

GHANA EDUCATION SERVICE



Republic of Ghana

Values-based Water, Sanitation and Hygiene Education



A Trainer's of Trainers Guide for Ghana



(MOES/GES/SHEP/UN-Habitat)

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PREFACE

The Ministry / UN-HABITAT / ... hopes that the use of the guide will equip educators to assist learners to apply the needed values to change behaviours and attitudes of people towards the achievement of the WASH in Disaster Prone Communities objectives in the Northern, Upper West and Upper East Regions of Ghana.

(DIRECTOR- GENERAL, GHANA EDUCATION SERVICE)

ACKNOWLEDGEMENT

This guide is the outcome of contributions by a number of local and international personnel of the UN-HABITAT and the Ghana Education Service.

Many thanks go to the resource persons and writers who produced this guide especially:

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CONTEXT

Natural disaster occurrence in Ghana consists of droughts, epidemic outbreaks, floods, and wildfires. In the 3 Northern regions, disasters significantly impact vulnerable populations in disaster prone areas, and may lead to unnecessary losses of social and economic capital. In particular, recurrent flooding events, which are the most pervasive in terms of financial damages and numbers of people affected, usually result in the disruption of services from WASH facilities, which could lead to significant damages to property and trigger other emergency situations such as outbreaks of diarrhoea, cholera, and other water related/borne diseases.

Having to ensure that when such floods occur the quality of water supply is not contaminated (during collection, handling, storage, and use) also presents immense challenges to the health of these communities.

The situation is further aggravated in those communities where there is a lack of WASH facilities and services. In such circumstances, the challenges include the prevalence of water borne, vector borne and sanitation related diseases as a result of poor drinking water quality and inadequate sanitation. Women, children and the youth suffer the most from the effects of this lack of access to WASH facilities and related services.

The importance of water and sanitation is also underlined in the Education Strategic Plan (ESP) 2010-2020 of the Ministry of Education (MoE). The ESP sets targets for ensuring that all basic education schools are rehabilitated in terms of safety, sanitation and health by 2015 and 75% of schools have access to water by 2020. The MoE's Annual Education Sector Operational Plan (AESOP) 2011-2013 aims at the completion of potable water and sanitation facilities for 4,600 schools by 2013.

Furthermore, in the standards for Child Friendly Schools (CFS), water, sanitation and hygiene (WASH) are important interventions making contributions towards encouraging the enrolment, retention and learning achievement for girls. Making schools both child and girl-child friendly contributes to this effort.

Specifically, under the Basic Education *thematic area on Socio-humanistic* issues with the policy objective to Improve equitable access to and participation in quality education at the basic education level, the School Health Education Programme (SHEP) is responsible for implementing the strategy to ensure that all Basic Education schools meet national norms in health, sanitation and safety. The indicative activities to achieve the WASH in schools component of this objective include:

- Revising and distributing national guidelines on minimum standards for health, sanitation and safety for Basic Education institutions at all levels.
- Provide adequate safety, sanitation and basic health care facilities and access for children with disabilities, in accordance with national guidelines.
- Ensure that there is potable water within 250 m of BE school sites and that there are adequate sanitation facilities on site (especially for girls and female teachers/SMC members) at all institutions.

A complementary consideration is that if sustainable access to water and sanitation is to be achieved then the consumer (both individually and collectively) has to see that it is in their own interests to alter their value system. This can best be achieved in the long term through

appropriate training and sensitisation measures that are designed to transform at every level. It is here that the Human Values-Based Education (HVBE) approach, which seeks to impart information and facts on water, sanitation and hygiene through focusing on the inherent values, can play a major role. It is an approach that has potential at any level, from affecting the behaviour of young children at primary school to changing attitudes in small local communities. The HVBE technique was championed by UN-Habitat and has been mainstreamed into the primary school curricula in Ghana.

The HVBE explores the integration of the core and related human values through formal school curriculum to character development and behaviour change especially in young boys and girls in school. The secondary target group are adult learners through integration of human values into extracurricular activities.

Values-based Water, Sanitation and Hygiene Education (VB-WASH Ed.)

The broad aim of Values-based Water, Sanitation and Hygiene Education (VB-WASH) is to facilitate changes in behaviour and personal attitudes among water consumers and to promote better understanding of the environment in a water, sanitation and hygiene context. There is a growing understanding that only a fundamental change in behaviour and personal attitudes, and the underlying values that prompt such inappropriate behaviour, can reverse this situation.

Water, sanitation and hygiene education can play a strategic role in bringing about positive attitudinal changes, and in the longer term, can help develop a new water-use ethic in society. To achieve this, it is important to develop capacity in schools, teacher training colleges and communities in order to optimize human potential, thereby empowering individuals to:

- Develop an awareness amongst boys and girls of water, sanitation and hygiene related environmental issues;
- Gain knowledge, insight, and skills necessary to analyse the issues and understand why men and women, boys and girls view and use water in the environment in particular ways;
- Examine attitudes, values, and behaviours in gender sensitive manner regarding water, sanitation and hygiene in communities found within each city;
- Identify the underlying causes of current water, sanitation and hygiene oriented problems in the community;
- Support informed decision-making by the community that could affect the quality of their lives with respect to water, sanitation and hygiene;
- Participate actively in the sustainable management of their environment in a water and sanitation context;
- Evaluate and propose actions that will achieve effective water and sanitation related solutions in support of water conservation and observance of good sanitation practices.

Purpose and Outcomes of this Training Guide

This training guide is intended to build the capacity of trainers, teacher and community educators and non-governmental organization agencies to implement WASH attitude change education component of the WHASH in DPC Programme. Specifically this guide has been developed as a resource for Trainers in VB-WASH. The purpose of this guide is to:

- Share knowledge, skills and attitudes relating to Values-Based Water, Sanitation and Hygiene Education.
- Build capacity of Trainers to undertake country training.
- Familiarise Trainers with the strategy and methodology that will be used to implement the VB-WASH component of the WASH in DPC programme.

The following outcomes are envisaged for Trainers and participants using this guide.

- Enhanced understanding of water, sanitation and hygiene challenges in flood prone areas.
- Understanding of the Conceptual framework of Values-based Water, Sanitation and Hygiene Education
- Internalisation of the philosophy and methodology of Values-Based Education
- Development of Skills, strategies and tools to implement the new water, sanitation and hygiene ethic that is based on human values

HOW TO USE THIS TRAINING GUIDE

1 - General guidelines

This training guide consists of the following 6 modules.

	Theme	Duration
Module 1	Concept of values based water, sanitation and hygiene education	3.5 hours
Module 2	Water, sanitation and hygiene challenges in disaster prone areas	3.5 hours
Module 3	Practical knowledge on water and sanitation and hygiene	2.0 hours
Module 4	Creating new water, sanitation and hygiene ethic	2.5 hours
Module 5	Values-based education in practice: philosophy and methodology	5.0 hours
Module 6	Programme strategy development and implementation for VB-WASH in schools and communities	6.5 hours

Each of the modules in turn is divided into several activities. Each module consists of:

- An introduction and brief description
- The aims and outcomes of the module
- Key issues and content covered
- The activities that are undertaken
- Handout to participants
- A list of references and website links.

2 - Notes for facilitators

Facilitators must note that:

- Participants have valuable and important contributions to make.
- They must be prepared to learn from participants.
- They must not speak too much or dominate the proceedings.
- Most people learn better when their contribution is acknowledged.
- They must be punctual, well prepared and impartial.

2.1 - Ice breakers and energizers

Ice breakers are fun. They help participants to integrate and socialize. They also help to relax participants, and that makes them more receptive to listening and contributing. However, they should not be too long.

2.2 - Developing workshop values

One way of establishing workshop ground rules is to give the participants an opportunity to identify human values which will create a positive and harmonious climate which will contribute to a successful workshop. Ask the participants to identify values which they would like to see being practiced in the workshop. List these values on a chart paper and refer to these values at appropriate moments to remind participants of the values that they have agreed to subscribe to.

Displaying the following icons will help to remind the participants of punctuality and cell phone usage:



2.3 - Sticking to time

Plan your daily schedule well and put the programme on the wall of the venue to help you. It is useful if you let your co-facilitator help you to stick to time.

2.4 - Group work

It is important that the facilitator is active during group work. Walk around and check that everybody understands and does what they should be doing. Guide and warn groups about how much time they have left to complete their task. Encourage slower groups and challenge the faster groups.

It is useful to change the composition of groups at least twice a day. It keeps people on their toes and moves them out of their comfort zones.

Please make sure you follow the icons that indicate what type of facilitation is required.

2.5 - Setting up the venue

Prior to the commencement of the workshop, make sure the venue is properly set up. You may use the following checklist for the purpose:

- Is the venue clean and tidy?
- Could I make the venue look more inviting?
- Is there enough light and ventilation?
- Are there enough tables and chairs?
- Do I need a registration table?
- Will participants be able to concentrate in this venue?
- Is there enough space to move between tables?
- Are there enough toilets and are they clean?
- Is there toilet paper?
- Is the area for the catering set up?
- Is there water?
- Do we need a microphone or will everyone be able to hear?

2.6 - Participant's pledge

One way of reminding the participants of the reason they are attending the workshop is get them to make a pledge at the beginning of the workshop. The facilitator may say something like "Our coming together is to serve a noble purpose. Let us recognize it as such by taking a pledge and making some promises to ensure that our workshop is a success."

Pledge

"We have ALL committed ourselves to work with our schools, colleges of education and communities to achieve the Millennium Development Goals in Water and Sanitation. We have

gathered here today because we want to DO something, we want to ACT to promote change so that we can achieve our vision of providing water and sanitation facilities. Water is Life, Sanitation is Dignity.”

2.7 - Promises

Let's ...

- Clear our thoughts. While we are together at this workshop let us be present in body and in spirit and let us involve ourselves fully in the tasks.
- Decide to contribute and share openly and respectfully so that others can share and be open with us.
- Keep our school, college and community clearly in mind. The workshop aims to change for the better what we think is possible and real for our environment.
- Decide that we will learn something useful from this workshop.
- Decide to be active listeners. Let's listen to the thoughts, ideas and perceptions of others, this will enable all of us to benefit greatly from the experience.
- Understand that we will take the role of both educators and learners at the workshop.
- Share the dialogue of the workshop with others, expand the community and build networks of active learning communities.
- Enjoy ourselves! It is an opportunity to come together to work together and to learn together for a common shared purpose. By participating fully in this workshop and beyond we will realise the joy of working together and the creative energy that it stimulates so that by the end we want only to celebrate.

2.8 - Evaluation

It is essential that the participants provide feedback to the organisers and facilitators to improve the workshop and to assess how successful the workshop was.

The following format may be used a day before the end of the workshop:

Workshop evaluation form

Please give us your evaluation, suggestions and constructive criticisms to help us improve future workshops.

Rating scale 1 = well below expectations/unacceptable
 2 = below standard
 3 = acceptable
 4 = good
 5 = excellent/outstanding

No	ASPECT	1	2	3	4	5
1.	Programme content					
	How relevant was the programme content?					
	Was the content of the workshop interesting and useful?					
	Were the objectives of the workshop made clear?					
	Were these objectives achieved?					
2.	Interaction With And Within The Group					
	Was there sufficient interaction – questions, discussion & activities?					
	Was there sufficient interaction among participants?					
3	Understanding subject matter					
	Did the facilitator/s understand the subject matter?					
	Do you understand the various modules					
	Were the materials and documents user-friendly, informative and helpful					
4.	Presentation and facilitation skills					
	<i>Please rate the overall presentation skills of the facilitators</i>					
	Module 1: Overview and Concept of VB-WASH Ed.					
	Module 2: Water, Sanitation and Hygiene Challenges, particularly in flood prone Areas					
	Module 3: Practical knowledge on Water, Sanitation and Hygiene					
	Module 4 : Creating a new Water, Sanitation and Hygiene Ethic					
	Module 5: Human Values Education in Practice- Philosophies/Pedagogical Background (integration)					
	Module 6: Programme Strategy for Development of HVBWSHE in schools (Basic & TTC)					
	Comments on presentation and facilitation skills					
5.	Overall evaluation					
	What is your overall rating of the workshop?					

6. What did you like most about the workshop?

7. What can be improved upon?

8. What further training/support would you like?

Thank you for your time

MODULE 1

CONCEPT OF VALUES BASED WATER, SANITATION AND HYGIENE EDUCATION

1 - INTRODUCTION

The Values-based Water, Sanitation and Hygiene Education Programme (HVBWSHE) **are** expected to create a new ethic, attitude and behaviour change towards water use, sanitation and hygiene practices. It is a systemic approach linking the school, the community, community based organisations, non-governmental organisation and government ministries to foster partnerships that will lead to models of excellence.

2 - AIMS OF THE MODULE

This module is to give the participants an overview of the VB-WASH programme as well as share the conceptual framework of the programme.

3 - LEARNING OUTCOMES

On completion of this module the participants should be able to:

- Understand the background and rationale for VB-WASH
- Understand the key issues on VB-WASH
- Appreciate the need to address the water, sanitation and hygiene in education

Key issues

- What is Water Sanitation and Hygiene Education?
- Why Water Sanitation and Hygiene Education?
- The Value Based approach and concept of VB-WASH.
- Need for provision/construction of (user friendly) gender sensitive water sanitation and sanitation facilities in schools.

4 - MATERIALS AND RESOURCES

Slides, handouts, pictures/posters on water, sanitation and hygiene.

5 - ACTIVITIES/STEPS

Activity 1: **Power Point presentation on**

Overview and concepts of Human Value-based approach to Water Sanitation and Hygiene Education.

Activity 2: **Group Work**

- I. Put participants in groups. Each group is to brainstorm to analyse the opportunities, risks and challenges to mainstream the VB-WASH in the curriculum.
- II. Groups to identify the core and related values to the area of water, sanitation and Hygiene education.
- iii. Groups to report at a plenary
- iv. Discussion, facilitator summaries salient points in the discussion on a flip chart.

Activity 3: **Evaluation**

This may take the form of questions and answers or feedback from participants.

HANDOUT

CONCEPT OF VALUES BASED WATER, SANITATION AND HYGIENE EDUCATION

1 - OVERVIEW

1.1 - Introduction

There is a compelling case for creating a new water-use ethic in our cities. Rapid urbanization has put enormous pressure on water resources. The growing numbers of urban residents, especially the urban poor, pay an increasingly high price for the lack of safe water and adequate sanitation. They endure an increasing health burden from water related diseases, resulting from unsafe water, inadequate sanitation and hygiene. In addition to higher health burdens, the poor all too often pay much more for inferior water and sanitation services than their wealthier neighbours. There is a growing recognition that improvements in water management cannot be accomplished by technical or regulatory measures alone. These would have to be complemented by advocacy, awareness and education initiatives.

Water education is a strategic entry point for bringing about positive attitudinal changes among both service providers and users. There is a growing understanding that only a fundamental change in behaviour and personal attitudes, and the underlying values that prompt such inappropriate behaviour, can reverse this situation. Water, sanitation and hygiene education can play a strategic role in bringing about positive attitudinal changes, and in the longer term, can help develop a new water-use ethic in society. Children and youth could be the best ambassadors to bring about these attitudinal changes.

1.2 - What is Water, Sanitation and Hygiene Education?

Water, Sanitation and Hygiene Education is a process in which individuals gain awareness of their living environment and acquire knowledge, skills, values and experiences, and also the determination, which will enable them to act - individually and collectively to solve present and future water, sanitation and related hygiene problems.

It is a learning process that increases people's knowledge and awareness about water, sanitation and hygiene and associated challenges. It develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivation, and commitments to make informed decisions.

Properly understood, it should constitute a comprehensive lifelong education, one that is responsive to changes in a rapidly changing world. It should prepare the individual for life through the understanding of the major problems of the contemporary world vis-à-vis water, sanitation and hygiene, and the provision of skills and attitudes that are needed to play a productive role towards improving living conditions and protecting the living environment with due regard given to ethical values.

1.3 - The VB-WASH approach

VB-WASH seeks to impart information on water, sanitation and hygiene and also inspires and motivates learners to change their behaviour and adopt attitudes that promote hygienic living and wise and sustainable use of water. Its advantages include the following:

- it does not add further to the current overload of the curriculum, as it can be integrated with ease into the existing curriculum;
- it creates a lasting impact through character development, when understood, appreciated and practiced by children and young adults;

- It is a proven approach in current practice world-wide, well documented and evaluated by experts in different parts of the world.

2 - CONCEPTS OF VALUES-BASED WATER, SANITATION AND HYGIENE (VB-WASH)

VB-WASH Concepts are developed from the perspectives of:

- The Education Sector
- The Water and Sanitation Sector
- Human Values in Water, Sanitation, Hygiene and Health Sector

2.1 - The Education Sector - Values Education

Values education is an explicit attempt to teach about values and/or valuing. Values education approaches include the inculcation of moral development and analysis with the purpose of instilling certain values in students and help them develop a higher set of values.

Values-based education lays emphasis on those qualities of a human being which are desirable, respected, esteemed, and help in making informed choices sanctioned by a given society. Realising the importance of values education many countries around the world have taken initiatives for developing sets of values for education. Ghana has partially incorporated Values in the national curriculum in primary school. Australia has just published a National Framework for Values Education in Australian Schools (2005) and New Zealand has been promoting values education in the curriculum. South Africa has embarked on an initiative on Values, Education and Democracy.

