MANAGEMENT OF ENVIRONMENTAL HEALTH IN DECENTRALISED GOVERNMENT

Volume I

FACILITATOR'S GUIDE

TAMALE SCHOOL OF HYGIENE

2005

Acknowledgements

This course has been designed and developed by a team of resource people from the Tamale School of Hygiene, and the Northern Region Environmental Health Unit. It is the result of a process that took place over the last year that saw the development of the course syllabus and training materials, as well as a number of intakes.

The resource team is grateful to the input of the participants in these intakes which helped us improve upon the materials to ensure that they are as relevant to District Environmental Health Officers and workers as possible.

Finally the resource team would like to acknowledge the support of CIDA's District Capacity Building Project (DISCAP) who provided technical and financial support to the course development process, as well as through the sponsorship of participants to the course.

Tamale School of Hygiene Resource Group
Tamale, March 2005

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1.   INTRODUCTION

The District Environmental Health Unit has a critical role to play in the water and sanitation sector in Ghana. In Ghana, Environmental Health conditions continue to be a major drain on the country's weak economy due to high health expenditure and loss of productivity through lost person-hours. Environmentally related diseases are the major reasons for seeking medical care at the outpatient departments in the country. These conditions include malaria, diarrhoeal diseases, upper respiratory infections, cholera, typhoid, skin and eye diseases, intestinal worms etc.

The Environmental Health Sector and the Environmental Health Workers (EHW) are there to promote and protect the health of the public from factors in the environment that are likely to be offensive or injurious to health. This is achieved by provision of the basic requirements for a healthy environment *in collaboration with other stakeholders.* These basic requirements for a healthy environment include:

- Hygienic Environment
- Clean air,
- Safe and sufficient water,
- Adequate and safe food,
- Safe and peaceful settlements and
- A stable environment

Despite the acknowledged importance of the DEHU the department faces major constraints in terms of human and financial resources. This negatively impacts the ability of the DEHU to achieve their goals. In addition, many of the EHWs have received little or no training since they completed their initial schooling. This course was developed in order to provide a forum to EHWs to learn new approaches to environmental health management and to share ideas with the aim of *enhancing the knowledge and skills of Environmental Health Officers to deliver environmental health and sanitation services effectively and efficiently at the District Assembly level.*

The objectives of the training course are as follows:
- To provide participants with an understanding of the sanitation and hygiene state in the country, particularly Northern Ghana and an overview of the major issues facing them in their work.
- To equip participants with the necessary skills to manage effective sanitation practices in their districts, including supervision of staff, proper hygiene practices, action planning, proposal writing and resource mobilization, and proper sanitation of water systems equipment.
- To train participants to promote proper sanitation and hygiene practices throughout the district, specifically targeting women and children and to use participatory methods in this promotion.
- To provide participants with an understanding of the legal provisions and policies guiding the operation of the Environmental Health Unit.

The training methodology incorporates the following principles:
- Incorporation of gender as a cross cutting theme;
- Utilization of a participatory approach where appropriate including role plays, small group discussions, and case studies;
- Focus on sanitation at the district and community level recognizing that all participants will be coming from DEHUs or DWSTs; and
- Emphasis on developing core competencies that will improve performance.

The course is offered by Tamale School Hygiene (TSH) over an 8 week period, with a one week break in the middle to allow participants to return to their Districts to take care of any critical issues. The facilitation team is composed of tutors from TSH and external resource people to lend their expertise in particular technical subjects such as planning, M&E, and gender.

There are two volumes of course materials:

Volume I, this document, is the **Facilitator's Guide**. It provides session plans for each of the topics addressed in the 8 modules of the course. Each session plan details learning objectives, training needs, duration, approach and facilitator's notes. This level of detail ensures that the material delivered will be consistent, even if facilitators change.

Volume II encompasses the **Handouts** that have been developed for each topic. These provide additional detail for both facilitators and participants.

It is intended that these two volumes be used together, but they can also be used by other stakeholders or interested parties in partial form.

2.   MODULE 1: INTRODUCTION

The District Environmental Health Unit (DEHU) is a legally established body in the decentralised policy of the Ministry of Local Government and Rural Development (MLGRD), whose services are delivered at the assembly level, (Metro / Municipal / District). This transfer from the Ministry of Health (MoH) occurred in 1994. As one of the 11 decentralised departments the DEHU reports to the DA on all matters and is dependent on the DA for funding. Any plans of the DEHU should be part of the DA Medium Term Development Plan (MTDP). For the DEHU to operate effectively in this system they need to understand the implications of decentralisation, as well as the role of the DEHU within the system.

