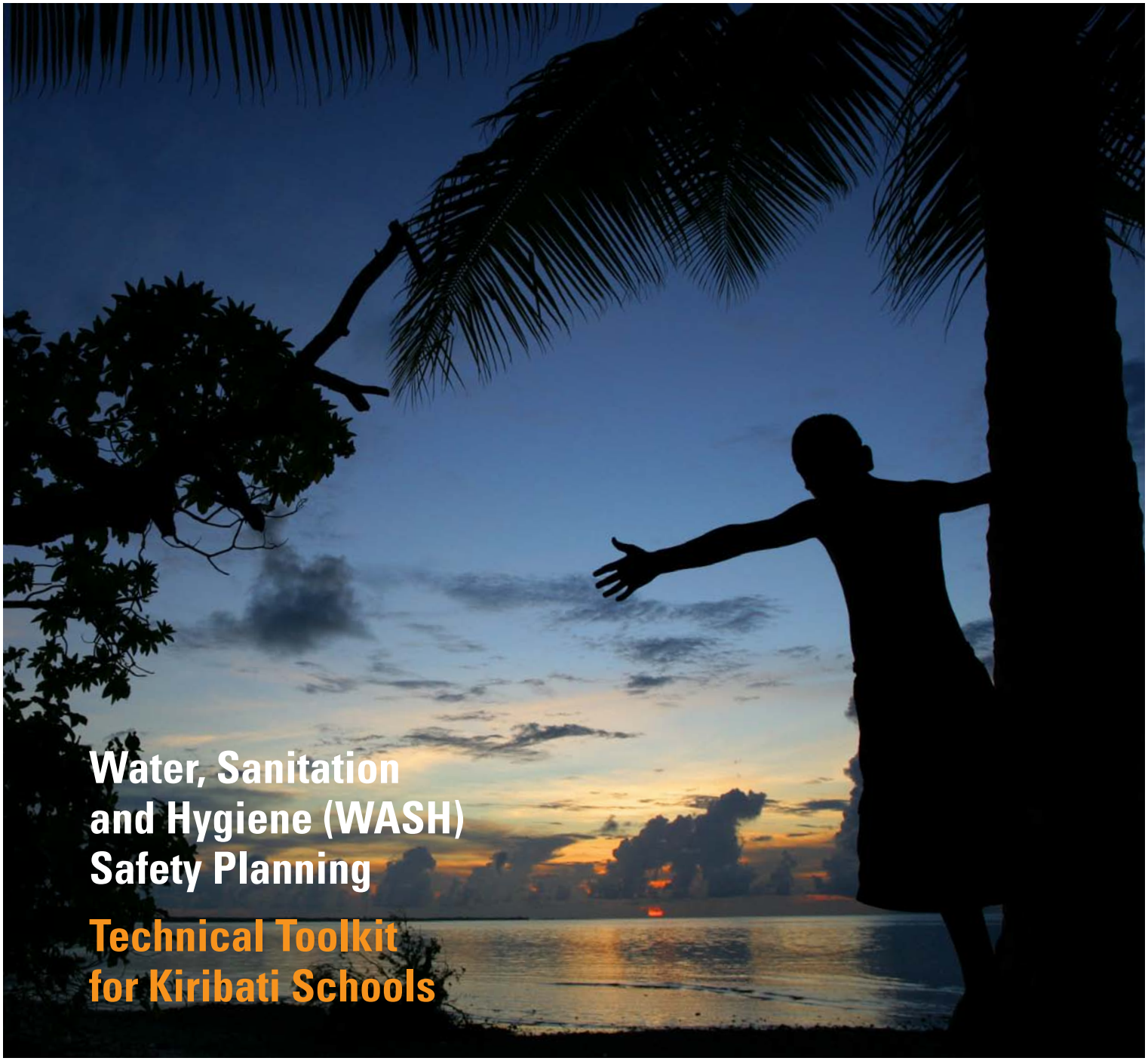
unicef

FRAMEWORK



Water, Sanitation and Hygiene (WASH) Safety Planning

Technical Toolkit for Kiribati Schools

E/S/R THE SCIENCE BEHIND THE TRUTH

DISCLAIMER

The Institute of Environmental Science and Research Limited (ESR) has used all reasonable endeavours to ensure that the information contained in this client report is accurate. However ESR does not give any express or implied warranty as to the completeness of the information contained in this client report or that it will be suitable for any purposes other than those specifically contemplated during the Project or agreed by ESR and the Client.