2.2 - The Water and Sanitation Sector

Values of Water and Sanitation

The Ministerial Forum at the 2nd World Water Forum held in The Hague proclaimed that water needs to be managed in a way that it reflects its economic, social, environmental and cultural values for all its users.

Life-giving Value

Unfortunately millions of children die annually from preventable water and sanitation related diseases in developing countries. Reliable water and sanitation services are basic human rights, however they are far from being universally available.

Social & Economic Value

Water and sanitation is central to socioeconomic development and poverty alleviation. Water has an economic value due to its contributions to economic activities including agriculture, energy generation and industries. Water also receives and carries away waste.

Value to ecosystem

Water gives irreplaceable services to the ecosystem like sustaining human and other life by way of producing food, decomposing organic waste, absorbing human and industrial wastes and converting them to beneficial uses.

Cultural and Spiritual Values

These values are integral to any society and are intertwined with the cultural and spiritual aspects of life.

2.3 - Human Values

Human Values are fundamental to human existence. They are universal and inherent in all human beings and are found in varying degrees in all societies, religious traditions and civilisations. Human value based education, therefore, is complimentary to values-based education.

Bringing out and nurturing of the human values in the children during the formative years will result in caring and responsible adults in the future.

There are five core human values: Truth, Right Conduct, Love, Peace and Non-violence. Different societies have socio-cultural and value orientations. The water, sanitation and hygiene education initiative has taken these into account through active participation.

Three main approaches are used for teaching human values-based water, sanitation and hygiene education. These include: the Direct Method; Integrated Method for the Curriculum (Formal Education); Integrated Method for Co-curricular activities (Non-Formal and Informal Education).

The Task Force on Water and Sanitation of the United Nations Millennium Project in its final report has identified Human Values and Human Rights the basis for meeting the internationally agreed targets on water and sanitation.

3. ABOUT THE PROGRAMME

UNICEF is currently implementing a number of WASH programmes, much of which is directly relevant to this project. These programmes span across national advocacy and policy support for WASH in schools, WASH in emergencies and upscaling of WASH to significant on-the-ground delivery of water supply, sanitation, hygiene behavioural change and infrastructure and WASH in schools programs in the 3 northern regions

An example is the Enhanced Water, Sanitation and Hygiene (WASH) Services in Schools and Communities in Ghana (2012-2016) in collaboration with the Government of Ghana and with funding support from DFATD. The initiative is designed to contribute to improved health and well-being of children in schools, and of women and men in communities

The initiative also aims to strengthen relevant national institutions and monitoring and evaluation systems to provide an enabling environment for better planning, delivery and sustainability of decentralized water, sanitation and hygiene services in Ghana

3.1 - Overall Objective

The objective of the School Education is to raise awareness and instill behavioural change in Water, Sanitation and hygiene practices so to improve the sanitation and health conditions for about 50,000 schools children in basic schools and their communities.

3.2 - Activities

To reach that objective, it is appropriate to:

- Establish school health clubs and community platforms to promote hygiene behavior change using values based participatory approaches
- Prepare operational, management and maintenance plans for the schools and communities WASH facilities;
- Develop/adapt WASH materials, including values based components, and other participatory materials for training
- Undertake WASH TOT for teachers and community facilitators to undertake subsequent wider training;
- Facilitate the involvement of Health clubs and community platforms in decisions for improved WASH facilities and services

MODULE 2

WATER, SANITATION AND HYGIENE CHALLENGES IN DISASTER PRONE AREAS

1 - INTRODUCTION

Natural disaster occurrence in Ghana consists of droughts, epidemic outbreaks, floods, and wildfires. In the 3 Northern regions, disasters significantly impact vulnerable populations in disaster prone areas, and may lead to unnecessary losses of social and economic capital. In particular, recurrent flooding events, which are the most pervasive in terms of financial damages and numbers of people affected, usually result in the disruption of services from WASH facilities, which could lead to significant damages to property and trigger other emergency situations such as outbreaks of diarrhoea, cholera, and other water related/borne diseases. The combination of these effects reduces the productivity of the population and the losses they suffer are immense and seriously affect their economic and social circumstances. These events tend to have devastating effects on the development of affected communities.

Having to ensure that when such floods occur the quality of water supply is not contaminated (during collection, handling, storage, and use) also presents immense challenges to the health of these communities. Rehabilitation costs are usually unaffordable and communities have suffered a drastic fall in their living conditions and opportunities for future development, pushing them further into poverty and deprivation.

The situation is further aggravated in those communities where there is a lack of WASH facilities and services. In such circumstances, the challenges include the prevalence of water borne, vector borne and sanitation related diseases as a result of poor drinking water quality and inadequate sanitation. Women, children and the youth suffer the most from the effects of this lack of access to WASH facilities and related services. Initiatives that address and improve the WASH situation for people in disaster prone communities contribute significantly to address most MDGs.

In a recent report, the National Disaster Monitoring Organization (NADMO) indicated that it had taken a census of people living in flood prone areas of the country, including the northern regions, and had allocated safe havens in these communities to prepare for the onset of the major rains.

Disaster Risk Reduction (DRR) is an urgent and significant development issue in Ghana. Meanwhile, there are ongoing projects on DRR through support provided by various donor agencies, there is a significant need and opportunity for a comprehensive and strategic support to enable DRR efforts to be implemented more effectively. A key component of the Action Plan is to build capacities within the country to reduce disaster risk by putting in place an integrated early warning system that is both scientific and people entered.

The Volta river basin drains about 70% of the total area of Ghana and provides water for domestic, industrial, and hydroelectric purposes. The three major tributaries of the Volta River (White Volta, Black Volta and Oti) which drain the three northern regions substantially decline in volume during the dry season. However, during years of torrential rainfall, these tributaries tend to burst their banks causing floods in nearby villages, damaging livelihoods and putting lives at risk.

An assessment of the state of flooding in the three northern regions of Ghana for the period 1970 - 2009¹ showed high disparities within the regions. The Upper East region recorded the highest frequency followed by Upper West, and the Northern Region.

In the 3 regions, flooding is due to high intensity short duration rains and spillage from upstream dammed reservoirs. The effects are generally along the flood plains of the major rivers and tributaries of the White Volta.

2 - AIMS OF THE MODULE:

The aim of this module is to;

1. Highlight the water, sanitation and hygiene challenges in Northern Ghana's flood prone areas.
2. Establish the role of Human Values in addressing the challenges.
3. Explore the resilience to flood on the provision of safe drinking water and adequate sanitation in 265 flood prone communities of the Upper East, Upper West and Northern regions of Ghana.

3 - LEARNING OUTCOMES

On completion of this module, learners should be able to acquire knowledge and skills necessary for understanding:

- The water, sanitation and hygiene challenges in flood prone communities.
- The current innovative ways of responding to the Water, Sanitation and Hygiene Challenges and building resilience in flood prone area environment.
- The role that Human Values can contribute in addressing the Water, Sanitation and Hygiene Challenges in that context.

Key Issues

The following areas will be discussed and shared with the learners:

- The centrality of water and sanitation in meeting the local Development objectives under disaster conditions.
- The water, sanitation and hygiene challenges associated with flood
 - Rising levels of poverty
 - The crisis of WASH governance
 - The health burden
 - Ecological footprints
- Meeting the Water, Sanitation and Hygiene Challenges
 - Resilient management of water, sanitation and hygiene in disaster prone areas
 - Improving local Governance
- Human Values: The missing link in the chain of good WASH related governance

4 - MATERIALS AND RESOURCES:

Newspaper articles, video clip and case studies on urban water supply and sanitation issues

¹ Climate Change, Water and Disasters: Perspectives from the three Northern Regions, Prepared by Delali B. RC Climate Change Assessment Series No.1, 2010

5 - ACTIVITY/STEPS

Activity 1: **Power point Presentation on the following:**

- The centrality of water and sanitation in meeting the local Development objectives in disaster prone areas.
- Crises of WASH governance.
- The health burden
- Meeting the water, sanitation and hygiene challenges

Activity 2: **Discussion**

Participants discuss the centrality of water and sanitation in meeting the local Development objectives under disaster conditions.

Activity 3: **Group work**

Put participants into groups to come out with suggested solutions to meet disaster challenges related to water, sanitation and hygiene in the three Northern regions of Ghana.

HANDOUT

The centrality of water and sanitation in flood prone areas.

1 - INTRODUCTION

Safe drinking water, adequate sanitation and hygiene are the most important preconditions for sustaining human life, for maintaining ecological systems that support all life and for achieving sustainable development.

Water, sanitation and hygiene are at the core of all development challenges. The realities of the context in 3 Northern regions, and in particular in flood emergency situations. In these 3 regions, reliance is mainly on boreholes for drinking water. The most important sources in Upper East and Upper West is the tube well or borehole constituting 65 percent and 70 percent respectively. In Northern region, a significant percentage of the population rely on river or stream water (an unimproved source) as their main source of drinking water and about 10 percent of the population in this region depend on water from either dam or lake or pond for drinking.

The 2011 MICS shows that Ghana's improved sanitation coverage is 15 per cent and nearly 1 out of 4 households (22.9%) practice open defecation (ODF) or have no toilet facility. The incidence of ODF is more pronounced in rural areas (35%) than urban areas (10%), and the practice is more common among the poor and also those with relatively lower levels of education.

Regional disparities exist with residents of Northern, Upper East and Upper West regions less likely than populations in other regions to use improved facilities. For example, in Upper East region, only 10 percent of the population use improved sanitation facilities, and the highest cases of open defecation (71.1 - 88.6 per cent) occur in the three Northern Regions As a consequence:

- Every year, due to the lack of access to safe drinking water and sanitation, cholera, typhoid and different forms of dysentery take the lives of thousands of children.
- Owing to the lack of water points and adequate water distribution networks, many little girls are forced to fetch water every day instead of going to school.
- Flood and drought result in greater water constraints leading to sometimes irreversible damage to the environment and to a multiplication of disputes over water use.

2 - WHAT ARE THE CHALLENGES?

The MICS 2011 results also show that the use of improved sanitation facilities is strongly associated with wealth and educational level of head of households. There is also profound difference in specific facilities between urban and rural areas. In rural areas, the population is mostly using ventilated improved pit (VIP) latrine, pit latrines without slabs, or simply have no facilities. In urban areas, the most common facilities are flush toilets with connection to a sewerage system or septic tank (26%) and use of ventilated improved pit (VIP) latrine (40%).

The same pattern is observed in the case of the education level of the head of the household, where the percentage of household members practicing open defecation decreases with educational levels. In terms of regional distribution, open defecation is mostly practiced in Upper East (89%), Northern (72%) and Upper West (71%).

These poor sanitation and hygiene conditions are a special challenge in disaster prone areas such as the three Northern Regions of Ghana where flood disasters are a common occurrence. Disease outbreaks after floods are common in such conditions of poor sanitation and hygiene.

The practice of hand washing with soap is equally low in the country with only 23.8 per cent of the population practicing hand washing with soap when the proxy indicator of there being a designated place for hand washing is considered (Fig. 4). The level of practice reduces to 11.9 per cent when the proxy indicator of there being water and soap available at the designated place is considered. (MICS, 2011)

According to the Ministry of Education², in 2008, a total of 2,990,773 pupils in 13,247 public primary schools in Ghana shared 6,363 toilets and 8,347 water facilities. In the Northern region in particular, about 30% of schools do not have any form of latrine, compelling all pupils in these schools to defecate in the open. Of the 70% that had some form of a latrine, 83% did not have hand washing facilities, a situation which further compromised hygiene practices in the school. Also, existing toilet facilities mainly comprised one block with privies allocated to boys, girls and sometimes teachers, thereby compromising privacy especially for girls.

3 - WATER, SANITATION AND HYGIENE CHALLENGES ASSOCIATED WITH MDG

The poor sanitation and hygiene situation as described in section 2.4.2 needs to be emphasized when compared to the Millennium Development Goal (MDG) target for sanitation for Ghana which is 54 Per cent. In an effort to address this situation the Government of Ghana (GOG) has developed the MDG Acceleration Framework (MAF) for Sanitation with the objective of accelerating efforts to remove the most critical bottlenecks affecting sanitation improvement in the country.

The MAF was developed by MLGRD in collaboration with development partners particularly the United Nations Country Team and other stakeholders using the National Technical Working Group on Sanitation (NTWGS) as a platform. The Country Action Plan (CAP)³ for the MAF identifies three critical interventions for scaling up sanitation improvements including scaling up Community Led Total Sanitation (CLTS), implementing decentralized treatment/disposal systems incorporating harvesting and re-use of by-products (e.g. biogas) and rolling out a micro-finance credit scheme to support household latrine construction. These interventions are mutually reinforcing as the lack of effective treatment and/or disposal of excreta in any facility renders the facility "unimproved".

The lack of sustainable credit was identified as a constraint hindering households to own improved sanitation facilities when they go beyond "triggering" by CLTS agents, especially poor households who want to invest "up" on the sanitation ladder. To overcome this constraint, the rural sanitation model is built on CLTS as the main demand side intervention in Ghana and micro-finance and sanitation marketing as the main supply-side intervention.

4 - EDUCATION STRATEGIC PLAN AND WASH

The importance of water and sanitation is also underlined in the Education Strategic Plan (ESP) 2010-2020 of the Ministry of Education (MoE). The ESP sets targets for ensuring that all basic

² Ministry of Education, 2008; Education Management Information System (EMIS). Data accessed in November 2009

³ Ghana MAF – Country Action Plan for Sanitation: Go Sanitation Go!, August 2011

education schools are rehabilitated in terms of safety, sanitation and health by 2015 and 75% of schools have access to water by 2020.

Furthermore, in the standards for Child Friendly Schools (CFS), water, sanitation and hygiene (WASH) are important interventions making contributions towards encouraging the enrolment, retention and learning achievement for girls. Making schools both child and girl-child friendly contributes to this effort.

Specifically, under the Basic Education thematic area on Socio-humanistic issues with the policy objective to Improve equitable access to and participation in quality education at the basic education level, the School Health Education Programme (SHEP) is responsible for implementing the strategy to ensure that all Basic Education schools meet national norms in health, sanitation and safety.

A complementary consideration is that if sustainable access to water and sanitation is to be achieved then the consumer (both individually and collectively) has to see that it is in their own interests to alter their value system. This can best be achieved in the long term through appropriate training and sensitisation measures that are designed to transform behaviour at every level. It is here that the Human Values-Based Education (HVBE) approach, which seeks to impart information and facts on water, sanitation and hygiene through focusing on the inherent values, can play a major role.

The value-based approach stimulates the Human Values inherent in every man - compassion, tolerance, honesty, solidarity and shared responsibility, among others – to motivate inspirational action, and can lay a sound foundation for behavioural change.

It is an approach that has potential at any level, from affecting the behaviour of young children at primary school to changing attitudes in small local communities. The HVBE technique was championed by UN-Habitat and has been mainstreamed into the primary school curricula in Ghana.

MODULE 3

PRACTICAL KNOWLEDGE ON WATER AND SANITATION AND HYGIENE

1 - INTRODUCTION

Over 97 percent of all water (oceans, seas, ice, and atmosphere) is not available for our use. Even much of the remaining 3 percent is out of reach. Considering that most of the water we use in everyday life comes from rivers, we generally only make use of a tiny portion of the available water supplies.

2 - AIMS OF THE MODULE:

The aim of this module is to provide learners with practical knowledge and skills on water and sanitation.

3 - LEARNING OUTCOMES

On completion of this module, learners should be able to acquire:

- Basic knowledge on water and sanitation
- Practical skills on water and sanitation.

Key Issues:

The following areas will be discussed and shared with the learners:

- Where is Earth's water located and in what forms does it exist?
- How much of Earth's water is available for our use ... and in what forms does it exist?
- What are the physical and chemical properties of water that make it so unique and necessary for living things?
- Practical water saving tips
- Grey water reuse at home
- Rainwater harvesting
- Main sources of water contamination
- Health and sanitation issues pertaining to water
- Safe disposal of human waste
- Water related diseases
- Household water treatment and safe storage
- The water treatment cycle

4 - MATERIALS AND RESOURCES:

Slides, flip chart, pictures, charts, different types of water (rain water, well water, sea water, brackish water etc.)

5 - ACTIVITIES/STEPS

Activity 1: **Presentation of the following:**

- Where Earth's water located the form in which it exist
- How much of Earth's water is available for our use and the forms in which water exist
- The physical and chemical properties of water
- Practical water saving tips

- Grey water reuse at home
- Rainwater harvesting
- Main sources of water contamination
- Health and sanitation issues pertaining to water
- Safe disposal of human waste
- Water related diseases
- Household water treatment and safe storage
- The water treatment cycle

Activity 2: Participants perform experiments to demonstrate some of the properties of water.
E.g. Experiment to demonstrate that water has adhesive, cohesive properties etc.