In addition, this introductory session will explore the state of environmental health nationally, and then specifically in the North. This will include both policy and programme issues. Environmental health issues are gaining in importance and are being recognized as critical to not just water and sanitation, but that they cut across several sectors, particularly health, and have a substantial impact on productivity. The session will explore the role of the District Environmental Health Officer (DEHO) in these two environments.

OBJECTIVES:
- Explain the national and local policies related to Environmental Health and Sanitation.
- Describe the Decentralization process and role of the DEHU Staff.
- Utilize a collaborative and integrated approach in the management of Environmental health issues.

TOPICS
- Introduction of participants
- Introduction of Course Goals, objectives etc
- Over view of water and sanitation sector in Ghana
- Environmental Health in Ghana
- Decentralization
- The Local Government system
- Roles and responsibilities of DEHO
- Introduction to Gender Issues

TOPIC 1:   INTRODUCTION OF PARTICIPANTS.

LEARNING OBJECTIVES:
- To encourage the process of becoming acquainted.
- To help every one learn the names of their fellow participants.

TRAINING NEEDS: None, except chairs arranged in rows, for the participants

DURATION: 1 hour

APPROACH:

(1)   Introduce yourself and briefly introduce the course. Explain to the participants that before the course goal, objectives and goal are discussed you would like everyone to begin to get to know each other as they are going to be together in this course for the next 8 weeks. Then explain the exercise.

(2)   Start a round in which every body carefully says his/her (first) name. This is done slowly, so that the others have time to repeat the name for themselves and find a way to link that name to that person. Unusual names can be written on the board. Alternatively each participant may be asked to provide a memory when introducing themselves. E.g. "My name is Frank and I always try to be " "

(3)   When the round is completed, the trainer then says "My name is (……………)"
Points to B and asks them to look for person C. E.g. "My name is Alfred, your name is Charles. Charles would you Please find Rita?   You should avoid looking at Rita as you do this and should ask the rest of the group not to help Charles by looking at Rita.

(4)   Charles has to say his own name first, point out Rita, mention Rita's name and ask Rita to look for Rebecca at which point Charles should not   look at Rebecca.

(5)   Continue until everyone has had a turn.

   (*Source: Frank Owikes and Richard Thomas (1992)*

FACILITATOR'S NOTES
The goal is to begin to break the ice between participants, and also acquaint yourselves with them. It is a quick exercise, simply meant to get things going.

A variation of this activity is to ask participant to pair up with someone they do not know and spend about two (2) minutes trying to know each other. After the two minutes, ask each participant to introduce his or her parent to the group.

TOPIC 2:   INTRODUCTION OF COURSE GOAL AND OBJECTIVES

LEARNING OBJECTIVES:
- To allow participants to express hopes and fears.
- To introduce course goal and objectives to participants.

DURATION: 30 minutes

TRAINING NEEDS: Markers, flip chart.

APPROACH:

(1)   Have participant divided into five (5) groups. Ask the participants to use their notebooks to record answers to the question "What expectations, concerns or preconceived notions do you have about this training?" Have each group discuss their answers after selecting someone to record the information. Ask the reporters to present their responses to the entire group. Record responses on to flip chart. Keep the flip chart posted in the room somewhere to return to throughout the course.

(2)   Present the goal and objectives of the course, using prepared flip chart. Discuss any differences between these and expectations.

(3)   Present the course schedule and discuss any logistical matters.

FACILTATOR'S NOTES:

After trainers have recorded every group's response onto the flip chart, consider ways the trainers can reduce these concern. Expectations and objectives should match closely.

Explain which expectations will or will not be met and why.

TOPIC 3: INTRODUCTION TO ENVIRONMENTAL HEALTH

LEARNING OBJECTIVES:
- Define Environmental Health.
- Identify environmental factors that can affect human health and quality.
- List the basic requirements for a healthy environment.

DURATION: 2hrs 30mins.

TRAINING NEEDS: Marker, Paper, Flip Chart.

APPROACH:

(1)   Divide participants in to five (5)-groups of 5 participants. Have each group to select some one to record the information. Write down about **ten (10) items that they can see or feel around them.** Ask them to further **state how any three affects or influences their health and quality of life.**

(2)   Participants should then define the following terms:

"Environment, Health, and Environmental Health"

After the above, (about 30 minutes) ask the groups to proceed to the next question: **Identify environmental factors that can affect human health and quality.**

At the end of the next 30 minutes, ask participants to brainstorm and **write down about eight (8) basic requirements for a healthy environment that will promote good health and quality of life.** (This should take about 20 minutes).