CONTENTS

01 INTRODUCTION

1.1 WASH IN SCHOOLS

Children have the right to safe water, adequate sanitation and good health. Healthy school environments, where children spend most of their day, are essential for child development and learning.

The goal for schools in the Republic of Kiribati is to reach the minimum non-technical standards for water and sanitation, as set out in the Kiribati Ministry of Education's *National Infrastructure Standards for Primary Schools* (MoE, 2011).

This ***WASH Safety Planning Technical Toolkit*** is designed to provide technical support to school water, sanitation and hygiene (WASH) interventions, as directed by the *National Infrastructure Standards* and implemented through the *School Improvement Plan* (SIP) initiative with support from the *Three Star Approach for WASH in Schools* (UNICEF, 2013). The ***Toolkit*** is presented in a form that will enable WASH facilitators to guide school communities to make their own informed choices of appropriate infrastructure improvements, and improve management practices and personal behaviours.

1.2 WASH SAFETY PLANNING FRAMEWORK AND TECHNICAL TOOLKIT

In response to the successful triggering of communities to improve health outcomes through improved sanitation practices through CLTS[1] and the *Three Star Approach for WASH in Schools*, the ***WASH Safety Planning Technical Toolkit*** will enable school communities to consider the risks to health and the environment from water, sanitation and hygiene practices as a package, and to consider a corresponding package of WASH risk management actions.

The framework for WASH safety planning is not new in itself, following the internationally-accepted health risk assessment and management approach for safe water, known as Drinking Water Safety Planning, which is practiced throughout the Pacific islands (WHO, 2010). As with Drinking Water Safety Planning, WASH safety planning promotes community leadership, participation and empowerment, enabling communities to decide on and achieve their own WASH solutions, using local materials and skills where possible.

The framework (Figure 1) provides a logical set of discussion points for the school community[2],

---

1 Community Lead Total Sanitation

2 The Ministries of Education, Health and Medical Services and Public Works and Utilities should also be involved in the preparation of a school WASH Safety Plan because these agencies have important regulatory responsibilities.

starting with describing the entire existing WASH system (people, facilities, available resources and environment), and noting what is already being done to reduce the chance of people becoming sick or contaminating the environment. These good things need to be acknowledged and continued. Weaknesses in the existing WASH system that could result in people getting sick or the environment being contaminated are identified, and a plan is developed to address them. Once the improvements are made, the school community commits to on-going actions to maintain the improved system. They also plan in advance what they will do if something does go wrong.

The following sections describe in more detail each of the steps in the framework, and refer to additional support available in the form of good practice guides. This framework document and the guides collectively make up the ***WASH Safety Planning Technical Toolkit.***

The content of this ***WASH Safety Planning Technical Toolkit*** is equally applicable to the wider community, although there may be other technical options available to communities that are not suitable for schools, and therefore not in the *Menu of Options* good practice guide.

Figure 1: WASH Safety Planning Framework

Having worked through the WASH safety planning process, a school community will have developed and documented its tailor-made WASH safety plan that becomes a focal point for the school community guiding its day-to-day actions and its incremental improvement programme.

1.3 WHO IS THE TARGET AUDIENCE

The ***WASH Safety Planning Technical Toolkit*** is aimed at WASH sector specialists and project officers or facilitators who are working with school communities. It assumes a basic level of public health and environmental science understanding.

There are field resources available for many of the good practice guides that will encourage school communities to engage and take charge of deciding and achieving their own WASH solutions.

02 UNDERSTANDING THE SITUATION AND SETTING GOALS

Ready, steady, go – but from where to where, and who decides?

WASH safety planning starts with understanding the current WASH situation from the many school community perspectives. This step in the framework may already have been done as part of a community-based WASH triggering activity, or as a *Three Star Approach for WASH in Schools* activity while developing the school's *School Improvement Plan.*

The whole school community has a role in discussing and deciding on their WASH issues, goals and solutions. Participatory approaches are encouraged because different groups of people within the school community (students, teachers, school committee, parents, wider community, Ministry of Education) will have different experiences, views and roles in decision making.

The ***Describing the School WASH System Guide*** provides a checklist of what to consider in the description, covering:

- The location of all buildings and existing WASH facilities.
- The condition of existing WASH facilities.
- Who manages, operates and maintains the WASH facilities.
- What knowledge, skills and tools the community provides to the school.
- The numbers of students (male and female) and teachers at the school (influencing water supply and sanitation current and future demand).
- Common WASH behaviours and practices of students and teachers.