Activity 3: Participants write personal habits in the use of the following:

- bathroom
- kitchen
- toilet
- compound
- Laundry (clothing, car etc.)
- disposal of waste water

Participants pair up to discuss the issues in order to come out with good practices

Activity 4: Participants in groups discuss traditional and modern water conservation methods in Ghana

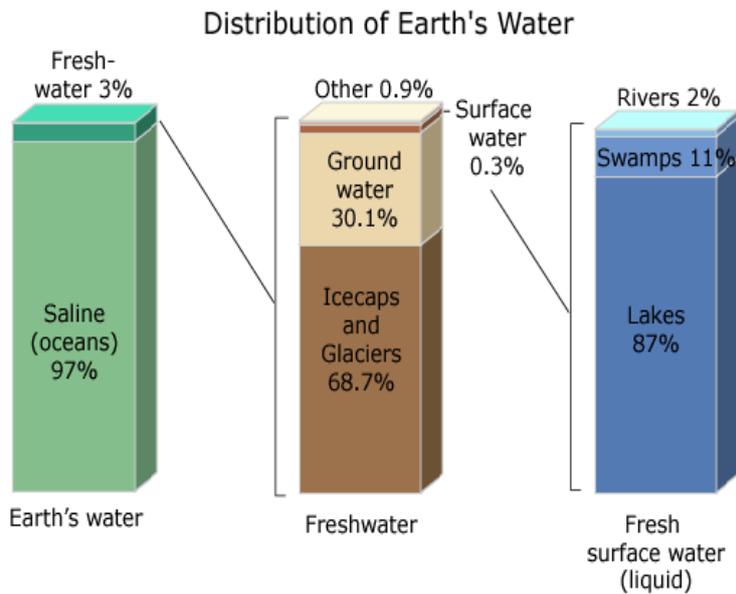
Activity 5: Participants in groups discuss different types of wastes (liquid and solid), generated in Accra and how they could be /are disposed off.

HANDOUT

PRACTICAL KNOWLEDGE ON WATER AND SANITATION AND HYGIENE

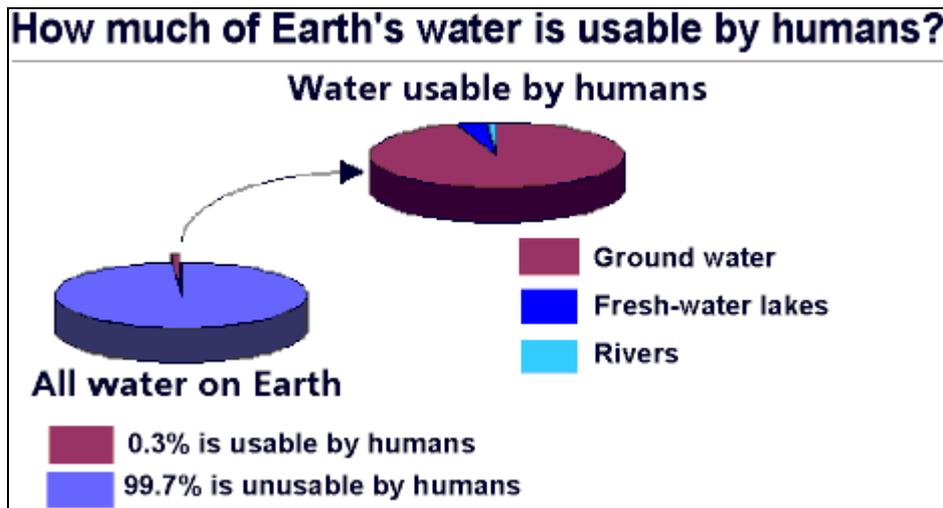
1 - WHERE IS EARTH'S WATER LOCATED AND IN WHAT FORMS DOES IT EXIST?

Although more than three quarters of the earth's surface is made up of water, only 3 percent of the Earth's water is available for human consumption. The other 97 percent is in the oceans; however, this water is too salty to use for most purposes, and the salt is very costly to remove. Most of the Earth's freshwater is frozen in polar ice caps, icebergs, and glaciers.



Source: United States Geological Survey, **Water Science for Schools**
 URL: <http://ga.water.usgs.gov/edu/earthwherewater.html>

How much of Earth's water is available for our uses ... and in what forms does it exist?



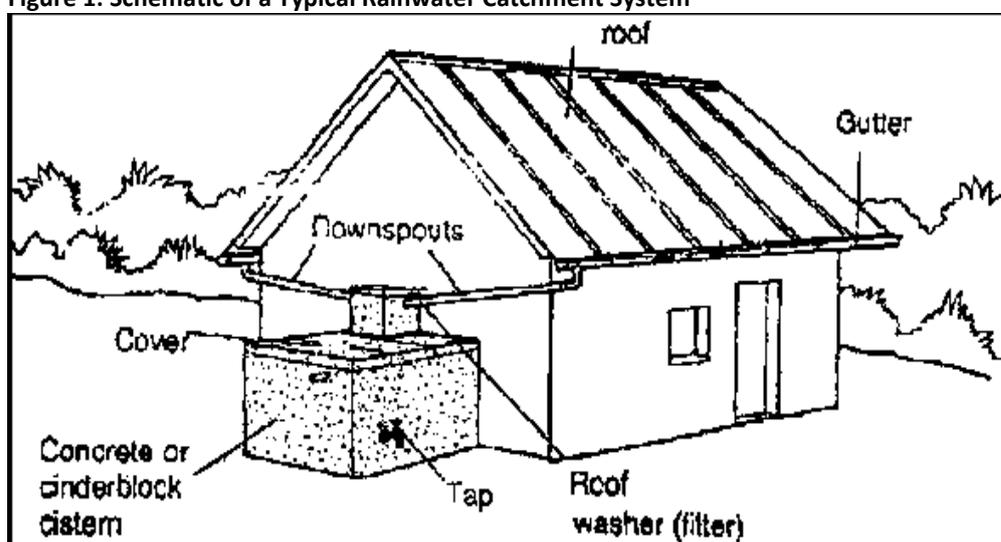
Source: United States Geological Survey, **Water Science for Schools**
 URL: <http://ga.water.usgs.gov/edu/earthwherewater.html>

2 - PRACTICAL WATER SAVING TIPS

2.1 - Harvesting the Rain

Rainwater harvesting is collecting rainfall to meet water needs. A rainwater harvesting system concentrates and collects for direct use and storage rain falling on house and grounds. Free, literally falling from the sky, harvested rainwater splendidly augments domestic water resources. Rainwater harvesting has been practiced for more than 4, 000 years, and, in most developing countries, is becoming essential owing to the temporal and spatial variability of rainfall. Rainwater harvesting is necessary in areas having significant rainfall but lacking any kind of conventional, centralized government supply system, and also in areas where good quality fresh surface water or groundwater is lacking. **Figure 1** shows a schematic of a rooftop catchment system.

Figure 1: Schematic of a Typical Rainwater Catchment System



All catchment surfaces must be made of nontoxic material. Painted surfaces should be avoided if possible, or, if the use of paint is unavoidable, only nontoxic paint should be used (e.g., no lead-, chromium-, or zinc-based paints). Overhanging vegetation should also be avoided.

Rainwater harvesting systems require few skills and little supervision to operate. Major concerns are the prevention of contamination of the tank during construction and while it is being replenished during a rainfall. Contamination of the water supply as a result of contact with certain materials can be avoided by the use of proper materials during construction of the system. The main sources of external contamination are pollution from the air, bird and animal droppings, and insects. Bacterial contamination may be minimized by keeping roof surfaces and drains clean but cannot be completely eliminated. If the water is to be used for drinking purposes, filtration and chlorination or disinfection by other means (e.g., boiling) is necessary.

2.2 - Maintenance guidelines for the operation of rainwater harvesting systems

- A procedure for eliminating the "foul flush" after a long dry spell deserves particular attention. The first part of each rainfall should be diverted from the storage tank since this is most likely to contain undesirable materials, which have accumulated on the roof and other surfaces between rainfalls. Generally, water captured during the first 10 minutes of rainfall during an event of average intensity is unfit for drinking purposes.

- The storage tank should be checked and cleaned periodically. All tanks need cleaning; their designs should allow for this. Cleaning procedures consist of thorough scrubbing of the inner walls and floors. Use of a chlorine solution is recommended for cleaning, followed by thorough rinsing.
- Care should be taken to keep rainfall collection surfaces covered, to reduce the likelihood of frogs, lizards, mosquitoes, and other pests using the cistern as a breeding ground. Residents may prefer to take care to prevent such problems rather than have to take corrective actions, such as treating or removing water, at a later time.
- Chlorination of the cisterns or storage tanks is necessary if the water is to be used for drinking and domestic uses.
- Gutters and down pipes need to be periodically inspected and cleaned carefully. Periodic maintenance must also be carried out on any pumps used to lift water to selected areas in the house or building. More often than not, maintenance is done only when equipment breaks down.
- Community systems require the creation of a community organization to maintain them effectively. Similarly, households must establish a maintenance routine that will be carried out by family members.
- As has been noted, in some cases the rainwater is treated with chlorine tablets. However, in most places it is used without treatment. In such cases, residents are advised to boil the water before drinking. Where cistern users do not treat their water, the quality of the water may be assured through the installation of commercially available in-line charcoal filters or other water treatment devices. Community catchments require additional protections, including:
 - Fencing of the paved catchment to prevent the entry of animals, primarily livestock such as goats, cows, donkeys, and pigs that can affect water quality.
 - Cleaning the paved catchment of leaves and other vegetative matter.
 - Repairing large cracks in the paved catchment as a result of soil movement, earthquakes, or exposure to the elements.
 - Maintaining water quality at a level where health risks are minimized. In many systems, this involves chlorination of the supplies at frequent intervals.

Source: Rainwater harvesting from rooftop catchments,
 URL: <http://www.oas.org/osde/publications>

A rainwater harvesting system consists of three basic elements: a collection area, a conveyance system, and storage facilities. The collection area in most cases is the roof of a house or a building. The effective roof area and the material used in constructing the roof influence the efficiency of collection and the water quality. A conveyance system usually consists of gutters or pipes that deliver rainwater falling on the rooftop to cisterns or other storage vessels. Both drainpipes and roof surfaces should be constructed of chemically inert materials such as wood, plastic, aluminium, or fibreglass, in order to avoid adverse effects on water quality.

The water ultimately is stored in a storage tank or cistern, which should also be constructed of an inert material. Reinforced concrete, fibreglass, or stainless steel are suitable materials. Storage tanks may be constructed as part of the building, or may be built as a separate unit located some distance away from the building.

3 - WATER CONTAMINATION

Water containing poisonous or dangerous substances is “contaminated” or “polluted” and can be harmful to our health. This contamination is not always visible so water that looks clean and clear may not be safe to drink.

Poverty makes people vulnerable to poor water and waste management. The poor usually store water in very unhygienic containers.

The main sources of contamination are:

3.1 - Human Waste

Faecal Waste: When lavatories (latrines) and water-closets are not used by people, faecal waste is often left all over the ground. This washes into water sources when it rains and causes water contamination or pollution.

3.2 - Household rubbish

Household rubbish can also contain poisonous substances which cause water contamination.

3.3 - Industrial /Agricultural Waste

Pesticides: When large quantities of pesticides are used on the farm they may wash into the water sources during the rain. Pesticides are usually poisonous.

Chemical: Many industries produce chemical “waste” which they discharge into the rivers or lakes. The water then becomes contaminated. Chemical waste may also come from car garages etc.

3.4 - Animals and Animal Waste

Some animals carry diseases, which can be transmitted to human (e.g. worms) so when they or their waste come into contact with a water source it can become contaminated.

3.5 - Human Contact

If people wash or play in a water source they may transfer diseases through germs. These germs in the water can infect other people. Also if people use dirty containers to collect water, it can become contaminated.

3.6 - Solid Waste

Waste management is the process of applying hygiene principles in the collection, storage transportation and disposal of waste, with a view of protecting health and the environment. Waste can be defined as unwanted materials or substances, which result from the activities of man. In our everyday life we carry out various activities, which result in the production of waste of various kinds. The waste produced can be hazardous to people and the environment. Such hazards are:

- The spread of diseases associated with poor sanitation such as typhoid and cholera;
- The breeding of flies, mosquitoes and other vermin;
- Emission of offensive smell;
- Pollution of rivers, lakes and land

It is therefore necessary to find better ways in which we can manage our waste in order not to contaminate water systems.

4 - SOURCES OF SOLID WASTE

Solid waste comes from various sources namely:-

- Domestic
- Trade activities
- Agricultural activities
- Industrial activities
- Special waste (such as from hospitals)

4.1 - Domestic waste

This is solid waste from residential areas. This may include paper, vegetable matter, rags, house sweepings, hedge cuttings and plastics. The amount of waste produced in houses varies in composition and quantity.

4.2 - Trade waste

This is waste from commercial premises e.g. shops and restaurants. Shop waste includes wrapping and packaging materials such as paper, plastics, rags, cartons and etc. Restaurant waste on the other hand includes vegetable matter such as food remains, peelings and wrapping materials.

4.3 - Agricultural waste

This waste consists of by-products from agricultural activities such as coffee berry husks, stalks and husks of cereals, legumes and other plants. It also consists of containers of agricultural chemicals such as insecticides, herbicides and fertilizers.

4.4 - Industrial waste

This is from industries e.g. food manufacturing, timber, chemical and metal industries. The type of waste produced varies with industry and the nature of the raw materials used. For example, food industry produces vegetable matter like pineapple, and sugarcane peelings and sometimes packing and packaging materials. Timber industry produces mainly timber chipping and saw dust. Chemical industries produce waste that is highly concentrated in chemicals or they produce chemicals as waste. This may be present in the form of gas, liquid or solid.

4.5 - Special waste

This waste requires special handling because of its nature e.g. some hospital waste and highly toxic radioactive waste from some industries.

5 - HEALTH AND SANITATION ISSUES PERTAINING TO WATER

Though water is necessary for human survival, contaminated water can contribute to the spreads of disease like cholera, dysentery and typhoid. Water sources need to be protected from contamination so that we can remain healthy. Other diseases like malaria are spread by mosquitoes which breed in stagnant pools of water. Proper sanitation involves good hygiene and good management of the environment so that disease-causing organisms or their carriers cannot survive. Some of the things we can do are washing of hands after using the latrine or before handling food, as well as proper disposal of human waste.

6 - GOOD SANITATION

6.1 - Safe disposal of human waste

It is important that the area around the home and school is clean and safe from waste. In slum areas children defecate and urinate in the open because many households do not have latrines. This is particularly serious where people live close to each other, thus increasing the chances of the spread of many diseases. Flies will be attracted to the excreta and they will spread germs when they come in contact with our food. Excreta can be carried by rain into water sources like rivers and streams and contaminate our water supplies. It is therefore important to dispose of excreta safely by using a latrine.

6.2 - Wash hands after visiting the latrine:

Dirty hands can carry germs, which cause diseases. When hands are washed after visiting the latrine, many diseases can be prevented. Always make it a habit of washing your hands with clean water and soap after using the latrine.

6.3 - Never touch food/water with unwashed hands

Hands should be washed before handling food so that germs will not contaminate our food. Food that is not going to be cooked, especially raw fruits and vegetables should be carefully washed before eating.

6.4 - Use of Latrines and Toilets

Pit latrines should be at least 10m away from well or water source

Pit latrines should be above the ground-water level

The latrine should be used correctly: It should be kept clean at all times. Hands should always be washed after visiting latrines or toilets, or after one has disposed of faeces

7 - FOOD HYGIENE

Disease-causing organisms enter the human body when a person ingests contaminated food or water. Micro-organisms in the contaminated food multiply at room temperatures and release poisons which cause illness. Diseases contracted by eating contaminated food are called food-borne diseases. Signs include diarrhoea, vomiting, stomach pains and body weakness.

7.1 - Some sources of food contamination

- Food containers
- Dirty hands
- Flies
- Toilet
- Contaminated water

7.2 - How to avoid food borne-diseases

- Wash hands before eating
- Keep all foods covered and in a cupboard, away from flies
- Food containers should preferably be washed thoroughly with soap and hot water
- Polythene bags should not be reused as food containers
- Keep finger nails short

8 - WATER RELATED DISEASES

There are four main types of diseases related to water:

8.1 - Water-borne

In which the disease (such as dysentery) is carried in the water and a person is infected by drinking the contaminated water.

8.2 - Water-washed

Diseases are caused by insufficient water to wash with e.g. Scabies.

8.3 - Water based

Pathogens (such as worms) live in the water and enter the body directly from the water e.g. Bilharzia.

8.5 - Insect based

Insects carrying disease depend on water so the transmission of disease from these insects is also related to water e.g. Malaria.

9 - HOUSEHOLD WATER TREATMENT AND SAFE STORAGE

Every year, there are 1.6 million diarrhoeal deaths related to unsafe water, sanitation, and hygiene – the vast majority are children under 5.⁴ More than one billion people lack access to an improved water source. Household water treatment and safe storage interventions can lead to dramatic improvements in drinking water quality and reductions in diarrhoeal disease – making an immediate difference to the lives of those who rely on water from polluted rivers, lakes, and in some cases, unsafe wells or piped water supplies.

Household water treatment and safe storage represents a cost-effective solution not only for those lacking "improved" access, but also for those who have access to water, but whose supplies are unsafe. It is effective, simple, and inexpensive. It is especially applicable to the poor households or to populations recovering from a disaster situation who often lack facilities and resources. For example, if household bleach is available, a dilute chlorine solution can be made up and used to disinfect water. Water can also be safely treated by exposing it to sunlight. All that is required is a discarded clear plastic bottle. Another option to treat water at home is the use of simple ceramic pot filters moulded by local artisans. If available, commercially produced tablets containing chlorine, or sachets with combined flocculation and disinfection properties, can also effectively remove pathogens from water.

9.1 - Options to purify household water

Boiling (<http://www.epa.gov/safewater/faq/emerg.html>)

Vigorous boiling for one minute will kill any disease-causing microorganisms present in water (at altitudes above one mile, boil for three minutes). The flat taste of boiled water can be improved by pouring it back and forth from one container to another (called aeration), by allowing it to stand for a few hours, or by adding a small pinch of salt for each quart of water boiled.