Ask the reporters of the various groups to present their responses to the entire group using the flip chart. (Or alternatively paste each group's flip charts around the room and have participants walk around and read each other's work.) Allow time for questions and criticisms.

(3)   Distribute Hand out to participants and explain major points on the topic. (See Facilitators Notes below).

KEY ISSUES / FACILITATOR' S NOTES:
-   Poor Environmental Health conditions, such as poor disposal of waste, polluted water, and polluted air are the cause of ill health and continue to drain the weak economies and low finances of the people of this country.

    What are the major causes of increased attendance at the O.P.D or the hospitals?
-   Many people seek medical attention and care because of environmentally related diseases.   The diseases include malaria, Diarrhoeal diseases, upper

respiratory tract infections, cholera, typhoid, skin and eye disease, intestinal warms etc.

What do you understand by the term environment?
- The environment comprises of all external condition that tends to influence the life and well being of an organism, individual or a community.

What is the WHO definition for health?
- Health is the state of complete physical mental and social and spiritual well-being of an individual and not mercy the absence of diseases or infirmities.
 (Source W.H.O 1993)
 Linking the definitions above gives us a definition for Environmental Health. But *WHO* has framed the definition of Environmental Health to state:
- *"Environmental Health comprises of those aspect of human Health including quality of life that are determined by* **physical, biological, social,** *and* **psychosocial factors** *in the environment.*
 It also refers to the theory and practice of **assessing, correcting** *and* **preventing** *those factors in the environment that can potentially affect adversely the health of the present and future generations   (Source:W.HO.1993)*
 This definition takes into consideration the factors in the environment that can influence Health and quality of life.

- **Environmental health factors that affect human health and quality**
   (i) Physical   ------- Air water Housing
   (ii) Biological   ------- Bacteria Viruses Fungi
   (iii) Social   ------- Culture, Behaviour Values
   (iv) Psychosocial   ------- Stressors, Homesickness

- To ensure good health and quality of life our environment should have the following:
 ϖ Hygienic Environment
 ϖ Clean air
 ϖ Safe and sufficient water
 ϖ Adequate and safe food
 ϖ Safe and peaceful settlements
 ϖ A stable environment
 (Source: Min of Local Government and Rural Development; Environmental Health and Sanitation Unit. Manual for Environment Health Inspection: October 2002)

Wrap up by calling individual participants to read out aloud from their hand outs the following sections:
- Environmental Health
- Environmental factors that can affect human health and quality of life (one participant to read one factor each)
- Basic Requirements for a healthy environment.

TOPIC 4:   ENVIRONMENTAL HEALTH SECTOR IN GHANA

LEARNING OBJECTIVE:
- Discuss the issues of importance in the environmental health sector in Ghana; and
- Identify the major policies that govern the environmental health sector in Ghana.

TRAINING NEEDS: Marker Flip Chart paper.

DURATION: 2 hours

APPROACH:
(1)   Begin the session by asking participants to brainstorm the key issues for environmental health in Ghana. Write down on a flip chart. (This should be done quickly, it does not need the details of each issues, just the broad issues. By doing it quickly, having people shout out answers, energy will be generated.)   The facilitator uses the material in the Facilitator's Notes to emphasize and add to major points.

(2)   Find out if participants have copies of the sanitation policy and what it means to them. Divide participants into small groups and discuss the following points:
- Functions of the DAs in the sanitation policy.
- Responsibility of the Environmental Health Department and GIA.

Each group should present two key responses to each point. The facilitator wraps up the discussion by raising any of the key points outlined in the Facilitators Notes.

(3)   As a large group brainstorm the key stakeholders in the environmental sector. Divide into small groups. Each small group draws an organizational chart that incorporates all the stakeholders. The groups post their charts around the room, walkabout making notes on other groups work. As a large group discuss and develop a final chart.

FACILITATORS NOTES:
Key Environmental and Sanitation Problems
The effects of the inadequacy or absence of tools and equipment as well as the low human resource capacity is reflected in the poor environmental and sanitation situation currently confronting the districts. These include the following:
- Poor personal hygiene practices
- Poor refuse collection system
- Overgrown weeds
- Poor food hygiene practices of food sellers
- Poor rearing and straying of animals
- Haphazard disposal of refuse and poor waste disposal system

- Cohabitation of humans and domestic animals
- Chocked gutters and generally poor environmental conditions
- Negative cultural practices such as exposure of corpses for days and burial in homes
- Poor attitude towards sanitation and environmental health issues
- Indiscipline in physical development leading to encroachment on environmental areas such as waterways and sanitary sides

Legal Provisions/Policies

The following statutory provisions give legal backing to the operations of the Environmental Health Department since its inception.