- The surrounding environment – a broader map of surrounding communities, availability and reliability of water sources, and activities that could pollute the water, physically-constraining features.
- School and community experiences of access to sufficient water and appropriate sanitation facilities, records of water-related illness and records of water quality.

2.1 GOAL SETTING

During the activity of describing and understanding the school WASH system, it is likely some weaknesses will show up. Describing weaknesses is a way of starting to express the goals or expectations of the WASH system. The ***Reaching a Common Goal Guide*** provides ideas about how to turn the identified weaknesses into positive statements (or goals).

The school community should try to develop the following range of goals:

- Ambition for attaining the National Infrastructure Standard – could be expressed as a *Three Star Approach for WASH in Schools* ambition.
- User preference goal - the types of WASH facilities and behaviours the school community wants.
- A community-commitment goal - what knowledge, skills, tools and time the wider community will make available to the school.
- A health goal – what improvements in children's health are expected, which could be expressed in a range of ways including reduced rates of diarrhoeal disease in school children or reduced absenteism from school.
- An environment goal - what improvements in environmental quality are expected, which could be expressed in a range of ways including water quality test results or a reduced number of open defecation areas.
- An affordability goal – what level of on-going financial support can the school community add to the available Ministry of Education budget.

In all of the following steps in the framework, it is useful to check in that the decisions made will contribute to achieveing these goals.

03 ASSESSING THE WEAKNESSES

This step in the framework uses the WASH system description from the previous step to look specifically for the weaknesses that could result in people becoming sick or contaminating the environment. There are four reasons for these weaknesses:

- Not knowing what factors increase the chance of people becoming sick or contaminating the environment, so doing nothing about it.
- Knowing there is a significant chance of people becoming sick or contaminating the environment, but doing nothing about it.
- Knowing there is a significant chance of people becoming sick or contaminating the environment, but doing the wrong thing about it.
- Taking the right actions to reduce the chance of people becoming sick or contaminating the environment, but for some reason stopping the actions.

The ***Spot the Problem and Good Practice Guide*** is a pictorial resource showing the most common and most significant weaknesses that increase the chance of poor water quality leading to people becoming sick or contaminating the environment, and also good practices in a WASH system. The school community is encouraged to look at each picture, decide whether their WASH system has this feature and why it has the feature, then and discuss and agree whether the feature is a good practice that must continue, or a weakness that needs to be improved.

The ***Sanitary Survey Checklist Guide*** provides a more methodical way of looking for strengths and weaknesses in the entire school WASH system. The checklists are like a sanitary survey observational inspection form, but cover both health and environmental consequences. They prompt thinking about what is visible now, and also what has happened in the past and what might happen in the future. The checklists prompt community-led thinking about more than the physical WASH system, covering:

- Weaknesses that come from the surrounding environment and technology.

  Including: Sources of pollution, demand compared to available supply of water, user requirements compared to availability of sanitation and hygiene facilities, impacts of seasonal or longer term climatic coniditons and natural events or disasters, condition of WASH facilities, access to knowledge, skills and tools to operate and maintain the WASH system, reliability of power supply, back-up options, locations and practices for sewage waste disposal, health and safety practices.

- Weaknesses that come from attitudes and affect behaviour (influenced by culture and the actions of others).

  Including: How culture affects thinking and decisions, how past experiences affect thinking and decisions, who is involved in making decisions, how gender, disability and vulnerable group considerations are discussed and included.

- Weaknesses in the enabling environment.

  Including: National regulations and physical infrastructure (eg. roads and electricity), and access to other support (eg. technical, education, training and health care, and finance mechanisms) that need to be in place for community-based and demand-driven actions and improvements.

In the next steps in the framework, practical solutions to address the weakness are identified and made into an improvement plan, a day-to-day operation and maintenance plan, and a monitoring and response plan.

04 IDENTIFYING AND EVALUATING IMPROVEMENT OPTIONS

Guides:

- Menu of options – appropriate infrastructure for water, sanitation and hygiene
- Improving existing WASH options – minor repairs, behaviour change, training, operations and maintenance procedures

Having assessed the weaknesses in the WASH system, this step in the process identifies what should and can be done practically to overcome each of the weaknesses. The result is an improvement plan. Improvements fall into one of two broad categories – infrastructure (built facilities) and non-infrastructure (people and processes).

