst. Besides the lack of community led approach makes it more difficult to govern and maintain the Water and sanitation services to sustain in the long run.