The Town Ordinances.
- ♣ Cap 86 deals with general sanitary nuisances. The Ordinances give the Department the power to deal appropriately with sanitation offenders.
- ♣ Cap 78, deals with all aspects of infectious diseases and gives the Department the power to handle all cases of infectious diseases in order to prevent further transmission.
- ♣ Cap 75, also known as the Mosquito Ordinance, empowers the Department to take appropriate steps to destroy all mosquito larvae.

The Criminal Code – Act 29 (1960) The Criminal Code was promulgated in 1960 and addresses some aspects of environmental health.
- ♣ Selling of unwholesome food
- ♣ Carrying on of noxious trade.
- ♣ Indiscriminate slaughtering
- ♣ Straying of animals.
- ♣ Destruction of stray dogs.

District Assemblies' Bye–laws
The various District Assemblies are required to enact byelaws to regulate environmental sanitation, and prevent pollution within their areas of jurisdiction.

Environmental Sanitation Policy:
The Environmental Sanitation Policy is a blue print on Sanitation and Environmental Health in the country today. It outlines and defines a systematic approach and framework for the implementation of Environmental Sanitation Services and programmes in Ghana.

Local Government Act 462 of 1993.
The Local Government Act was promulgated to establish and regulate the local government system in accordance with the 1992 Constitution. The Act spells out the legislative, deliberative and administrative functions of District Assemblies, including sanitation and environmental health delivery. The Act also makes the Environmental Health Officer an officer of the District Assembly for the purpose of

giving effect to, and enforcing bye-laws relating to public health made by the District Assemblies

Other Relevant Legislations on Sanitation and Environmental Health

Other legal provisions on sanitation and environmental health worth noting include the following:
- ♣ The Legislative Instruments establishing the various District Assemblies.
- ♣ Legislative Instrument 1693, on building regulations.
- ♣ Environmental Policy of 1990
- ♣ Food and Drugs Act
- ♣ Towns Ordinance, Cap 84 of 1945 on the establishment of the Town and Country Planning Department.

Weaknesses of the Existing Legislations
In spite of the good intention of all the policies pertaining to the delivery of sanitation and environmental health, they all have inherent deficiencies as can be seen in the following:
- ♣ The aspects on penalties for offences for instance, have become irrelevant and outmoded in addressing issues of sanitation and environmental health at the present time. The fines are not punitive enough to deter people.
- ♣ The Ordinances are limited to some particular towns in the country, and do not apply to the whole country.
- ♣ The Criminal Code is very limited in scope.
- ♣ Most districts do not have the capacity/skill to formulate byelaws.
- ♣ Low understanding of legal issues and processes such as the prosecution of offenders pertaining to environmental health and sanitation by staff of the Environmental Health Department.
- ♣ The byelaws formulated by District Assemblies place less emphasis on environmental health and sanitation issues.
- ♣ Most byelaws are not gazetted and therefore cannot be enforced and are thus ineffective.
- ♣ The Sanitation Policy is not adequately publicized and hence knowledge about it is limited.
- ♣ There is limited commitment on the part of politicians to ensure that all policies and decisions are implemented.
- ♣ The EHD is not adequately resourced to ensure that all requirements of the policies are addressed.
- ♣ Programmes have not been put in place to ensure that standards set in the policies are achieved.
- ♣ The Local Government Act (Act 462) does not adequately address sanitation and environmental health issues.

Major Findings

Some major findings of a sanitation study commissioned by DISCAP include the following:

1. Laws/Policies: Most of the laws and policies formulated to guide the operation of the EHD have outlined their usefulness and hence become outdated and ineffective.

2. Process of transferring the EHD from MOH to MLG& RD) has left the EHD without any clear identity and thus affecting its ability to attract requisite resources from external sources such as donors and NGOs.

3. Even though most EHDs have Action Plans derived from the districts' MTDPs, the implementation of these Plans have been minimal, as achievement rate is below 50% of expected target.

4. The current status of sanitation and environmental health in all the study districts/regions is in a very bad and deplorable state.