First priority should be to get the best out of what exists, fix what is broken and use it properly. It is difficult to make the case for donor investment in a new facility until this is done. The ***Improving Existing WASH Options Guide*** describes good practice examples to assist with selecting simple no/low cost improvements. It includes ideas about simple repairs and maintenance, temporary solutions, preparing operation and maintenance procedures and schedules/timetables, training requirements, keeping records.

When it comes to the infrastructure improvements, there may be several options to choose from. The suitability of each option should be considered in the specific local context. The ***Menu of Options Guide*** provides information on a range of WASH options considered appropriate for the low lying atoll situation of Kiribati. The information will assist the school community to make the right choice for their situation. It covers water, sanitation and hygiene infrastructure. It evaluates each option for the following criteria:

- Degree to which the option will impact on the environment.
- Its compatibility with other aspects of WASH.
- Location constraints, accessibility issues and health and safety.

- Affordability to build, operate and maintain.
- Technical skill level required to build, operate and maintain.
- User responsibilities.
- Use of local materials.
- Reliability and durability.

4.1 PRIORITISING IMPROVEMENTS

The school will now have a list of needed improvements to ensure a safe water supply, adequate sanitation facilities and good hygiene practices. Not every improvement can be done at the same time, so it is useful to plan the order of improvements and who will be involved in each improvement.

In general, improvements should first address the weaknesses that pose highest risk to people's health. However, there are other considerations.

- A **logical order** of improvements; some things need to happen before or at the same time as others. For example, training in operation and maintenance needs to happen before a new facility is opened for use.
- **Practicality** of the improvement option; it needs to be achievable within the available local technical capacity and access to external technical support, and within available funds.
- Potential for detrimental **impact on the environment**. A balance needs to be found between reducing the risk to health and protecting the environment.
- **Fairness and transparency** in benefiting from the improvement. The improvement should benefit as many people as possible, and should not exclude or be at the expense of others.
- Working within Government **regulatory requirements** and local island council rules.

The likelihood of **sustaining the improvement** will be greatest when the improvement:

- Meets user preferences.
- Achieves early, desirable and visible successes.
- Is affordable for the build and for on-going operations and maintenance.
- Can make use of local building, operating and maintenance materials.
- Can make use of local skills.

4.2 GROUPING IMPROVEMENTS

In practice, an incremental improvement plan is best to ensure limited funds from within and external to the school community are used effectively. However, there is good reason to start with some of the simple no/low cost improvements to achieve early successes that will motivate the school community to want to take the next step. Intended improvements should be incorporated into its School Improvement Plan (SIP), identifying those that are within and

beyond the level of expertise and the financial means of the community.

It may be helpful to group the improvements into categories that reflect increasing complexity and external assistance, such as:

Catergory 1 Improvements.	Improving the way the existing WASH facilities are used.
Catergory 2 Improvements.	Reducing environmental pollution, so that well water is not contaminated and people are not directly exposed to harmful contaminants, such as human and animal faecal waste.
Catergory 3 Improvements.	Improving the way the existing WASH facilities are operated and maintained, including preparing and using procedures, preparing and using schedules, and technical training.
Catergory 4 Improvements.	Repairing broken parts of the existing WASH system.
Catergory 5 Improvements.	Replacing or installing new infrastructure.
Catergory 6 Improvements.	Temporary solutions.

At the end of this step in the framework the school's *Improvement Plan* with short, medium and long term actions will be ready for implementation.

05 MAKING THE IMPROVEMENTS

Referring to Category 1–6 Improvements from the previous step in the framework:

5.1 GETTING THE BEST OUT OF WHAT EXISTS

Category 1 Improvements will mostly be responding to the weaknesses that come from attitudes and behaviour. An important contribution to these improvements will be made from the enabling environment, particularly the inclusion of WASH awareness and practice in the school curriculum, and with support from the *Three Star Approach for WASH in Schools* activity.

Many of the Category 2 and 3 Improvements should be the responsibility of the school and wider community. The Category 3 Improvements are likely to be those that have come from using the Improving Existing WASH Options Guide in the previous step in the framework. Little external assistance should be required, except for possibly training. For each of the improvements in these two categories, the school community needs to discuss, agree and document who will take responsibility for the making the improvement, when the improvement will happen, and what support do they require (eg, local knowledge, authority to act, or training). A small budget may be required for day-to-day operation and maintenance expenses, and ideally this should be sought from the school community.