Filtration

If filters are available, then water filtration is another option to purify water. Ceramic filters with small pores, often coated with silver for bacteriostasis, have been shown to be effective at removing microbes and other suspended solids. Filters need to be cleaned regularly. For further information, see www.potpaz.org/ or www.purifier.com.np.

There are other chemical treatment methods such as chlorination, use of iodine tablets, and the use of alum.

Safe Water Storage

Regardless of whether household water is initially of acceptable microbiological quality, it often becomes contaminated with pathogens of faecal origin during transport and storage due to unhygienic storage and handling practices. Studies show that the use of containers with narrow openings for filling, and dispensing devices such as spouts or taps/spigots protect the collected water during storage and household use. Improved containers protect household water from the introduction of microbial contaminants via contact with hands, dippers, other faecal contaminated vehicles or intrusion of vectors.

⁴ WHO, http://www.who.int/household_water/en/

MODULE 4

CREATING NEW WATER, SANITATION AND HYGIENE ETHIC

1 - INTRODUCTION

It is essential to change old behaviours and habits that are ineffective in order to attain the millennium development goals related to water and sanitation. The Human Values approach is based on the assumption that knowledge and skills are not sufficient to bring about changes. A new water, sanitation and hygiene ethic is created by applying human values to knowledge. This module explores a variety of behavioural change theories and models as well as the human values approach to character development and behaviour change. It is by understanding how people change behaviours and applying human values that transformation occurs.

2 - AIMS OF THE MODULE

The aim of this module is to:

1. Deepen the participant's understanding of behaviour change.
2. Help participants acquire the necessary knowledge and skills to facilitate sustainable behaviour changes in water, sanitation and hygiene.

3 - LEARNING OUTCOMES

On completion of this module participants should be able to acquire competencies to:

- Identify factors which facilitate or hinder behaviour change in relation to water, sanitation and hygiene education
- Access and select information from a variety of sources
- Understand behaviour change in the context of water, sanitation and hygiene education
- Apply the human values approach to water, sanitation and hygiene education.
- Facilitate the process of creating a new water, sanitation and hygiene ethic through the application of human values

Key issues

1. Types of hygiene behaviour
2. Behaviour change and behaviour change models
3. Understanding human values as the foundation for sustainable behaviour
4. School climate as a model for character transformation and behaviour change.
5. Creation of an environment to implement VB-WASH.

4 - ACTIVITY/STEPS

Start the Unit with a self-reflection activity

Invite a few participants to share their values and why they are important to them.

Activity: Self-reflection

Write down:

- What you understand by the term values?
- What values do you consider to be important and why.
- Identify the national or constitutional values of your country.
- What values would you like the children of your country to grow up with?

- Identify a value that starts with the first alphabet of your name e.g. Helpful Harry, Kind Felicia, Patient Sarah, Courage Otu Frank Glover, and Enthusiastic Eric etc.

- Activity 1:** **Presentation of the following:**
- factors hindering behaviour change in relation to water, sanitation and hygiene education
 - Strategies, approaches and steps to access and select information from variety of sources
 - Understanding behaviour change in the context of water, sanitation and hygiene
 - Application of Human values Approach to water, sanitation and Hygiene education.
 - The process of creating a new water, sanitation and hygiene ethic.

- Activity 2:** **Video Watch: UN-HABITAT video “Unheard Voices of Women”**
 Participants analyse behaviours, attitudes and related values on gender, water, sanitation and hygiene based on the video.

- Activity 3:** **Participants write on pieces of paper their reflections/personal experiences** on behaviours that they have changed or present behaviours that they would like to change.

The following questions can be helpful for the activity.

- *What was the change?*
- *How did you start to implement the change?*
- *What strategies did you use?*
- *What challenges did you encounter?*
- *Did you relapse to old behaviour?*
- *What factors supported the change?*

Ask participants to exchange papers. Each participant to share the experience/ reflections of another person.

- Activity 4:** In small groups, participants brainstorm to show how the school climate can be used as a model for character transformation and behaviour change.

- Activity 5:** Participants in groups brainstorm to give reasons why some people:
- Have latrine and disposal bins of their own.
 - Have their own latrines
 - Indulge in indiscriminate disposal of garbage.

- Activity 6:** A self-reflection activity on Values
 Ask the participants to reflect on what they think values are and what values do they consider to be important. Ask the participants to write down one value on a strip of paper. An A4 page could be divided into 4 *quarters* and each participant could be given one strip. The values that are identified will be used in the next module.

HANDOUT BEHAVIOURAL CHANGE

1 - IMPORTANT HYGIENE BEHAVIOURS

There are various types of behaviours that are important for improved water, sanitation and hygiene (Hubley 2004)

- Community action - action by communities to change their surroundings.
- Health behaviours – actions people undertake to be healthy, such as washing hands.
- Utilization behaviours – use of health services such as latrine.
- Illness behaviours – recognition of symptoms and prompt action, such as diarrhoea or cholera.
- Compliance/adherence – following course of prescribed medicine or action, such as using ORT (Oral Rehydration) solution.
- Another typology of behaviours identified by Hubley:
- Decision-based behaviours, conscious decision making to perform or not to perform the behaviour.
- One-time behaviour
- Routine behaviour
- Addictive behaviours

2 - UNDERSTANDING ATTITUDES AND BEHAVIOUR CHANGE

Research in social sciences has shown that knowledge on a topic may increase; people may even change attitudes, but that the step to improved behaviours and practices is depending on a complex set of social and psychological factors. Hubley introduced the BASNEF model for understanding behaviours in health communication: Beliefs, Attitudes, Subjective Norms and Enabling Factors (Hubley, 1993).

Individual beliefs about the consequences of certain behaviour and the value placed on each consequence lead to personal attitude or judgement. Attitudes combined with subjective norms contribute to behavioural intention. Subjective norms are beliefs about what behaviour other influential people would wish the person to perform. Enabling factors such as income, housing, water supply, agriculture and sanitation should be available so that the intention leads to a change in behaviour.

Below the influences on behaviour and communication actions needed in the BASNEF-model are explained.

BASNEF		
	Influences	Actions needed
B eliefs, A ttitudes (individual)	culture, values, traditions, mass media, education, experiences	Communication programmes to modify beliefs and values
S ubjective N orms (community)	family, community, social network, culture, social change, power structure, peer pressure	Communication directed at persons in family and community who have influence
E nabling F actors (inter sectoral)	Income/poverty, sanitation services, women's status, inequalities, employment, agriculture	Programmes to improve income, sanitation provision, situation of women, housing, skill training

The starting point is the individual's own personal behaviour. However, the family, community, and the nation as well as education, economic and political status can also influence the individual's resultant behaviour. All interventions for behaviour change should therefore go beyond the individual.

3 - STRATEGIES, APPROACHES AND STEPS

A systematic approach to plan and implement a strategy for advocacy and awareness raising will be needed to mobilise different segments of society to support the development of sustainable water, sanitation and hygiene management. This consists of the following seven components in a process.

4 - IDENTIFICATION AND DETERMINATION OF THE ISSUES THAT NEED TO BE ADDRESSED IN THE STRATEGY

Advocacy requires agreements on specific issues to be addressed. These may change in the course of the strategy and can be adapted as the need arises. An unclear 'goal' for advocacy will prevent clear messages to be formulated and this will hinder reaching the intended audiences in an effective way.

5 - ASSESSMENT OF THE CURRENT SITUATION WITH REGARD TO SEWAGE MANAGEMENT

Before it is possible to develop a strategy for public awareness raising for sewage management, it is necessary to get an overview of the present situation with regard to sewage. This assessment can focus on the different systems that are in use for human waste collection and disposal, waste water disposal and treatment systems.

6 - ASSESSMENT OF CURRENT KNOWLEDGE, ATTITUDE AND PRACTICES

In addition to the assessment of the 'environmental' status quo, it is necessary to assess what the present knowledge, attitudes and practices are with regard to sewage management.

7 - AUDIENCE RESEARCH AND SEGMENTATION

Segmentation of audiences and their communication needs essential for effective communication. Without understanding the differences among various segments, or sub-segments, it is difficult to design effective messages that call for change. Communities/users. It is usually local government that has to take responsibility for setting verifiable goals

Advocacy requires agreements on specific operational goals. These have to be realistic and achievable in a specified time span. It is best to set these goals with the main stakeholders involved and setting them in such a way that indicators are agreed upon and are verifiable, preferably by those stakeholders who have immediate interest in the issue.

8 - BUILDING ALLIANCES

Once these goals are in place, the next step is to identify and mobilize potential partners including legislative bodies, NGOs, industries, religious people, the media, and community and professional groups. All these groups are important for political and financial support. When the alliance is one sided, support for the cause will be lost, as is illustrated by the case below.

9 - CONCLUSIONS

Advocacy and public awareness raising for behavioural change is more than a one-off campaign in the mass media... This approach consists of a number of seven components in a process, which can be summarized by the steps and questions below.

- What is the issue? What are we trying to achieve? What behaviour?
- Who are the target groups? To whom? Whose behaviour?
- What are the present knowledge, attitudes, and practices?
- What type of message? Two way
- Who will help in communication? Incentives?
- Are communication materials field-tested?
- What media? Tools
- What are the indicators for results?
- Cost and budget
- Revision of programme based on lessons learned.

10 - WHAT IS HYGIENE BEHAVIOURAL CHANGE? WHICH FACTORS INDUCE PEOPLE TO CHANGE THEIR BEHAVIOUR?

For individuals or groups to make a sustained change to their hygiene behaviour, they need to go through several steps:

- Recognizing or acknowledging that a particular behaviour (e.g. leaving children's stools exposed in the living environment) is wrong, or risky, or anti-social and wanting (or accepting peer pressure) to change it.
- Discovering alternative, more suitable, behaviour (putting the stools in a latrine) that is practical and convenient.
- Trying out the new behaviour and assessing the pros (cleanliness, dignity, esteem, improved health) and cons (extra effort, disruption to daily routine, distance to latrine).
- Finding an overall positive benefit from adopting the new behaviour.

- Before making the actual change, different considerations (own beliefs and values, developed attitude, influence of others, enabling factors) play a role.

When people change, as individuals or through group action, specific factors motivate them to do so. In the table below, four key benefits are listed which have been found to strongly influence hygiene behaviour change.

They are:

- facilitation, or making good behaviour easier;
- understanding in one's own mode of thinking, that the change is better for oneself and for one's family;
- influence and support from others, when a new practice is adopted; and
- Autonomy or the means and control to carry out the practice.

Factors inducing people to change their hygiene behaviour	
Facilitation more on water	<ul style="list-style-type: none"> • Water sources are closer, supply is reliable and predictable, collection easier and safer. • New facilities to solve excreta disposal problems e.g. lack of privacy, lack of safety, bad smells, flies, and workloads of children are solved. • New facilities/services to eliminate solid waste and waste water nuisance from dirt, mud, rats and bad smells are reduced.
Understanding	<ul style="list-style-type: none"> • People conclude that within their own hygiene perceptions certain conditions or practices are unhealthy or undesirable and should be changed. • People perceive economic implications of unhygienic conditions.
Influence	<ul style="list-style-type: none"> • People gain prestige from their new behaviour. • Others support the new behaviour/disapprove of different behaviour. • The group/community commits itself to the behaviour. • People agree on specific punishments or rewards.
Autonomy	<ul style="list-style-type: none"> • Means (time, energy, finances, etc.) for the new practice are available. • The process provides valued skills and resources. • The users are free to use their skills and resources.

Source: Wijk, Christine van Wijk and Tineke Murre (1995). [Motivating better hygiene behaviour. Importance for public health. Mechanisms for change](#)

(www.unicef.org/programme/wes/pubs/behav/behav.htm). New York, USA: UNICEF.

A copy in Pdf program can be downloaded:

<http://www.unicef.org/programme/wes/pubs/behav/behav.pdf>

HANDOUT

LEARNING AND BEHAVIOUR CHANGE

Behaviour change and learning have much in common, but they are not quite the same thing. Nonetheless, learning is vital if people are to change their behaviour. As Kilvington & Allen (2001) suggest:

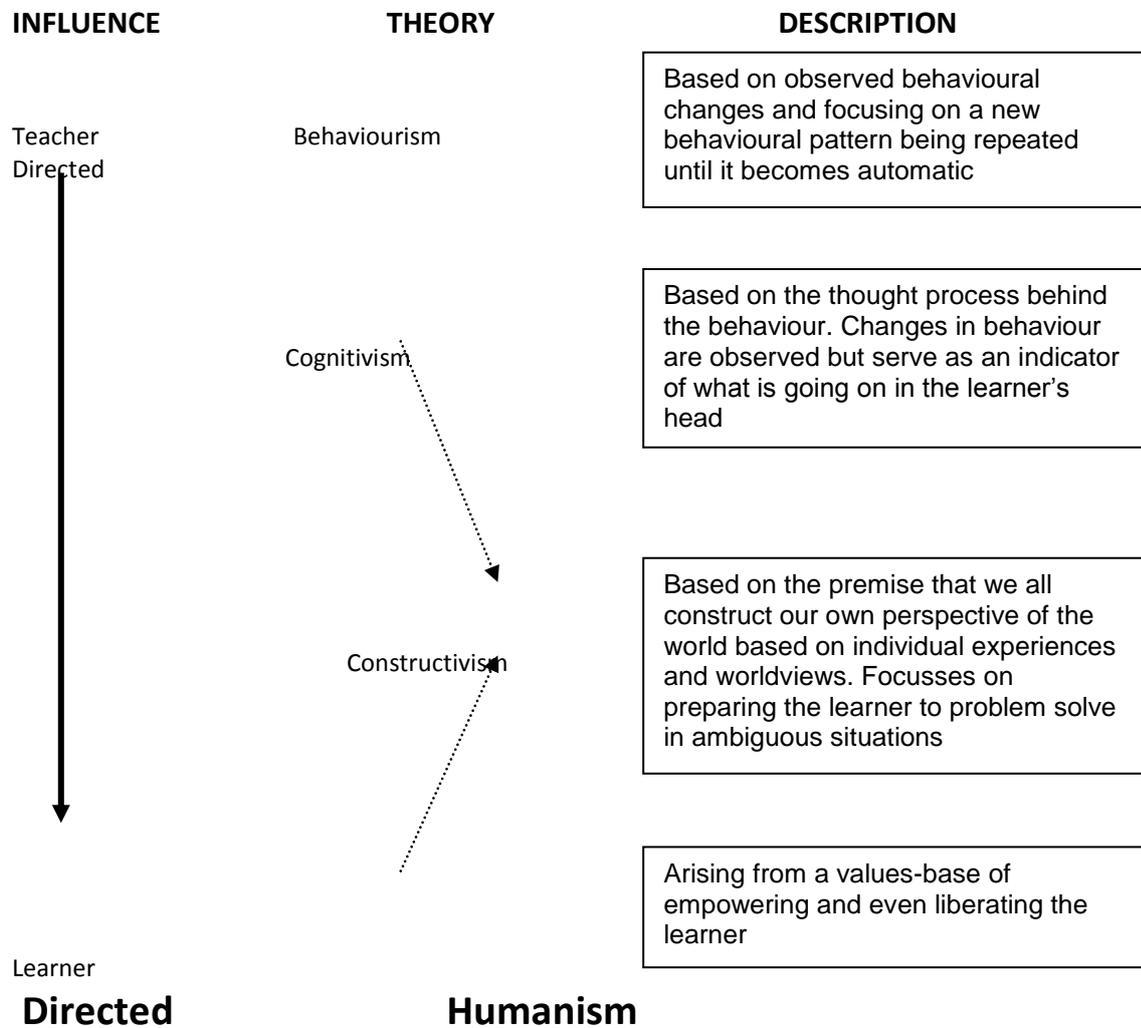
Behaviour change = Knowing what to do + Enabling environment + Imperative. Learning is important in all three parts of this behaviour change equation. Working out what to do requires people to learn about the situation. Learning is important for understanding how the social and physical environment can support behaviour change, and learning may be important for developing the motivation (imperative) for making the change. Understanding environmental issues may provide some motivation (imperative) for acting differently with respect water usage, hygiene habits and sanitation practices, for example.

Learning means different things to different people. Studies done on how learners understand learning show that as people learn, they come to understand it differently. Early on, learners think of learning as a way to 'know a lot'. Hence the teacher has the information and the learner has to acquire and memorise it. After a while, learners start to understand learning as being about acquiring new skills and methods. Here the learner is trying to learn new ways of thinking and doing. Knowing 'facts' is secondary. Advanced, reflective learners come to see learning as about understanding the world through reinterpreting and integrating knowledge (Belenky et al. 1986). These observations indicate that learners at different levels of understanding have different needs. Initially the learner learns the facts of washing hands before eating. When the learner washes his or hands these skills are practised. Reflexive learners do this automatically and are able solve problems building on the knowledge and skills developed e.g. if no water is available at the toilet, the learner goes out in search of water before handling food.

1 - THEORETICAL PERSPECTIVES

Understanding some of the theories of learning and behaviour change will offer more insights. The following model is a synthesis of the predominant psychological theories that underpin learning.

Fig. 1



1.1 - Behaviourism

In behaviourism, learning is seen as the conditioning of human behaviour through habit formation. Behaviourists see people who can be conditioned to behave in particular ways with the right use of rewards and/or punishments (Skinner 1972). Behaviourism implies the dominance of the teacher, with learners characterised as essentially passive. Behaviourism is an important aspect of parenting, when adults train children to behave in particular ways through the consistent use of either punishment or reward. They also underlie policy mechanisms such as fines and incentives. A parent may discipline a child when s/he leaves the tap open when brushing his or her teeth. Alternatively the parent may reward the child with a chocolate when the child turns off the tap.