5. Evidence from the survey suggests that there is inadequacy of staff both qualitatively and quantitatively. With reference to gender equity, it was realized that decision-making in the EHD is dominated by males. Training programs, which are to upgrade the capacities of the staff, were found to be either non-existent or inadequate

6. There are virtually no motivating packages for EHD staff. Allowances such as travelling and transport claims are not paid by most District Assemblies to the EHD staff for attending district meetings or for carrying out outreach activities. Opportunities for further studies as exists in other departments or agencies such as the GES and MOH were also found to be non-existent in the Environmental Health Department.

7. Basic tools and equipment for routine waste collection, disposal and management activities were either lacking or inadequate which seriously constrains the Departments' delivery capacity and capability .

Implications

The above findings have serious implications for health promotion in the three Northern Regions as can be seen in the following:

- There exists the possibility for increased sanitation – related illnesses / diseases. Presently, malaria, diarrhoeal diseases, upper respiratory tract infections, diseases of the skin, intestinal worms, anemia and pneumonia are the seven top environmental sanitation related diseases recorded in health facilities across the three Northern Regions. Other serious

mortality and morbidity diseases, but which are not among the top ten diseases include typhoid, infectious hepatitis and trachoma

- Reduction in the value of properties (infrastructure)
- Loss of lives and properties through flooding of choked drains
- Reduction in the value of agricultural lands resulting from plastic pollution
- Increased health budget, and national budget.
- Low labour productivity and school attendance due to loss of man-days as a result of illness and hospital attendance.
- Reduction in the tourism potential of the district and the country as a whole.

TOPIC 5: DECENTRALIZATION AND LOCAL GOVERNMENT

LEARNING OBJECTIVE:
- Explain the concept of decentralization.
- Interpret the decentralization polices and how they relate to Environmental Health sector in Ghana.

TRAINING NEEDS: Markers, Flip Chart papers.

DURATION: 4 hours

APPROACH:

(1) Ask participants to think about the local government system in Ghana. How are government responsibilities being decentralised? Present the concepts related to decentralisation briefly, including the following definitions:

- **Decentralization:** - Services to be provided and decisions to be made away from the central point and in the field.

- **Functional decentralisation**: A particular service or function is hived off from the central government as a semi-independent organisation.

- **De-concentration**: The process where by authority to perform Governmental mandates is dispensed to various levels within the same agencies (e.g. Ministry of Health, Ministry of Education).

- **Devolution**: A complex form of decentralization involving the transfer by central government of political and administrative authority to a local government unit (e.g. District Assemblies and therefore, DEHU).

- **Delegation:** Based on an efficiency model for service delivery, various services are delegated to specialized agencies, privatized, or delegated to communities for managing them (e.g. Community Water and Sanitation Agency).

(2) Divide the participants into groups and ask them to brainstorm and come out with at least four (4) reasons each why decentralisation should be practiced in Ghana and 2 challenges for decentralisation. (Give them 15 minutes). The proceedings should be recorded and presented at the end of the 15 minutes by the respective reporters.

(3) Generate discussion on the decentralised/local government system as it exists in Ghana, by asking participants how they see themselves in relation to the MLGRD and the DA structure.

(4)   Wrap up explaining the Key points such as Decentralization, Deconcentration and how it is being practiced in the Ghanaian context.

FACILITATOR'S NOTES

The Ministry responsible for decentralisation in Ghana is the Ministry for Local Government and Rural Development (MLGRD). Within the MLGRD there is a Decentralisation Secretariat who leads the decentralisation process. They have developed a National Decentralisation Action Plan (NDAP) that has been accepted by Parliament.

LOCAL GOVERNMENT:

The governance of a modern society is an enormous task. In Ghana for example, half of the nation's annual income flows through the hands of the government and some 60% of the labour force are employed in the state sector. This system is cumbersome and full of inefficiencies.

For this reason, most countries find it necessary for services to be provided and decisions to be made away from the centre or capital, in the field or locally, where the services and the decisions are most needed. Some definitions of local Government include:
  - Local government is defined as democracy at the doorstep and the administration of local services by elected\ appointed members.
  - Local government is also defined as self-government involving the administration of public affairs in each locality by a body of representatives of the local community.
  - Local government is also defined as intra-sovereign geographic units found within a sovereign nation or quasi-sovereign state.

In effect, local government aims at promoting responsive and equitable governance at the local level that allows effective participation, equity in resource allocation and effective delivery of services, especially for the poor.

The Ministry of Local Government and Rural Development (MLGRD) is the lead agency with the responsibility of coordinating the implementation of the Decentralization policy and the local government reform programme.