Category 4 Improvements are likely to require some external assistance, such as access to technical expertise and tools, and likely require some money to pay for parts and labour. Since these improvements are dependent on external assistance, there will be some delay

in making the improvement. However, the school community should still make a plan for these improvements including (i) breaking the improvement down into practical steps, (ii) doing as much of the improvement as they can without external assistance, (iii) deciding who will take responsibility for requesting the external assistance, and (iv) deciding who will oversee the delivery of the external assistance and completion of the improvement. Part of the plan for these improvements will be about raising funds. Again, the school community should be the first call, then the Ministry of Education, but more money may be needed. The ***Finance Incentive Scheme Guide*** introduces a number of ways to pay for improvements that are beyond the means of the school community.

5.2 NEW INVESTMENTS

Category 5 Improvements are likely to be those that have come from using the *Menu of Options Guide* in the previous step in the framework. These will likely be the most expensive improvements in the plan and will require external assistance. The ***Technical Designs Guide*** provide a range of technical designs for each option, pre-approved by the Ministry of Education and the regulatory authorities (MPWU and MELAD). Generic design detail is available for each option, sufficient to guide local or contracted construction, but flexible enough to allow for local variation/innovation. As for the Category 4 Improvements, the school community should make a plan for these improvements, including an appropriate way to finance the improvements (see the *Finance Incentive Scheme Guide*).

Realistically, a feasible and affordable improvement plan for the entire WASH system is likely to span three to five years. During this time, it may be necessary to put in place some temporary ways to manage the high health risks until resources become available for the preferred permanent improvement. These are the Category 6 Improvements, and may include actions such as notices to boil water before drinking, or designating an area for open defecation or a pit latrine until the appropriate Category 5 Improvement is made.

5.3 REVIEWING PROGRESS

Someone or some group needs to take responsibility for monitoring the implementation of the *Improvement Plan*. An existing school committee would be most logical.

Remember to celebrate achievements along the way.

06 CARRYING OUT ROUTINE OPERATIONS AND MAINTENANCE

Guides:

- Operations and maintenance procedure examples – for each type of water, sanitation and hand washing system – daily, weekly, monthly, annually, occasionally.

Every part of the school WASH system requires some looking after so that it is clean and attractive for the user, and so that it rarely fails and prolongs its life (preventative maintenance).

Different parts of the WASH system and different technology options have different operations and maintenance (O&M) requirements. O&M activities may be needed daily, weekly, monthly, annually and occasionally. Different skills and tools will be required for different O&M activities. The ***Operations and Maintenance Procedures Examples Guide*** provides a description of the O&M activities required for each option in the Menu of Options Guide. Once the school community has selected the option(s) it needs, the relevant O&M guide for that option will outline:

- The tasks required, ordered by frequency (daily, weekly, monthly, annually, and occasionally).
- The materials, spare parts and tools required.
- Regular on-going costs of O&M.
- Roles and responsibilities of various people.
- The type of knowledge and skills required for each role.

Some examples of O&M activities are: cleaning toilet facilities; cleaning the rainwater harvesting roof, gutter and tank; repairing broken concrete slabs; replacing washers and seals; refuelling pumps; repairing or replacing thatched/woven walls; repairing water leaks; and emptying toilet pit or vault.

6.1 PLANNING AHEAD

Planning ahead for available spare parts and tools will avoid unnecessary delays in maintenance and repairs. The availability of spare parts and tools should be one of the main considerations in selected the most appropriate option. Although local materials may be free, most spare parts will need to be paid for, so each year the school should prepare an O&M budget and identify how the funds will be raised.

For O&M activities that happen daily or weekly, make sure the spare parts and tools are always available, either on the school grounds or from the surrounding community. For O&M activities that happen monthly or annually, holding stocks of spare parts and tools may be beyond the means of the school, so make plans well ahead of the activity to have these delivered to the school at the time required. In most cases it is unnecessary and unaffordable to hold stocks of spare parts for responding to an unexpected breakdown, particularly if it is an expensive item. However, the O&M plan should at least identify where the spare part or tool can be obtained from in the quickest time, and have a plan for a temporary solution. Unexpected problems, appropriate responses and temporary solutions are covered in more detail in the next step in the framework.

The continuous functioning of a WASH system should not be dependent on just one person. Planning ahead for backup people will avoid unnecessary delays in operation and maintenance activities. Ideally, every role and responsibility should have a back-up person.