1.2 - Cognitive approaches

Cognitive psychologists, in contrast to behaviourists, are more concerned with the processes and structures inside people's brains. They deal with perception, seeing the brain as continuously categorising inputs from experience and, in turn, interpreting experience in terms of the categories that are developing. This process is an ongoing one in which the patterns in our brains are constantly affecting what we perceive, and what we perceive is constantly affecting the patterns in our brains (Atkinson et al. 1993). In contrast to the behavioural perspective, the cognitive school focuses more on the learner as an active participant in the teaching learning process. Cognitive-based teachers instruct students by using teaching strategies that help the learner acquire knowledge more effectively. When teaching the impact of pollution on water bodies the teacher may decide to ask the learners to work on a project to identify the causes of pollution in a nearby stream or river.

An important influence in cognitivism was the work of Jean Piaget who observed that children go through stages that appear to be linked to the maturity and development of the brain. A related concept is the idea of styles of learning, in which individuals are seen to have different learning styles and to be at different stages in a learning continuum (Atherton 2001).

1.3 - Constructivism

Constructivism is an approach that has emerged within the cognitive school of thinking and it underlies much work currently undertaken in the field of education and social psychology. Constructivism (Kelly 1955) adds the notion of 'context' and process to understanding behaviour change. The essence of constructivism is that people are active sense-makers who are continually assessing their environment and acting according to the ways in which they interpret the situation (Ross & Nisbett 1991; Allen et al. 2001). This perspective highlights the fact that people may react to the same information in very different ways. Importantly, constructivism sees learning as an internal process of interpretation, rather than a process of knowledge transmission.

An individual's behaviour emerges from the sense that they have made of what is happening, their ideas about what should happen, and what might happen if they change their behaviour (Ross & Nisbett 1991). Individuals use a wide range of information to develop their understanding of a situation. However, for them to engage with the information in the first place it must be both credible and relevant (Reynolds & Busby 1996). Credibility is not always to do with the scientific quality of the information. It is often more to do with the qualities and credentials of the person from whom it comes. Thus, learners are more likely to listen to other learners, or to people that they know well and whom they trust. The human values approach uses group activities which promotes child-to-child learning as peer influence is an opportunity to use to promote the new water, sanitation and hygiene ethic we are promoting. Role modelling is another avenue of

facilitating behaviour change e.g. if a teacher ignores a leaking tap , children are likely to emulate this behaviour.

1.4 - Humanism – Human values approach

This perspective is driven largely by liberal values. It tends to prescribe what should happen rather than describing what does happen during the learning process. Humanists assert that everyone has a natural desire to learn and that learners need to be empowered and to have control over the learning process. This means that in an ideal world the teacher relinquishes a great deal of authority and becomes more of a facilitator (Atherton 2001). Humanists are especially concerned with creating an educational environment in which learners can reach their full potential. The school climate is powerful tool for character building and promoting appropriate water and sanitation behaviours. The parents, teachers and administrators must all model good human values if the human values approach to water, sanitation and hygiene education is to succeed.

Table 1

Concept	Definition	Important processes	Example
PRE-CONTEMPLATION	Unaware of the problem, hasn't thought about change		Defecating near the local river and is unaware of cholera
		Becoming aware Emotional response Environmental analysis	Lesson in class Embarrassed Impact on the river
CONTEMPLATION	Thinking about change, in the near future		
		Thinking through the issues	How cholera is caused.
DECISION/ DETERMINATION	Making a plan to change plans, setting gradual goals	Seeing other options	Thinks about alternatives
		Self-efficacy Social support	Believes that old behaviour can be changed
ACTION	Implementation of specific action plans		Now defecates in the bush. Covers excreta with soil
		Helping relationships	
MAINTENANCE	Continuation of desirable actions, or repeating, periodic, recommended step(s)	Reinforcement Seeing other options Being in control Social support	Teacher reinforces behaviour by praising. Friends also practice acceptable sanitation habits.

2 - HUMAN VALUES AS THE FOUNDATION FOR SUSTAINABLE BEHAVIOUR

This approach sees values that are essential for good living as being an integral part of oneself and that all human beings are capable of accessing these values that reside within them. In behaviour change management the facilitator through modelling good values, and creating a climate that is conducive for character development draws out the values through a learning process described as elicitation. This is the meaning of the term education, which is described as “educare” (Latin), which means drawing out, or bringing out.

It is essential that education combine skills and knowledge development with values. The following model looks at the relationship between knowledge, skills and values.

SKILLS

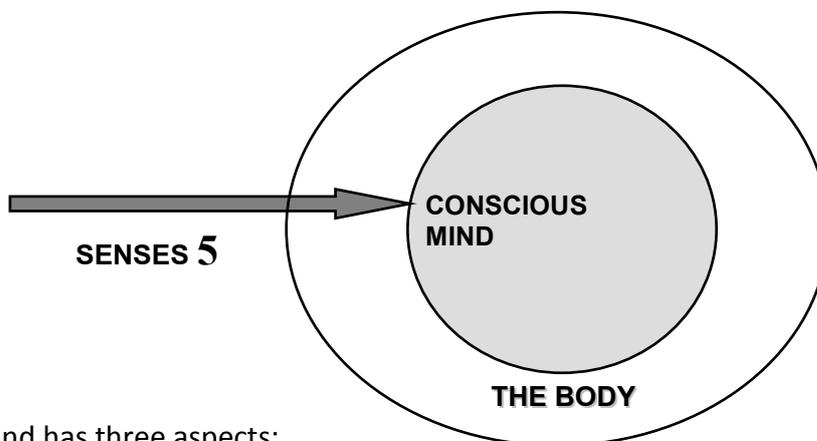


1. People with low values and low skills are harmful and are not useful in society.
2. People with strong values and high in skills are best.
3. People with high skills and low in values are dangerous.
4. People with strong values and are low in skills are trainable.

2.1 - The mind

By skilling knowledge with the integration and elicitation of human values, behaviour changes as manifested in character transformation are permanent. Education is seen as a process that moves from information to transformation. In this presentation the work of Dr Art Ong Jumsai will be explored along with the notion that an enabling and positive school climates lead to character development.

Human beings learn through the process of interacting with the environment through the five senses. Researchers have explained that the brain processes the stimuli received by the sense organs. The following model illustrates this process.



The mind has three aspects:

1. Subconscious mind
2. Conscious mind
3. Super Conscious mind

Sub-Conscious Mind

The subconscious performs function similar to the memory in the computer. It stores data, information, past events, and programs. A new program can be installed in the subconscious through various means such as seeing or hearing something repeatedly, saying something verbally or mentally repeatedly.

Whatever we think, so we become. Every time you encounter a message at the tap stating “Water is Precious, Don’t waste it”, this message is stored in the sub-conscious mind. By seeing this message repeatedly, the conscience directs the individual to use water wisely.

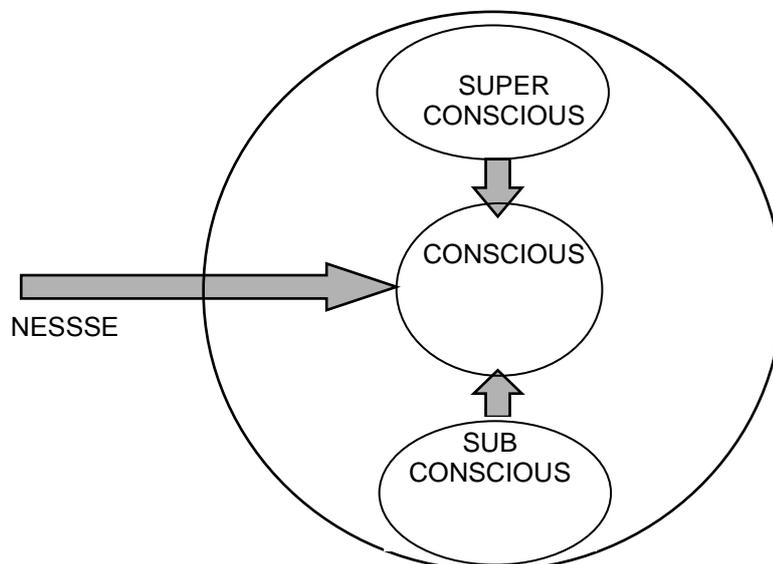
Conscious Mind

The conscious mind is that part of the mind that we are aware of. We use it to think and make decisions. When faced with the choice of watching a soccer match, and emptying tins that contain water which are breeding sites for mosquito’s, the conscious mind thinks. The mind then draws on the sub-conscious memories and realizes that malaria is a killer. The conscious mind may decide to forego the soccer match and clear the containers.

Super Conscious Mind

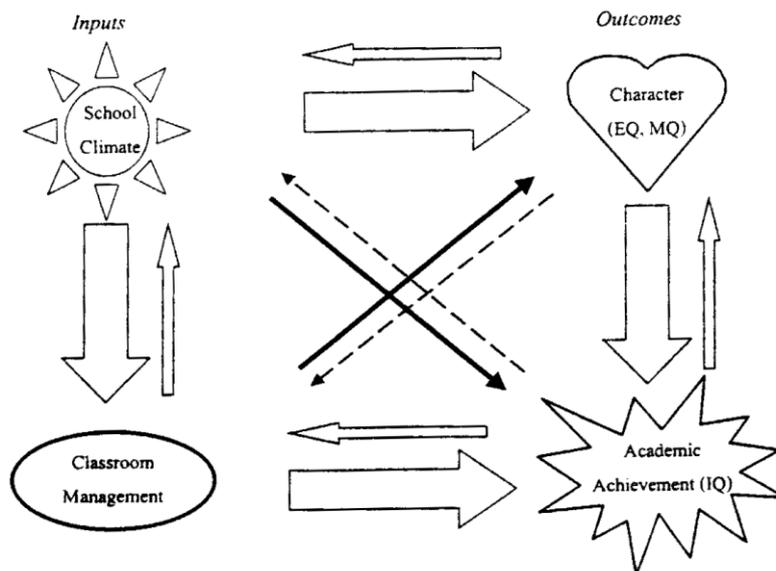
The Super Conscious Mind comes to play when it is found that the conscious mind becomes calm, peaceful and does not react emotionally to various stimuli as a result before. The ability to concentrate is improved and memory is enhanced. Training children in the art of concentration and meditation would speed up the transformation. The conscience within the children will start to teach and guide them to act in the right way, to do only what is good for themselves and to others. A new type of learning has started. Knowledge and understanding are gained intuitively without having to use the conscious mind. In fact, the conscious mind needs to be stilled and completely calm for intuition to occur. Many great discoveries in the past have been achieved when the mind is calm. Sir Isaac Newton discovered the law of gravity while sitting quietly under an apple tree when an apple fell down on his head. As a small child, Newton used to sit quietly alone by himself under an apple tree. This became his habit as he grew up. The human value gained through the development of the super-conscious is the understanding of the “TRUTH”. In the context of water, sanitation and hygiene the individual may acquire insights when they least expect it e.g. finding alternative and cost effective methods of teaching water education in the absence of expensive laboratory equipment. The teacher may use old plastic bottles as beakers and may use old cloth as filter mechanisms instead of filter paper.

The following diagram illustrates the concept of the sub-conscious, conscious and super-conscious minds.



2.2 - The school climate

If the atmosphere of the school is full of peace, love and compassion, it will lead to the output desired of good character with high EQ, emotional intelligence and MQ, moral intelligence. At the same time, teachers will feel at peace and the school climate will enhance classroom management. With good classroom management, this will lead directly to academic achievement. An important discovery is that when students have good character (high EQ and MQ), this will also lead directly to academic achievement. In the following figure, the size and direction of the arrows indicate the magnitude of influence and directionality.



Thus the first step in the application of the model is to create an appropriate school climate that will help in the transformation of teachers and students as well as the staff in the school. This involves the proper objectives for the school, the school mission, the leadership, the policy and vision of the management, the morale of staff and teachers, parents' and students' participation. In fact all the steps in the Human Values Integrated Instructional Model will all contribute to the school climate. The parents, teachers and administrators must all model good human values if the human values approach to water, sanitation and hygiene education is to succeed. Every influential person must live the human values in the school and inspire the learners to do so. "As is the water in the tank, so is the water in the tap", says Sai Baba, a sponsor of a large water supply project in India.

3 - CONCLUSION

The Human values approach to behaviour change is adding another dimension to the learning process. It takes it a step forward by asserting that acquisition of knowledge and information is not enough to lead to sustainable behaviour changes. Transformation begins when the individuals value systems which have been nurtured in the sub-conscious mind shapes decision making. It is the application of human values to water, sanitation and hygiene education that will lead to the new ethic that the programme is striving to achieve.

REFERENCES AND WEBSITE LINKS FOR ADDITIONAL INFORMATION

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MODULE 5

VALUES-BASED EDUCATION IN PRACTICE: PHILOSOPHY AND METHODOLOGY

1 - INTRODUCTION

Human values are central to transformation and are a strategy that UN-HABITAT is using to create a new water, sanitation and hygiene ethic. In this module human values are defined and various sources of values are explored. The philosophical underpinning of the human values approach is discussed and participants are encouraged to identify core personal values and a system to classify these values. The pedagogy of values education is shared and participants are exposed to the various methods and tools used.

2 - AIMS OF THE MODULE

The aim of this module is to strengthen the participant's understanding of Values-based Water, Sanitation and Hygiene Education as well to acquire the pedagogy of values education.

3 - LEARNING OUTCOMES

On completion of this module, participants should be competent enough to:

- identify personal, social and national values that impact on water, sanitation and hygiene practices
- acquire knowledge on human values education
- apply human values to water, sanitation and hygiene education
- Acquire the methodology to implement the human values approach to water, sanitation and hygiene education.

Key issues

1. Human values and living
2. Values-based Water, Sanitation and Hygiene Education
3. Challenges associated with water, sanitation and hygiene education.
4. Change through education in human value.

4 - MATERIALS AND METHODS

Flip chart, pictures, fliers, slides

5 - STEPS/ACTIVITIES

Activity 1: **Power point presentation / Presentation on the following:**

- Human and living values. (Sources of values)
- Human values in water, Sanitation and water Education.
- Challenges associated with water, Sanitation and hygiene Education.
- Change through education in human values.
- Direct and integrated (indirect) Teaching methods in water, sanitation and hygiene education

Activity 1: **Developing taxonomy for human values**

Participants list all human and living values they know of and categorize them into the five core values

Divide participants into groups and ask them to engage with the following activity. Ask the participants to take the values that they wrote down on the strip of paper in the Activity in Module 4 and negotiate with other members of the group as to how these values can be categorized or grouped. At some point the group must come up with a list of core values under which the other values can be grouped. Ask the participants: What is the link between human values and water, sanitation and hygiene education?

Activity 1: The direct method

Participants sit silently, quietly or still in a posture.

Take them on a mental expedition e.g. through a forest or through a clean and neat city.

Activity 1: The Integrated (indirect) method

Participants identify a topic in their subject areas and develop a lesson on Human Values in Water, Sanitation and Hygiene. You will be required to share these lesson plans in a gallery walk. One Member of your group will present this lesson plan to the others as they walk around the gallery” viewing the different exhibits. Use means to captivate the audience’s interest e.g. singing songs, developing a dance routine etc. Remember you are trying to change behaviours and attitudes using the human values approach.

Feedback will be elicited on the process of developing lesson plans for water, sanitation and hygiene education.

HANDOUT

VALUES-BASED EDUCATION IN PRACTICE: PHILOSOPHY AND METHODOLOGY

QUESTIONS

- *What are values?*
- *What are the sources of human values?*
- *List some values that are important to you?*
- *What value does to our nation uphold?*

1 - INTRODUCTION

Philosophers have for centuries past, philosophized on the fundamental question of what truly constitutes the good life of man. In other words, what will lead man to human excellence – not in terms of the acquisition of material things and the advancement of science and technology (tangible variables) which by themselves have not brought about real and sustainable peace, happiness and stability in homes, work places, communities, nations and the world at large. Their focus has always been on intangible variables which can impact on the human spirit and thereby bring about a turn away from that which is evil to that which is good; from darkness to light. These intangible variables have received different labels such as ethics, morality, virtues and so on. They are all about the way we, humans, ought to behave so as to bring out and apply in our daily lives the humanness, the treasure that is within us.

In recent times the intangibles have received a new label – VALUES – which is easily identifiable within oneself, culture and tradition, constitution and social relations as well as in all International Conventions and Declarations including the United Nations Charter. For example, the values of solidarity, tolerance, peace, respect for others culture, religions, civic responsibility, and so on are desirable or worthwhile human qualities which, when lived, will provide a conducive environment for the full development of human potential and the dawn of peace among individuals and nations.

2 - TRADITIONAL AFRICAN RELIGION AND COSMOLOGY

The traditional African man lives in (a) the world of the concrete reality; (b) the world of the values (social) human and (c) the world of the Constant Integrated Consciousness of what makes him brilliant, excellent, successful. The first world is that of the man, trees, stars, objects inanimate as phenomena. The second is that of Human Values (truth, caring, sharing, compassion, peace etc.) in which it participates in the management of the mental and spiritual processes of the man and his community. The third is the world that the man cannot reach or express the world of the spiritual powers.)