WHY LOCAL GOVERNMENT?

1. Local government is seen as an efficient method of administering certain services. This efficiency is explained in one or more of the following grounds.
   (a) Local authorities consist of members who are drawn from the local populace and who therefore have local knowledge and a commitment to the local area and its people.
   (b) Local authorities are multi-purpose bodies and can therefore, theoretically secure a greater degree of co-ordination: for example, since the same council in responsible for planning wads and housing sanitation the liaison between the different services and department is easier and closer.

(c) Public administration generally benefits from the existence of local authorities because they off-load responsibilities from central government departments and the civil service, who would other wise be over burdened with work.

2. Local government can be said to encourage citizenship or democracy and promote "political education" in its widest sense. It does this by involving large numbers of people in the political decision making process. Councillors are elected, and the frequent election which occur in local government give the general public an opportunity to exercise and practice the right to vote. In some ways, this relation between the elector and elected is closer at the local than at the national level and helps to create an awareness among local voters of their ability to influence decisions.

3. Having a fair degree of independence, the local authorities can take initiatives and experiment. In this way they may innovate and pioneer new services or methods or administration and successful ideas may be spread to other authorities.

4. Local government is seen by some as a barrier of defence against an all-powerful central government and the abuse of power. Certainly in the nineteenth century it was held that the existence of a strong local government system helped to disperse political power and diminish the danger of an over-centralised state. Today we tend to see local government more as means to influence central government.

CRITICS OF LOCAL GOVERNMENT

The case for local government is not overwhelming or unanimous. There exist contrary views, that of the "centralists" who are critical of its existence on a number of grounds.

1. Local government allows a variation in the standard of provision of local services that may be regarded as inequitable or unfair in an age of equality, or at least equality of opportunity.

2. Doubt is cast on the efficiency of local government administration. Many authorities are felt to be "too small or too young" to be effective in the provision of some or all of their services. In addition, there is scepticism about the amount of co-ordination and integration of services that is achieved in practice among local authorities. Moreover, the speed of modern communications means that central government can be as effective in dealing with local problems even though local government is nearer.

3. Finally there is the danger of exaggeration and over-idealization. The notion that, the local government acts as a bastion against excessive state power, and as a catalyst to the release of simmering community participation, may be far too ambitious a claim. In practice the central government exercises considerable

control over the policies of local government, and the general public shows a considerable lack of enthusiasm for local government matters.

CHARACTERISTICS OF LOCAL GOVERNMENT

There are a number of characteristics that mark out Local government as a distinctive form of public administration. These include:

(a) **Local government is elected local authorities consisting of representatives chosen by the members of the community at properly constituted elections.** It must be pointed out that in Ghana not all members of the local authorities are elected. For example from the First republic till the PNDC regime one third of the total membership of the local authorities were reserved for the traditional chiefs. It must be emphasised here that the governments of the PNDC and NDC continued to appoint one-third of the local membership of the local authorities but it is not exclusively reserved for the traditional chiefs.

(b) **Local Government is multi-purpose**. Every local authority has many jobs to do, and a variety of services to provide. An individual local authority may be responsible for the provision of schools, homes for the elderly and training centres for the handicapped, fire services road building and maintenance and the control of the environment through the regulation of building and land development.

(c) **Local government is limited in its scale of its operation.** Each authority has responsibility in its own area only.

(d) **Has a clearly defined structure**. Essentially local government has two tiers made up or Regional council and smaller District councils. Thus, wherever we may live in Ghana, we shall find our selves under the jurisdiction of two Local authorities.

(e) **Subordinate to the national authority i.e. parliament.** Local authorities are subject to the law. If a local authority steps outside the law (for example by failing to do something which the law requires it to do, such as providing sanitation services) it will be liable to the rigorous sanctions of the law in the same way as private people are. Parliament alone has the sovereignty: Local authorities exercise power to the extent that Acts of parliament allows it. Although local authorities carry out those responsibilities handed on to them by parliament it is misleading to see them simply as agents acting for the central government in the administration of certain services. While subject to certain controls operated by central government, the local authorities work in partnership with it and they possess a freedom and initiative which justifies their being described as bodies exercising local self-government.

(f) **Characterized by a rating system.** Rates are a form of taxation and have been exercised by local authorities for centuries. Although rate revenue is no longer the most important source of local government income, it is very substantial and affords local authorities with a significant degree of independence and flexibility.