6.2 REVIEWING PRACTICE

Someone or some group needs to take responsibility for monitoring the O&M activities, checking that the right things are being done at the right times. An existing school committee would be most logical. Good record keeping of O&M activities will assist.

07 MONITORING TO PICK UP PROBLEMS EARLY, AND RESPONDING

Guides:

- Potential problems, signs to look out for, and what to do to stop things going terribly wrong, to prevent the same thing happening again, and how to respond if it does go terribly wrong.

WASH Safety Plan monitoring serves two purposes:

- **Operational** monitoring or inspection to demonstrate the WASH system is performing well, or that something needs attention, or that something has gone terribly wrong and people need to be warned of possible consequences and what precautions they need to take themselves.
- **Auditing** progress in implementing the school WASH Safety Plan, and checking the WASH Safety Plan is still appropriate in the quest to reach the school community goals, or signalling that the WASH Safety Plan or goals need to be modified.

7.1 OPERATIONAL MONITORING AND INSPECTION

Every WASH Safety Plan should have an operational monitoring and inspection plan. The purpose of the plan is to prevent serious problems by picking up early signs of a potential problem. The ***Potential Problems, Signs to Look Out For, and What to Do Guide*** will assist in preparing this plan. The guide lists the most common problems, indicators that the problem is happening, trigger levels for action, and suggested responses to the problems. The solutions range from what immediate action to take through to how to stop the same problem occurring again. For the most serious and typically unforeseen events, emergency management procedures need to be available.

Quick and easy observations are the best monitoring measures, for example looking for damage to structures, rubbish has been thrown into a well or into a toilet, or the colour, smell or taste of the water. Operational monitoring is best done by the person responsible for the day-to-day O&M activities.

A sudden or dramatic change in the environment, for example heavy rainfall or a king tide, should trigger increased operational monitoring.

7.2 REVIEWING PERFORMANCE

Someone or some group needs to take responsibility for reviewing the operational monitoring plan results, checking the indicators and trigger levels were effective, appropriate responses were made, and looking out for possible trends in problems over time. An existing school committee would be most logical. Good record keeping will assist.

7.3 AUDITING

WASH Safety Plan auditing serves the purpose of making sure investments of people's time and money are achieving the desired results. It should be at least an annual event. The school community (students, teachers, school committee, parents, wider community, Ministry of Education) will have a view on progress, and an interest in its investment. The Ministry of Education will have a particular interest in the connection between the school WASH Safety Plan and its School Improvement Plan (SIP) activities and achievements.

Key audit question 1: Is the school WASH Safety Plan being implemented as written?

- If so, what are the stand-out factors that have enabled this?
- If not, why not?
- If not, what needs to change in the plan?

Key audit question 2: Is implementation of the school WASH Safety Plan making measureable progress towards the school community-set goals?

- If so, what are the stand-out factors that have enabled this?
- If not, why not?
- What needs to change in the plan or the goals?

During the audit, time should be allowed for discussions about the difficulties the school community has had in developing and implementing the school WASH Safety Plan. The difficulties may relate to willingness to participate, availability of time to operate and maintain the WASH system according to the plan, access to resources (materials, training, expertise and skilled labour, money), or unexpected set-backs.

If it is not working, change something.

REFERENCES

GWP and UNICEF (2014) WASH and Climate Resilient Development, Technical Brief: Local Participatory Water Supply and Climate Change Risk Assessment: Modified Water Safety Plans. Global Water Partnership and UNICEF.

MoE (2011) National Infrastructure Standards for primary Schools (Edition 3.1, July 2011). Ministry of Education, The Republic of Kiribati.

Tearfund (2011) Water Safety Plans for Communities: Guidance for Adoption of Water Safety Plans at Community Level. Tearfund.

UNICEF (2013) Field Guide: The Three Star Approach for WASH in Schools. UNICEF/GIZ, Programme Division/WASH, New York.

WHO (2010) Drinking Water Safety Planning: A Practical Guide for Pacific Island Communities. WHO/SOPAC Joint Contribution Report 193. World Health Organization and Pacific Islands Applied Geoscience Commission, Suva, Fiji.

WHO and IRC (2003) Linking Technology Choice with Operation and Maintenance in the Context of Community Water Supply and Sanitation. World Health Organization and IRC Water and Sanitation Centre, Geneva, Switzerland.