The study of the myths and legends is intended to highlight the way in which the people share a close bond with the elements of nature. The African people maintain a high reverence for all things natural. As part of the desire to give praise and thanks to the natural elements, the people of Africa immortalize nature through myths and legends. Each myth is designed to entertain the listeners while providing them with a history lesson of sorts as well as moral instruction.

3 - CONSTITUTIONAL VALUES AND CHARACTER EDUCATION PROGRAMMES

In Ghana, constitutional values form the basis of national values. These include democracy, equality, freedom, justice, respect and appreciation of human rights. This is implemented in schools as Values in Education, as an initiative to familiarise learners with Constitutional values and symbols. The revised National Curriculum, places emphasis on values related to Social Justice, a Healthy Environment, and Human Rights and Inclusivity.

In Ghana, education is seen as more than equipping Ghanaian students with specific skills and knowledge. It is also about developing positive, productive attitudes and building character. It is about giving and living the values the nation needs.

Ghanaian society has a shared sense of values that unite people and are important for accepting and celebrating diversity. Values such as tolerance, trustworthiness, mutual respect, courage, compassion, honesty, courtesy and doing one's best are part of our democratic way of life and shape our children's understanding of themselves and of the world.

4 - HUMAN VALUES AND LIVING VALUES

Two modern schools of thought may be identified: Living Values and Human Values. The two schools are not mutually exclusive. If anything, they are mutually inclusive and complementary. The differences in name and categorization (in terms of core values: Living Values Approach has twelve; Human Values Approach has five) are superficial. The core values manifest themselves in various practical ways, for example, love manifests itself in caring, sharing, concern for others, forgiveness and so on. The core values in both schools are inter-related and inter-connected. The teaching methodologies are not conflicting because they are simply different pathways to the same goal – Human Excellence. Both approaches are equally applicable as solutions to human concerns such as water, sanitation and hygiene education.

4.1 - Categorising human values

As human values can be numerous, it may be useful to develop a taxonomy or system of clustering, organizing and grouping values.

Values-Based Water, Sanitation and Hygiene Education

Discussion on a subject as important as Water, Sanitation and Hygiene Education often centres on its most tangible aspects – information gathering about rivers, lakes, waterfalls, lagoons, groundwater, the rain cycle, water pollution and treatment, excreta disposal, personal cleanliness, water diseases and so on. It is about water literacy which usually encompasses comprehension and the application of scientific knowledge and skills. Although these things are critically important, Water Education is all of these things plus something less concrete; though no less important. It is also about the community's values, its sense of duty – the obligations members have to each other, to the use of water itself and to future generations. The community's values ought to be strengthened towards the use and management of water and other natural resources which took billions of years to develop and, yet, could be diminished or exhausted within a relatively short period of time. The same sense of values – LOVE, love of oneself, of natural resources – should be strengthened towards the provision of adequate hygiene and easily accessible sanitation facilities and sustainable hygiene practices.

It was Lao Tsu who said:

In the end we will conserve only what we LOVE

We will love only what we UNDERSTAND
We will understand only what we are TAUGHT

The task of Water Education therefore is to teach people so that they understand the role of water in the world, in order to love water and thereby to conserve, protect and care for it. Water Education should be seen as being concerned with change, with transformation of peoples' perceptions, attitudes and behavioural patterns towards water use, sanitation and hygiene. Although perhaps most people are vaguely aware of the role water plays in their lives, yet, it is obvious that public and private understanding of water, water management and water-related issues is basic to solving present and future water problems; and to sustainable development.

4.2 - Challenges

The most obvious challenges that are associated with Water, Sanitation and Hygiene Education are:

- Attitudinal and behavioural changes towards water use.
- Social challenges within the non-formal and informal sectors of society.
- Institutional challenges – constraints within the formal sectors of education in terms of additional inputs in the school curriculum.
- Economic and financial challenges.
- The long-term challenge of helping people become water wiser, efficient, literate; to educate them with respect to the problems and complexities of monitoring both ecologically and economically sound people/water interactions.



5 - CHANGE THROUGH EDUCATION IN HUMAN VALUES

There are several ways of classifying Human Values e.g. the Living Values programme which lists twelve core values. Whatever way you classify and group your values is up to you and they will be valid in terms of your beliefs and understanding of human values.

In this document, the five basic human values are adopted and discussed in this section.

Human Values are human qualities that are accepted and found to be worthy in the full development of human beings. They are universal, inherent and uniquely applicable to humans. Human Values may be grouped into core values of like Truth, Love, Right Conduct, Peace and Non-Violence. This categorization is for the purpose of understanding the Human Values Approach and is not the only way to describe the values that people espouse. From a pedagogic viewpoint this classification is shared and as you internalize the values education process you would be able to apply systems that you have developed or apply other systems that you feel comfortable with.

5.1 - Truth

Ask the participants what they consider to be the meaning of “truth”.

How do you arrive at truth?

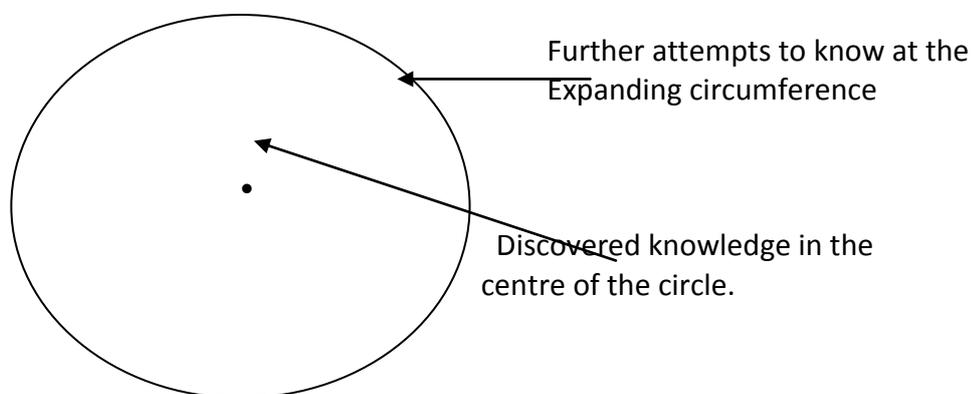
Curiosity, Discrimination, Intuition, Quest for Knowledge, Reason, Self-analysis, Self-awareness, Spirit of inquiry, Understanding

Truth is that which never changes or ceases to be. Neither is it limited by time or space nor can it be grasped through the 5 senses.

What then is truth? Take an example of blind men who discovered an elephant: one man felt the tail and said an elephant resembled a rope; another man touched a leg and thought it as a pillar; the third man felt its side and described it as a wall. Then they argued over it. In like manner, we think that what we perceive with our senses is real and true. Science shows us that in fact, we perceive illusion.

We have to discover what truth is. Through research and experimentation, scientists observe that reality (truth) is like a circle with discovered knowledge in the centre and further attempts to know at the circumference. As we discover more and understand a little more of nature and our universe, so the circle becomes bigger. There are many more things to be discovered, many more things we do not understand. The more we understand, the more we realize how much more there remains to be understood. There is no end to that.

Each one of us tries to understand only a fraction of our expanding circumference. We cannot understand the universe. Is there some knowledge that once known reveals all else? No.



Expanding Circle of Knowledge

Another example: Man has searched for happiness and peace everywhere, travelling far and wide in person, reading books, watching films and television, to no avail. The truth is: real peace and happiness are not outside but right inside us. We must therefore look within ourselves.

Great scientific discoveries are a result of intuition. Isaac Newton, after a long struggle, was able to discover the Law of Gravity through intuition. He was resting under an apple tree when the fateful fall of an apple gave birth to the Law of Gravity. It was his intuition that grasped the meaning, not his tired intellect.

We can arrive at this understanding that we are part of one life and not separate from each other. We are cells in the same body and if cells harm each other, the whole body suffers and finally dies. Cancerous cells harm and destroy good cells in the same body and the result is that when the body suffers and dies, they too cannot survive as a result of their own actions. We must realize that we are parts of the same living entity. If we injure others, we injure ourselves, we render it to ourselves. This is the human value of Truth.

Is Truth relevant to water, sanitation and hygiene?

Yes it is.

Let us look at some self-existent truths in relation to Water, Sanitation and Hygiene. Water sustains life and therefore it should be revered, protected and made available to all. Water by itself is pure and should therefore not be contaminated.

There are many living organisms in water that our eyes cannot see and therefore it is good practice that drinking water, in particular, is processed either through boiling, exposure to sunlight or through scientifically devised water purification systems. Water helps to clean our bodies and we must use it because cleanliness leads to healthy living. This is hygiene – the science of healthy living which requires the use of water.

Sanitation involves the application of techniques that prevent diseases and therefore enhance human well-being. Some of these techniques are related to proper use of sewerage, drainages and so on. The absence of sanitation creates health hazards. This is the truth, self-existent truth. Thus the implications of water, sanitation and hygiene in human development remain unchanged. This is the Truth.

5.2 - Love

How to practise love

Caring, Compassion, Dedication, Devotion, Friendship, Forgiveness, Generosity, Helping, Consideration, Kindness, Patience, Sharing, Sincerity, Sympathy, Tolerance, etc.

Love is energy that ennobles, uplifts and enhances life. This energy is within each and every one of us. When we love others, this energy flows through us as love before reaching the object of love. So, we give love to ourselves as we send it to others.

Love is powerful. Dr Art-Ong Jumsai, who has been mentioned earlier conducted an experiment to prove this. He got his students to grow some marigolds. After germination, the seedlings of equal strength were taken from the nursery, divided equally into two and planted in two different plots under the same conditions. The soil was mixed thoroughly and both groups were given equal amounts of water.

The scientist then guided his students to give all their love to the marigolds in one plot leaving out the other marigolds in the controlled plot for comparison. The physical conditions (i.e. watering, weeding, fertilizer, etc.) were the same for both plots. The students were shown how to shower their love on flowers (via a feeling similar to their love for their parents: thinking of their well-being, growth, needs, joy, etc.

After a few days, it was found that the marigolds receiving love were growing faster. They were at least 50% taller than the flowers which did not receive love. And in a few more days, they blossomed. The unloved marigolds were still dwarfs, some died.

What made the striking difference? All the conditions were scrupulously identical. What caused the difference was the power of showered love on the marigolds in one plot to the exclusion of the other marigolds in the other plot. It is love that caused the marigolds in the one plot to grow faster than the others. Love is an energy that really works, a tremendous energy that we can use in this world.

The opposite effect is also a fact and must also be remembered. When they were performing the marigold experiment in Bangkok, it was found one day that a plant had abruptly died. Upon investigations, one student said that he had on one Saturday sat in front of the plant and two to three solid hours had cursed and sworn at it. The plant shrivelled and died. The student further said that he himself thereafter developed a terrible headache and stomach pains. He was very ill and exhausted.

Why was that so? It was a natural reaction. Scientists have discovered that there is an actual energy that flows through us before leaving the body. If you have water, you will conserve it. If you have your body, you will keep it clean and engage in hygienic practices. You will automatically not hurt the environment. You will keep it clean and would like to see it beautiful. When you do this you will observe that sooner or later, scarce drinking water becomes adequate for all including the poor. Water-borne, air-borne and other kinds of diseases associated with poor sanitation will disappear.

Take the example of human relationships at home, at work places and in society. The presence of love in these human organizations gives them happiness and prosperity. The opposite is the case where love is absent. So, it is advisable to start the day with love, fill the day with love and end the day with love.

Our intense love for ourselves and our environment will make it easy for us to employ the practices of conservation of water, hygiene and sanitation. That is to say, the practice of love is the pre-requisite to water conservation and healthy living.

5.3 – Right conduct

How to practise right conduct

Cleanliness, Dependability, Duty, Endurance, Gratitude, Good behaviour, Good manners, Healthy living, Helpfulness, Initiative, Leadership, Patience, Perseverance, Proper use of time, Resourcefulness, Respect, Responsibility, Sacrifice, Self-confidence, Team work, etc.

Right Conduct is an act motivated by love. It is Love and Truth in outward expression. It is how we behave towards others, how we live in harmony with others and the peaceful way in which we carry out our duties and actions.

In what ways can we demonstrate right conduct in relation to water, sanitation and hygiene education?

Conduct that is based on Truth and motivated by love is the panacea for water, sanitation and hygiene problems in Africa. If we love ourselves and our neighbours, our conduct towards ourselves and them in this regard will be pure and will include:

- Closing the taps to avoid water wastage.
- Paying water and sewerage bills promptly.
- Cleaning our surroundings.
- Reporting all leakages and acts of vandalism of water and sewerage pipes.
- Taking a bath regularly.
- Flushing toilets after use.
- Washing hands before eating, etc.

5.4 - PEACE

How to practise peace

Attention, Calm, Concentration, Contentment, Dignity, Discipline, Focus, Humility, Optimism, Satisfaction, Self-confidence, Self-control, Self-respect

Peace is a state of mental tranquillity, mental ease, equanimity, severity or calmness. It is our nature. It is found within us. It is when the mind is at peace that wisdom flows, that intuition works (the Truth is discovered), that the intellect excels. One who has peace in him/her will manifest qualities that are contained in the box above.

To attain peace, practise silent sitting every day and reflect on yourself, your neighbour and your environment. Also reduce your wants, your desires, then you will have calmness of the mind.

We say we want peace, yet, we don't find it. "I want peace", everyone says. But to be left with "peace" we must take away the "I want" first. Get rid of the "I" feeling, the ego, attachment, that which makes one feel bigger and better or richer, then you will have peace.

What or who is the real enemy of man? What causes confusion and takes away peace. The real foes, which we must vanquish, are anger, greed, lust, jealousy, attachment, desire, and hatred. These are the real enemies within us.

How do we get rid of these enemies? Nature can teach us many things. Look at the sun. At night it is dark, but when the sun rises, darkness disappears. Does the sun use force? No. It rises silently and darkness is dispelled silently. We do not have to fight against anger, lust, greed, desire, etc., if we create light within us, our darkness, too, will disappear. That light is the human values. Negative qualities cannot co-exist with positive qualities. Once they disappear from within us, we will have inner peace.

How is peace relevant to Water, Sanitation and Hygiene?

Avoidance of water wastage leads to low water bills. Profligate use of water leads to high water bills which, if not paid, may lead to water disconnections. Water disconnection takes away peace from the home because there will be no water to drink, cook, clean, wash, bath; toilets will be unusable and diseases will set in – Peace becomes an illusion. When water is wasted others are denied peace for lack of water.

We can avoid water wastage and thereby enjoy peace and happiness in our homes and societies by ensuring that:

- Taps are closed
- Leakages are reported
- All forms of vandalism are eliminated.
- Care must also be taken when using flush toilets to avoid blockages of sewer lines. Keep the surroundings of our homes clean. Ensure that the sources of water are clean. Water from shallow wells, streams, among others, must be purified through either boiling or adding chlorine. Other good habits that we should practice include:
- Washing hands before eating
- Covering food
- Washing hands after coming from the toilet and so on.

These good habits come from a mind that is calm and a heart that is tranquil. The practice of these good habits will prevent diseases in the home and society, thereby enhancing peace and happiness everywhere.

5.5 - NON-VIOLENCE

How to practise non-violence

Appreciation, Good citizenship, Concern for life, Co-operation, Fellow feeling, loyalty, Respect for property and resources, Social justice, Unity, Unwillingness to hurt, etc.

Non-Violence is Love, Peace, Right Conduct and Truth combined

(I.e. $NV = T + L + P + RC$). We can only be non-violent if we understand the truth that we are all one. That understanding makes it truly impossible to hurt anyone or anything or to waste resources. If someone hurts us, we should try to react positively by thinking that they are thus unknowingly helping us to discipline our minds, control our feelings and so on. The person who insults you reviles you or scorns you, is helping you, teaching you to grow, see good in all things.

How is Non-Violence relevant to Water, Sanitation and Hygiene?

Non-Violence means understanding and believing that water is precious and must be conserved; that the body is a vehicle that helps us to think and perform activities and therefore it should be kept clean, fit and healthy; that good sanitation, like hygiene, promotes and sustains life.

HANDOUT

THE DIRECT and INDIRECT (INTEGRATED) METHODS IN WASH EDUCATION

OBJECTIVES

The main objectives of the Direct Method in relation to Water, Sanitation and Hygiene Education are:

- To raise the consciousness of students so that they acquire a heightened, integrated awareness of our dependence on nature – water in particular.
- To bring enjoyment, fun and laughter into learning about water, sanitation and hygiene management.
- To promote good sanitation practices and hygiene

In this way they would see the role that water plays in their lives and therefore come to value it more and learn to appreciate water in terms of its uses and conservation.

The Direct method appeals more to the heart than to the head and, is therefore, ideal for children in basic school. The Direct Method and its components have been used throughout the ages by humanity to teach, to inspire, to advise, to warn and elicit Human Values which have been and are considered the rock on which all societies are built. For example, in the Christian Bible; the Moslem Koran; the Hindu Geeta; the Buddhist Scriptures; the Jewish Torah and the African Cultures and Traditions, the Direct Method has been effectively employed as an educational tool.

1 - THE DIRECT METHOD AND ITS COMPONENTS

This method consists of the following components:

- Silent Sitting – This leads to concentration and Guided Visualisation.
- Prayers And Quotations (also proverbs, verses and poems)
- Story Telling.
- Group Singing.
- Group Activities.

1.1 - What is silent sitting?