GHANA NATIONAL DECENTRALISATION ACTION PLAN
Ghana is implementing both devolution and deconcentration.

The DA system is an example of devolution where by both political and administrative authority is being transferred to a sub-unit of the central government. Decision making power (to some extent) is being transferred, particularly in the area of development. However, to date employment and budgeting remain centralised.

Deconcentration is occurring in the Ministry of Health, Ministry of Education, and Ministry of Food and Agriculture. They are transferring certain functions to local branches i.e. District Education Office. However, decisions, budgeting, employment all remain centralized.

One of the difficulties of this process is that while the DA is trying to harmonise development activities, the DEO, DHS have no incentive to engage in the process. They receive their money from the central Ministry, that is where their loyalty lies. Therefore, there are significant challenges presented to the District Planning process resulting from decentralisation.

The DEHU is a decentralised unit under the DA. Their allegiance is to the DA, they are civil servants. All funding for the DEHU comes from the DA, and they should be participating in the planning process as a decentralised department.

TOPIC 6:   ROLES AND RESPONSIBLITIES OF THE DISTRICT ENVIRONMENTAL HEALTH OFFICERS.

LEARNING OBJECTIVES:
- To identify the roles and responsibilities of the DEHO.
- Explain the duties of the DEHO.

TRAINING NEEDS: Paper, Flip Chart and Markers

DURATION: 2 hours

APPROACH:
(1)   Ask about three or four participants to try to elucidate the activities that Environmental Health Workers perform in a given day.   After each explanation, find out what these activities are meant to achieve, Guide the explanation to focus on the roles and responsibilities of the DEHU.

   Key Discussion Points
   - The District Environmental Health officer is responsible for the overall public health of the district pertaining to sanitation
   - He/she does this by
      - ϖ Monitoring and enforcing environmental standards and regulations
      - ϖ Organising continually public education or safe guarding the environment

(2)   Divide the participants into small groups.   Use the following analogy of a hospital visit to outline the process of addressing the environmental health problems.   Ask one or two participants to state the process that he\she goes through when they visit the hospital and what each step is meant to achieve. Write each step on board and help them to try to clarify each step a patient goes through in the hospital to the following:
   - Assess to understand problem
   - Prescription of solution to problem
   - Supervision and monitoring the implementation of solution etc.
   - Monitoring area for any after- effect to prevent recurrence of problem
   - Communication of problem and actions taken in report form to superiors and other stakeholders.

   Wrap up by using this example to illustrate how the environmental health worker should approach their job i.e. in a systematic, organized manner.

(4)   Wrap up by asking participant to out line the role of the DEHO.   Distribute handout to participant.   Hand out job descriptions and discuss the responsibilities. How does this relate to what they do on a daily basis? What are their priorities? What are the challenges?

FACILITATOR'S NOTES:
Statutory Functions of the Environmental Health Department

The statutory functions as presently performed by the EHD is aimed at protecting the public from any environmental hazards or nuisances that are likely to be offensive or injurious to the health of the public. This function is achieved through the following activities:

i. Environmental health inspections to identify environmental risk factors
ii. Assessment of identified factors
iii. Taking steps to address all causative factors through
   • Public or individual education
   • Health promotion activities
   • Issuing of notices to ensure that offenders abate or remove the condition or nuisance
   • Prosecution of the of offenders when all else fails
iv. Monitoring of identified potential risk sites to prevent the recurrence of nuisances and hazards.

Specifically the EHDs are required to carry out the following statutory functions with respect to district sanitation and environmental health.

• Ensuring prompt collection, transport, treatment and disposal of solid and liquid waste.
• Monitoring and enforcing environmental standards.
• Planning, implementing, and monitoring environmental sanitation services.
• Promotion of environmental sanitation education.
• Enforcement of environmental sanitation byelaws.
• Environmental control of development activities.
• Protection of Pollution.
• Protection of water resources.
• Ensure wholesome meat/food.
• Ensure safe disposal of the dead.
• Control the rearing and straying of animals.
• Prosecution of sanitary offenders

TOPIC 7:   INTRODUCTION TO GENDER ISSUES

LEARNING OBJECTIVES:
- Explain gender concepts
    - (5)   Gender
    - (6)   Gender equality
    - (7)   Gender Equity
    - (8)   Women in Development (WID)
    - (9)   Gender and Development (GAD)
    - (10)   Gender relations.
- Contrast the Women in development (WID) approach to the Gender and development (GAD) approach.

TRAINING NEEDS: Paper, Pens, Markers, Flip Chart.