It is teaching students to sit silently, quietly or still in a good posture so as to help them to concentrate and to focus their minds on a particular thing; which may be the lesson or an object.

It is in silence that intuition works; that wisdom flows and that truth is unfolded as we see in Churches, Mosques, Courts of Law, and examination halls and in research laboratories.

The effects

- It affects its practitioners in several ways which brings about peace and truth. It promotes harmony and contentment.
- It increases attention and appreciation for the elements especially water.
- It encourages introspective enquiry, for example, why should they save water – how and when?
- It develops mental tranquillity, caring, sharing, peace and tolerance in water activities.
- It sharpens the intellect. For example - for them to examine the importance of, and do research into, purification and conservation of water techniques.

So in this component of silent sitting values of love, truth, curiosity, intuition, honesty, understanding, peace and non-violence are brought out.

1.2 - Prayers, thoughts, quotations and verses

Water is so common in our environment that we tend to take it for granted. Yet 'of all the natural resources available to human beings, water is perhaps the most essential for virtually every human activity'

– Mrs. Anna Kajumulo Tibaijuka, former Executive Director, UN-Habitat

- Teach children to pray and give thanks for the gift of water first thing in the morning and last thing at night. This gift enables them to wash first thing in the morning; to drink; to cook; to fish; to swim; to drive machines; to water their crops and environment and to use toilets – because water is life ... protect it ... love it ... respect it.
- Teach children to recite poems, prayers, quotations and affirmations that have elevated ideas about water, for example,
 - Water wasted is life wasted
 - Every drop counts
 - Love God – God made water
 - Water is life – don't waste it.

In this way the good thoughts are recorded in the sub-conscious minds which are retrieved by the conscious mind and which then result in good water actions and habits.

The noble emotions which are released in prayers for and about water are antidotes for the abuse, wastage, disrespect and irreverence for water.

The effects

Prayers and quotations have the following effects on their practitioners:

- They instil unity and harmony among water suppliers and users and bring about right conduct, co-operation, civic responsibility and non-violence.
- They establish true human ideals in water management in African cities.
- They promote love and respect for water.
- They develop the memories of students in all aspects of this important element – water.
- They improve concentration. Students develop curiosity, a quest for knowledge and enquiry about water.

Some of the values brought out in this component of Prayers and Quotations are truth, tolerance, right conduct, peace and respect.

1.3 - Story telling

As a teaching medium for illustrating the importance of water in creation, a story can illicit powerful emotions and inspire a desire in students to imbibe lessons on water found in the school syllabi.

Stories about the magnificence, usefulness, sanctity and sacredness of water abound in African folklore. These stories pass on the wisdom of proper water utilization and conservation. Stories also strengthen the hearts and minds of listeners. So we have to select, write and tell stories, which help the students to practise the lessons they have learnt on water management.

The effects

Story telling has the following effects:

- It kindles a passion for helping their schools, houses and communities in water management. This develops right conduct, love and non-violence.

- They encourage a feeling of oneness with water since each of them is 75% of water.
- It promotes patience and tolerance during water shortages. The UNFPA (state of world population) states that by 2025 two out of three people in the world will face water shortages; and the World Health Organisation (WHO) states that many millions people including children in Asia die of unsafe drinking water per annum.
- It widens horizons of knowledge for research into the uses and conservation of water.
- It encourages an interest in water-related stories and brings out right conduct, truth and many other values.

1.4 - Group singing

Life is a song. Let part of the students' lives be filled with uplifting water songs in different languages. Let them derive joy, happiness and awareness of the importance and uses of this vital element in their lives.

The power of music is well documented. It is easier for children to remember poems and verses about water if they are made into songs.

Water, Water, Water – Water fell on me x 2
On the day of harvest – Water fell on me.

Start the day with a water song
Fill the day with a water song
End the day with a water song
That is the way to live.

Love is flowing like a river
Flowing out from me and you
Flowing out across the river
Making all the water pure.

The effects

It promotes harmony and joy. By singing about water the students bring out the values of love, peace, truth and right conduct.

It removes social barriers. If students sing different water songs in different languages they promote unity in the midst of multi-racial and ethnic diversity and cultivate truth, love, peace and right conduct.

It develops love and devotion. Students develop love and respect for water.

1.5 - Group activities

The essence of all Human Values is love and, in a sense, love ushers unity; co-operation and shared joy. In order to foster growth of love in students, water activities which entail interacting with others in water projects are vital. Effective learning takes place only after a period of practise or involvement has been added to theoretical presentations of water. Those activities that involve 'mutual help' in water projects will lead students to a shared experience to practise them.

The effects

- They give a better understanding of group water activities.
- They awaken a stronger sense of their civic responsibility in-group water management.
- They promote powers of discrimination between proper and improper management of water.
- They develop discipline in so far as they minimise wastages or other forms of water vandalism and encourage right conduct and non-violence.
- They encourage co-operation and team spirit in shared water projects.

So Right Conduct, Love and Peace are brought out. This approach is C-C ('Child-Centred'). The involvement of children gives them a feeling of togetherness; of belonging; of being part of the group or team and therefore brings out the best in them helping them to develop good qualities in water usage.

2 - THE INTEGRATED (INDIRECT) METHOD

Values are elicited and integrated in all academic and non-academic subjects/learning areas in the school curriculum. This is done in two ways:

Inter-Disciplinary Integration: This may be a whole school or class project where the school or class takes water as specific learning area and then each academic discipline looks at water from its own perspective, elicits and integrates appropriate values. The exercises may be actively based both in theory and practice.

Syllabus-Based Integration: In this case a subject specialist teacher follows a given syllabus which contains many and varied learning areas. Some of these may not contain water components explicitly. Although the syllabus is information/examination driven, a values trained teacher will in the course of the delivery of the academic content, seize the opportunity of introducing water (even where water is not discernible), elicits and integrates the relevant values in Water Education and gives them applications that have a bearing upon the prevailing problems, in particular, that are associated with water in the community.

SOME KEY WATER MANAGEMENT ISSUES	VALUE-BASED DILEMMA	VALUE-BASED SOLUTION	UNDERLYING HUMAN VALUES
<p>1. A social Issue Lack of safe water and basic sanitation Facilities could be life threatening to all – poor and rich alike. How could water and sanitation be made accessible to the poor in the cities?</p>	<p>Am I willing to share the cost of providing water to the poor in the slums? This may mean that I will have to pay a higher price of water.</p>	<p>Yes, I care for my poor neighbour. I am ready to pay a higher price for water when I am convinced this will help extending water supply to poor neighbourhoods. I will afford it by cutting down my entertainment expenses.</p>	<p>LOVE: Caring for and sharing with others. RIGHT CONDUCT: Self-sacrifice; Respect for others; Service to others.</p>
<p>2. Another Social Issue How to deal with corruption in daily life which ultimately affects sustainability of services in cities.</p>	<p>Should I pay the high water bills every month or make a deal with the meter reader who offers to under-read it or tamper with it so that I can pay a flat rate that will be less costly to me.</p>	<p>Yes I will pay for the actual cost of water I consume. If I follow unscrupulous means, this will set a bad example for my children, whom I want to see grow up as responsible citizens.</p>	<p>TRUTH: Truthfulness RIGHT CONDUCT: Honesty, PEACE Integrity, Self Respect.</p>
<p>3. A Conservation Issue How to deal with profligate wastage of water in households.</p>	<p>Should I stop watering my gardens and washing my cars during summer months when scarcity of water affects the city? I can afford the water bill and I want my garden to be green and my car to shine even if it means less water available to others.</p>	<p>Yes, I should take every opportunity to conserve water, even if it means a little inconvenience to me and even so I can afford a higher water bill. Water is a gift of God but it is given in trust to us. While we enjoy this Gift, we have no right to waste this precious resource.</p>	<p>RIGHT CONDUCT: Proper utilisation of resources. PEACE: Self-discipline NON-VIOLENCE: Consideration for others.</p>
<p>4. An Economic Governance issue How to promote the concept of water as a social and economic good.</p>	<p>We are told that water is a gift of God. Then why are we asked to pay for water? Water in the river and in the wells, after all, belongs to everybody and should be freely available to all</p>	<p>Yes, I have an obligation to pay for water I consume. Water is a limited resource, to be shared by many users. Each must pay according to his need and ability, to cover the cost of supply. Nothing is absolutely free in nature.</p>	<p>RIGHT CONDUCT: Respect for others Needs. NON-VIOLENCE: Awareness of Responsibility towards common good. Readiness to co-operate. Fellow feeling. Sense of social justice.</p>

INTEGRATION OF VALUES IN WASH-RELATED TOPICS

SUBJECT	TOPIC	VALUES	VALUE-BASED WATER APPLICATION
1. Mathematics (a) Lower Grade	Number and Numeration: Addition Subtraction Multiplication Division	Co-operation/Unity, Detachment/Sharing Unity Sharing	True spirit of community unity, sharing and co-operation increases quantity and quality of water.
(b) Higher Grade	Pythagoras Theorem Two adjacent sides are equal to the hypotenuse	Equality/Inter-dependence/Consideration	Human beings depend on each other for the proper utilization of water
2. Physics	Measurement of volume of a liquid and of an irregular solid	Concentration Accuracy	Exercise reasonable level of concentration to successfully take the correct reading of the volume of a given vessel.
3. Chemistry	Endothermic and Exothermic Reactions	Sharing Choice	Energy is shared between the reacting system and the surrounding area and this necessitates the reaction. Similarly, water sharing with neighbours promotes good health and prevents outbreaks of water-borne diseases.
4. Biology	Blood	Co-operation Service	Just as 55% water co-operates with 45% solid with matter, blood is produced which services the whole human body. Similarly, co-operation in digging water wells will yield more water that services society.
5. Environmental Science	Living things in the Environment	Discrimination Inter-dependence	Just as living things depend on one another for survival, so, too, human beings should work together in the uses and conservation of water.

3 - ADVANTAGES OF VB-WASH

We are of the opinion that a Human Values-based approach to water education for African children would be a strategic entry point to developing a new ethic for water governance in the future.

Specifically, the Human Values-based approach has certain other advantages: it will not add further to the current overload of the curriculum, as it can be integrated with ease to the existing curriculum; it creates a lasting impact through character development, when understood, appreciated and practiced by children and young adults; human values-approach is also cost-effective, as it does not require any significant investment, except in human resources; finally, it is a proven approach in current practice world-wide, well documented and evaluated by experts in Africa and elsewhere.

4 - CONCLUSION

The end goal of education is not merely the transfer of knowledge or the acquisition of a set of learning skills but the development of character during the formative years of our children upon whom rests the ultimate responsibility of building the society and the nation. With rapid globalisation and urbanisation, African societies are increasingly becoming multi-cultural, multi-ethnic and multi-lingual. Widening income disparity is a fact of life in most African societies. For stability and prosperity amid such wide diversity, our society must draw upon, as never before, its reserve of values such as tolerance, humanism, sharing and caring and respect for the dignity of the individual. The five Human Values: Love, Peace, Truth, Right Conduct and Non-Violence, which are inherent in every human being, are the perennial streams which alone can provide sustenance to the nurturing of these societal values in the young minds.

Water education provides a strategic entry point to bring these Human Values to water management in African cities.

MODULE 6

PROGRAMME STRATEGY DEVELOPMENT AND IMPLEMENTATION FOR VB-WASH IN SCHOOLS AND COMMUNITIES

1 - INTRODUCTION

Creating models of excellence for schools, training colleges and communities implementing VB-WASH is a strategy that UN-HABITAT is pursuing to meet the millennium development goals. By changing behaviours of learners and by extending the programme to parents and the broader school community, It is expected that the school will play a key role in creating a new water, sanitation and hygiene ethic. This module explores the modalities of this process

The module looks at how the curriculum is reviewed and how this review contributes to the overall strategy for implementing Values-based Water, Sanitation and Hygiene Education. Furthermore gaps, opportunities, capacity building and material development needs are identified in the curriculum for the implementation of VB-WASH. One way of scaling up the project is to introduce VB-WASH in teacher training colleges and the strategy for this explored

2 - AIMS OF THE MODULE

This module serves to develop

1. Appreciation of the necessity for curriculum review for implanting VB-WASH
2. Strategy for implementing VB-WASH in schools, TTC's and community.

3 - LEARNING OUTCOMES

On completion of this module participants should be able to acquire competencies to:

- Undertake a curriculum review and identify training needs
- Analyse the curriculum review and develop a strategy for implementing VB-WASH in schools and community.
- Develop a vision of a model school
- Stimulate interest and sense of responsibility for water sanitation and Hygiene by enhancing community- school partnership in implementation of VB-WASH.
- Production of Action Plan.

Key issues

- Curriculum Review and identification of training needs
- Using curriculum review to identify gaps and opportunities to integrate VB-WASH.
- The essence of SWOT analysis in planning programme strategies
- Material development to support implementation.
- Assessment of learners
- Factors influencing community school linkages

4 - MATERIALS AND RESOURCES

Diagrams (conceptual frame work, the human values integrated instructional manual)

5 - ACTIVITIES/STEP 1

Activity 1: Presentation on the programme strategy for HVBWSHE in schools and community.

Activity 2: Group Activity

Participants develop a strategy for implementing the VB-WASH programme in schools/community Teacher Training Colleges. Undertake a SWOT analysis and identify risks that could impact on the programme. They should state how would you eliminate or mitigate these risks.

Participants should prepare a check list considering following issues:.

- Duration of course/frequency /number of modules/credits/ periods
- Which year of teacher training?
- Which subject/s lend themselves to VB-WASH?
- Teacher trainees assessment – knowledge test/practical demonstration of VB-WASH lessons
- Developing materials
- Engaging support of administrators

Activity 3: Develop a model school of excellent implementing VB-WASH; Draw a model, school and community

Activity 4: Factors influencing the community -school linkages

Participants in groups brainstorm to come out with the factors

Activity 5: Role of leadership in school/ community partnership.

Identify stakeholders/ Opinion leaders and gatekeeper’s leaders on the school and the community. Specific roles of leaders in the school and community partnership.

Activity 6: Participants will work in groups to develop a strategy for community for HVBWSHE.

The participants will be guided by the following outline:

1. Key Issues in community outreach
2. Project Objectives
3. Project Activities
4. Expected Output
5. Implementation Strategy
6. Action Plan - Based on the key issues and implementation strategy presented in the previous section, the Group will develop three-year action plan, starting October 2015.

Objective	Activities	Responsibility	Time Frame	Inputs	Outputs

HANDOUT 1

PROGRAMME STRATEGY DEVELOPMENT FOR VB-WASH IN SCHOOLS

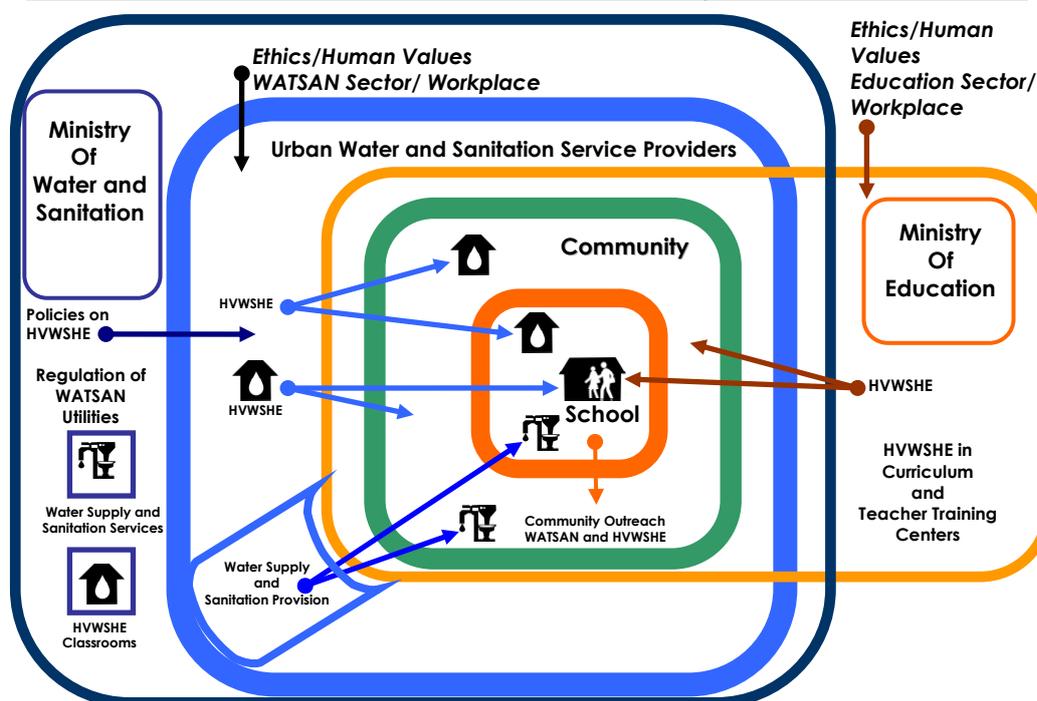
OBJECTIVES

1. To develop a strategy implementation of VB-WASH in schools
2. To contextualize the school programme and harmonise it with the human approach to water, sanitation and hygiene education.
3. To understand how to conduct a baseline study.
4. To establish teacher training needs and meet these.

INTRODUCTION

In order to contextualise the programme strategy development for schools it maybe prudent to revisit the conceptual framework of VB-WASH and the human values integrated instructional model. In designing a programme strategy for schools a training needs assesment must be conducted. Issues such as capacity building, materials development, and integration of water, sanitation and hygiene education within the curriculum, extra-curricular activities, and provision of adequate water and sanitation facilities must be considered. Equally important is a baseline study, which should be conducted.

Concept for Human Values in Water, Sanitation and Hygiene Education (HVWSHE)



The integrated teaching model for human values education is also be useful in seeing how the different elements in the system interact.

Baseline study of water, sanitation facilities and hygiene practices at demonstration schools. Before starting out with programme implementation a baseline study must be carried out for monitoring and evaluation purposes. A sample of a baseline study is presented as a way of introducing this aspect. This is by no means a definitive sample and should be revised.

1. BASELINE DATA

School Data

Name of School:	
Address	
Contact details:	
Principal/Head Teacher's name:	
Brief description of the community that it serves (socio-economic profile):	
Number of teachers:	Number of classrooms:
Number of learners:	Learner/Teacher ratio:
Grades/standard/classes offered:	
Water Supply	
Piped water – number of taps	
Hand Pump – and Borehole	
Rain water harvesting	
Nearby river	
Well	
Water transported to school	
Learners bring water to schools	
Other	
None	
No. of Taps	
School water bill (monthly average in US dollars)	

Quality of water	
Excellent	

Good	
Acceptable	
Below standard	
Unacceptable	

Sanitation Facilities

Number of toilets	
No. of toilets for boys that are being used	
No. of toilets for girls that are being used	
No. of toilets for teachers that are being used	
Type of Toilet	
Pit latrine	
Ventilated pit latrine	
Water borne sewage	
Soak pit system	
Other types of toilets	
None	
Condition of toilets	
Excellent	
Good	
Acceptable	
Below standard	
Unacceptable	
No facilities	
Presence of flies near toilet	
Extremely noticeable	
Very noticeable	
Noticeable	
Barely noticeable	
No flies	
Toilet smell	
Overwhelming smell	
Definite smell	
Moderate smell	
Smell barely perceived	
No smell	
Cleanliness of toilets	
Exceptionally clean	
Very clean	
Clean	
Unclean	
Unacceptably dirty	
Facilities to wash	
Is there soap?	
Is there water for cleansing inside or beside the toilet?	

Observation of hand washing	
Do children wash their hands after visiting the toilet?	

Occurrence of water and sanitation related illnesses

Number of cases reported or discovered in school in last 3 months:

Cholera	
Malaria	
Diarrhoea	
Bilharzia	

Water conservation

Is there evidence of water being recycled?	
Is there evidence of water conservation (posters, water wise gardening etc.)?	
Is there evidence of rainwater harvesting?	

Educator knowledge and practices

Are you trained to teach water, sanitation and hygiene education?	
If yes, how long was your training for?	
More than 5 days	
Three days	
Two days	
One day	
Less than a day	
Do you teach lessons on water, sanitation and hygiene?	
How often do you teach lessons on sanitation and hygiene?	
All the time	
Very often	
Often	
Seldom	
Never	
Do you have a guidebook for water, sanitation and hygiene education?	

Learner Knowledge, attitudes and behaviours

Do you wash your hands after going to the toilet?	
How many times do you rub your hands together when you wash them?	
Never	
Once	
Twice	
Three times	
Four times	

How do you dry your hands after washing them?	
Use a towel	
Use a handkerchief	
Wipe them on my clothes	
Shake the water off my hands	
Don't dry them	

Community

Water Supply	
Piped water	
Hand Pump - and Borehole	
Rain water harvesting	
Nearby river	
Well	
Water is bought from vendors	
Other	
None	
No. of Taps	
Water bill (monthly average in US dollars)	

Quality of water	
Excellent	
Good	
Acceptable	
Below standard	
Unacceptable	

Type of Toilet	
Pit latrine	
Ventilated pit latrine	
Water borne sewage	
Soak pit system	
Other types of toilets	
None	
Condition of toilets	
Excellent	
Good	
Acceptable	
Below standard	
Unacceptable	
No facilities	
Presence of flies near toilet	
Extremely noticeable	
Very noticeable	
Noticeable	

Barely noticeable	
No flies	
Toilet smell	
Overwhelming smell	
Definite smell	
Moderate smell	
Smell barely perceived	
No smell	
Cleanliness of toilets	
Exceptionally clean	
Very clean	
Clean	
Unclean	
Unacceptably dirty	
If there are no toilets how are excreta disposed?	
Facilities to wash	
Is there soap?	
Is there water for cleansing inside or beside the toilet?	
When do you wash your hands?	
Are parents, PTA or other community groups actively supporting the School?	
Are parents aware of the state of water and sanitation facilities at the school	
Do the parents make financial contributions towards the sanitation and water facilities at the school?	

1.2 - Possible Activities

- Training of tutors as mentors
- Administering questionnaires to get enough information on the use and issues of water
- Holding seminars, debates and quizzes to sensitize the students
- Demonstrating water harvesting and responsible usage
- Educating the community through music, poetry and drama
- Students create water puzzles, games, models of water treatment plant etc.
- Creating a “talking compound”
- Collaborating with other college/stakeholders
- Monitor VB-WASH efforts.

1.3 - What should be in place to ensure success of activities above

- A work plan
- Capacity building leading to attitude change
- Supervision and monitoring tools
- Well thought-out methods of delivering the message
- Support from various stakeholders

Identifying specific stakeholders for support e.g. District officers, SHEP coordinators, community leaders, NGOs.

1.4 - Conclusion

- Attitudinal change should start with the tutors
- Dissemination of VB-WASH at any moment possible when people meet e.g. during staff meeting
- Set up a working committee
- Divide roles for members accordingly
- Identify entry points
- Set up work plans
- Start only with what is affordable
- Identify contact groups or elements.

2 - TEACHER TRAINING NEEDS – ANALYSIS AND REVIEW

Obtaining feedback from participants in respect of the training needs. The following areas will be highlighted.

Action plan for teacher capacity building

- a) Involvement of head teachers
- b) Materials development to support implementation
- c) Integration of VBWSHE across the curriculum – identification on key subject/ number of periods
- d) Assessment of learners/monitoring behaviour change
- e) Provision of adequate water and sanitation facilities
- f) Introduction of water saving measures/ rainwater harvesting/purification of water/recycling of water/maintaining toilets
- g) Extra-curricular activities to promote VBWSHE

2.1 - STEPS/ACTIVITIES

Activity 1: Group activity

Undertake a SWOT analysis for the implementation of VB-WASH. Identify risks that could impact on the programme. How would you eliminate or mitigate these risks?

Activity 1: Develop a picture of a school implementation VBWSHE

What would this model school of excellence look like?

Activity 1: Photo Exhibition, Feedback and consolidation.

3 - PROGRAMME STRATEGY FOR SCHOOLS

To effectively implement VB-WASH, the capacity of the educators needs to be developed. The following factors should be considered when developing a training programme for educators.

- Involvement of head teachers
- Materials development to support implementation
- Integration of VB-WASH across the curriculum – identification of key subjects/ number of periods
- Assessment of learners/monitoring behaviour change
- Provision of adequate water and sanitation facilities
- Introduction of water saving measures/ rain water harvesting/ purification of water/ recycling of water/ maintaining toilets
- Extra-curricular activities to promote VB-WASH
- Action plan for teacher capacity building

When developing the programme strategy for schools the following processes should be undertaken:

- Development of a vision and mission for VB-WASH in schools
- SWOT analysis
- Risk identification

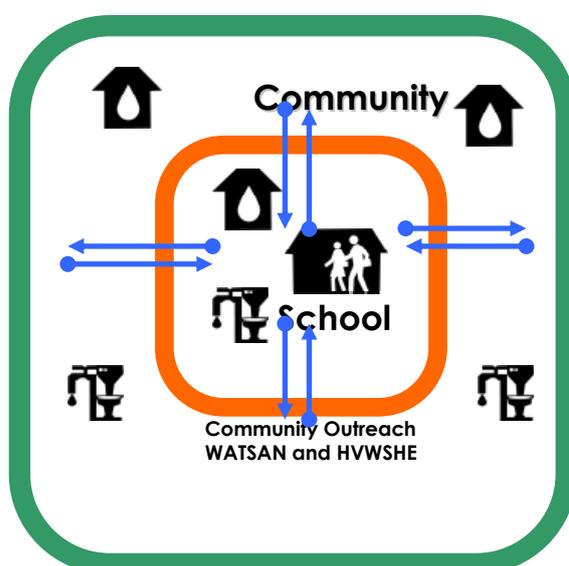
HANDOUT 2

Programme Strategy Development for VB-WASH for Community Outreach

1 - INTRODUCTION

Schools, working in partnership with local communities, can have a positive impact on water, sanitation and hygiene programmes. This is especially true when students, working alongside adults, are given meaningful opportunities to engage in community-based learning that serves the needs of the community while simultaneously addressing the learning needs of students.

2 - CONCEPTUAL FRAMEWORK



Miller⁵ described the contribution of schools to community social capital as a partnership consisting of three inter-related components: school as a community centre; community as curriculum, and school-based enterprise. Although these approaches are used to describe rural schools in the North, they are useful in understanding urban community-school linkages in the developing world. Each approach reflects learning opportunities and experiences that cross boundaries, which have traditionally separated the community as a place of learning from the school.

2.1. The school as a community centre

The first approach reflects the school as a community centre, serving as both a resource for lifelong learning and as a vehicle for the delivery of a wide range of services.⁶ School resources such as facilities, technology, and a well-educated staff can provide a range of educational and retraining opportunities for the community. An early manifestation of this approach was the

⁵ Miller, B. (1991). *Rural distress and survival: The school and the importance of "community."* Portland, OR: Northwest Regional Educational Laboratory.

⁶ Everson, C. (1994). Local governments and schools: Sharing support services, *Management Information Service Report*, 26(5). Washington, D.C.: International City/County Management Association.

community school movement of the 70s where educational opportunities ranging from day care to adult literacy were offered.⁷

In recent years, the idea of school as community centre has resurfaced in the concept of integrated family services, where the school serves, as a linking agent for the social service needs of youth and families.⁸ These may include health screening, day care, and dental treatment.

2.2 - Community as School Curriculum

Schools alone cannot meet children's complex individual needs. A second approach uses the community as curriculum, emphasizing the study of community in all its various dimensions. Students generate information for community development by conducting needs assessments, studying and monitoring environmental and land-use patterns, and by documenting local history through interviews and photo essays. Nachtigal points out that when students study their community and are directly involved with local residents, it helps them value their community. When education is taken outside the classroom, and the community becomes a curriculum source, barriers between school and community are further broken down as students learn within and about their community.⁹

2.3 - School-based enterprise (SBE)

A third approach, school-based enterprise (SBE), places a major emphasis on developing entrepreneurial skills whereby students not only identify potential service needs in their communities, but actually establish a business to address those needs. The SBE concept has been turned into a comprehensive curriculum program for rural schools called REAL (Rural Entrepreneurship through Action Learning). With the help of REAL, students have set up shoe repair, a delicatessen, and day-care businesses, providing both employment and filling a service not formally available.¹⁰

These three interrelated approaches provide a way to think about how schools and communities can work together on water, sanitation and hygiene practices.

2.4 - What is the need for strengthening community-school linkages in VB-WASH?

There are several reasons why schools should partner with communities in the implementation of VB-WASH. These include:

- Young people can be a needed source of volunteers for community projects such as clean-up efforts. They are important in community programs not only because of their potential as workers, but also because of their ideas and enthusiasm.

⁷ Minzey, J.D. & LeTarte, C. (1972). *Community education: From program to process*. Midland, MI: Pendell Publishing Co. Monk D.H. & Haller, E.J. (1986). *Organizational alternatives for small rural schools: Final report to the legislature of the State of New York*. New York: Cornell University.

⁸ Stoops, J. & Hull, J. (1993). *Toward integrated family services in rural settings: A summary of research and practice*. Portland, OR: Northwest Regional Educational Laboratory.

⁹ Nachtigal, P. 1994, 'Rural schools, rural communities: An alternative view of the future', Keynote Address, An International Conference on Issues Affecting Rural Communities: Proceedings of the Conference held by The Rural Education Research and Development Centre, 10-15 July, Townsville, Queensland, pp. 145-150.

¹⁰ Stern, D.; Stone III, J.; Hopkins, C.; McMillion, M.; & Crain, R. (1994). *School-based enterprise: Productive learning in American high schools*. San Francisco, CA: Jossey-Bass Publishers.

Stoops, J. & Hull, J. (1993). *Toward integrated family services in rural settings: A summary of research and practice*. Portland, OR: Northwest Regional Educational Laboratory.

- Community involvement offers a great educational laboratory for students. They can apply principles learned in environmental science class to water conservation and management in the community.

2.5 - Factors influencing community-school linkages

A number of factors influence the school-community relationship. These include:

- The size and strength of the community in terms of civic spirit and vitality.¹¹
- the sense of shared community within the school;
- the community's perceptions of the importance of education and the local school system,
- the flow of communication between school and community;¹²
- size of the school¹³
- Size of the community, and proximity of the school to the community.
- The nature and extent of leadership within schools and communities plays a role in creating the conditions in which the school-community partnership will flourish or not.¹⁴

2.6 - Role of Leadership in school-community partnership

Community leadership which embraces a participatory approach to community decision-making, and cooperative community spirit is likely to welcome and foster school-community interaction. Heartland Centre for Leadership Development 1987, 20 Clues to Rural Community Survival, University of Nebraska, USA.

Leadership is an integral component of the school-community partnership for two reasons:

The effectiveness of the partnership is dependent on the nature and extent of leadership within the school/community¹⁵.

The partnership itself provides leadership development opportunities for community members, particularly for youth¹⁶.

Effective leadership, whether in communities, schools or other organisations, is shared and participatory, and is based on the quality of relationships within and external to the community¹⁷.

The school-community partnership is enhanced by a school leadership process which recognises the importance of developing and maintaining multiple linkages within the community and of harnessing community resources. Central to this process is a vision which connects the school and wider community through curriculum programs. A democratic style of school leadership, which seeks input from staff, parents and community members, is likely to encourage a greater sense of

¹¹ Mathews, D. 1996, 'Public schools, our schools', in *Is There a Public for Public Schools*, Charles F. Kettering Foundation, Ch. 1, http://www.cpn.org/sections/topics/Youth/civic_perspectives/public_schools.html.

¹² Combs, L.R. & Bailey, G.D. 1992, 'Exemplary school - community partnerships: Successful programs', *The Rural Educator*, vol. 13, no. 3, Spring, pp. 8 - 13.

¹³ Jolly, D. & Deloney, P. 1996, 'Integrating Rural School and Community Development: An initial examination', Paper presented at the Annual Conference of the National Rural Education Association, San Antonio, Texas, 11-14 October.

¹⁴ Bishop, P. W. & Mulford, W.R. 1996, 'Empowerment in four Australian primary schools: They don't really care', *International Journal of Educational Reform*, vol. 5, no. 2, April, pp. 193-204.

¹⁵ Miller, B. 1998, 'School-to-work transition in rural communities' <http://www.nwrel.org/ruraled/Transitions.html>, 16 December.

¹⁶ Miller, B. 1995, 'The role of rural schools in community development: Policy issues and implications', <http://www.nwrel.org/ruraled/Role.html>.

¹⁷ Peirce, N. & Johnson, C. 1997, *Boundary Crossers: Community leadership for a global age*, The Academy of Leadership Press, Maryland, USA.

ownership of the school¹⁸. Such a leadership style ensures implementation of school practices and policies which reflect the interests and needs of the whole community¹⁹, thus strengthening ongoing community support for the school-community partnership²⁰. Failure to involve stakeholders' results in lack of ownership of the school, thus reducing the school's capacity to contribute to the community.

3 - KEY ELEMENTS OF A COMMUNITY OUTREACH STRATEGY FOR VB-WASH

Participants will discuss the key elements of the community outreach strategy for VB-WASH, including:

1. Needs Assessment
2. Production or adaptation of existing VB-WASH educational Materials for community outreach.
3. Sensitization workshops and training for Community Outreach Workers to provide them with the necessary skills to assist in the execution of the VB-WASH programme.
4. Provision of water and sanitation facilities in schools and surrounding communities.
5. Creation of partnerships with relevant institutions and stakeholders.
6. Sharing of VB-WASH knowledge and experiences at school, community, national, regional and international levels.
7. Creation of synergy and appropriate linkages with other WAC components.
8. Strategy for Monitoring and Evaluation.

Group Activity: Participants will work in groups to develop a strategy for flood prone community outreach for VB-WASH.

The participants will be guided by the following outline:

1. Key Issues in community outreach
2. Objectives
3. Project Activities
4. Expected Output
5. Implementation Strategy

Action Plan based on the key issues and implementation strategy presented in the pervious section, the Group will develop three-year action plan, starting October 2015.

Objective	Activities	Responsibility	Time Frame	Inputs	Outputs

¹⁸ Bishop, P. W. & Mulford, W.R. 1996, 'Empowerment in four Australian primary schools: They don't really care', *International Journal of Educational Reform*, vol. 5, no. 2, April, pp. 193-204.

¹⁹ Squires, D. & Sinclair, R. 1990, 'Rural schools and their communities: Towards a more symbiotic relationship', 'Think Tank' on Research into Rural Education: Proceedings of the Conference held by the Rural Education Research and Development Centre, 10-14 June, Townsville, Queensland, pp. 100-107.

²⁰ Miller, B. 1995, 'The role of rural schools in community development: Policy issues and implications', <http://www.nwrel.org/ruraled/Role.html>, 16 December 1998.