DURATION: 3 hours

APPROACH:
(1)   Each participant takes a couple of minutes to jot down answers to the following question:
-     Two things they like to do that are typical of their gender.
-     Two things they hate doing that are typical.
-     Two things they really wish they could do that are non-traditional.

At the end, let participants share their answers to the questions with the group. Explain that gender attaches predetermined roles to both women and men, and that both are constrained by this.

What are the major differences between the roles for men and women?

(2)   THE PROBLEM

Everywhere, women as a group enjoy fewer advantages and work longer hours than men. They are more involved in sanitation and hygiene activities than men because they are responsible for most of the jobs within the household. Meanwhile, women's work and opinions are undervalued. In many countries women earn less than men, are prevented from owning land, face numerous obstacles to holding position of authority, and face many threats of violence just because they are women. A starting point for gender and development analysis is recognizing women's subordinate position.

According to UN statistics:

⟹   Women perform 67% of the worlds working hours.

⟹   Women earn 10% of the world income,

⟹   Women are 2/3 of the world's illiterates, and

⟹   Women own less than 1% of the world's property.

It has been discovered that the impact of development programmes on women in the past have been negative. Even when women's issues were considered, but women were not included in the project/programme cycle their needs are not met, and the project often has a negative or neutral impact on women.

(3)   WHY GENDER?
The group is asked why they think it is important to incorporate gender issues into Environmental Health and Sanitation
Critical answers to highlight:
⦚   To determine the different impact of development /Environmental health and Sanitation programs on women and men.
⦚   To engage both women and men in the development process.
⦚   To determine how development and sanitation programs affect men and women differently.

(4)   BASIC GENDER CONCEPTS:
Review the level of gender understanding that the group holds. This will determine whether the group can move quickly through a review of the main topics or whether more time should be spent creating understanding.

Gender Concepts To Discuss:
Gender
Gender Equality
Gender Equity
Gender Roles
Women in Development (WID)
Gender and Development (GAD)

These concepts will be discussed by breaking the group into 6 small groups. Each group will be given a piece of paper with two of the concepts written on it (2 groups each get two concepts i.e. group 1, Gender and Gender Equality, group 2, Gender Equity and Gender Roles, group 3, WID and GAD. The group will then write the definition of the concept to the paper. The papers are posted around the room and the participants walk around and read the different definitions. In a group discussion they share their thoughts and identify any gaps or anything they disagree with.

KEY ISSUES:
Participants should leave the session understanding that Gender Issues are important because in almost all aspects of life, women are subordinate to men. Practically this means that 50% of the human resources of the population are being underutilized and their rights are not being respected.

Equality is about equality of impact. In development we want to benefit men and women equally. Equity is about introducing special measures (e.g. affirmative action) to ensure that equality of impact can be achieved. Providing men and

women with the same opportunity will not achieve equality of impact because they have different needs and resources with which to take advantage of the opportunity.

WID was the original thinking around gender equality. It generally meant including women as beneficiaries of projects and did not include them in planning, monitoring and evaluation or other decision making aspects of programs. This resulted in a greater burden for women, but did not change their subordinate status. For example, women were given access to credit, but if they do not improve their educational status they will continue doing low income generation activities like petty trading, and in many countries they will not have access to the increased income.

GAD represents an evolution in thinking that acknowledges women's subordinate status as the starting point for consideration of gender issues. It attempts to design programs/strategies that address women's practical needs, but also their strategic needs. Thus, the above example of income generation could be combined an education program that addresses empowerment issues (building their capacity to participate in household decision making), as well as training women in more profitable activities such as carpentry or leatherworks.

In the end, participants should understand that both men and women should be involved in each step of program/service delivery, particularly decision making. Activities need to be considered in light of gender analysis: How does this affect men? How does it affect women? The goal is not to increase the burden on women, but engage them in a meaningful way.

Gender issues will be discussed throughout the course, and practical ways to consider gender when designing/delivering activities will be shared.

TOPIC 8:   GENDER ROLES 24HOUR DAY.

LEARNING OBJECTIVES:
- Define gender roles.
- Explain how the daily tasks of professional men and women are different.
- Discuss the impact of men and women's different workload and power relations.

TRAINING NEEDS: Flipchart, Paper, Marker

DURATION: 2 Hour 30mins.

APPROACH:
(1)   Divide participants into five groups. Ask the groups to imagine a day in the lives of male/female of middle- level workers from different sectors (e.g. Health, Agric., Planning.) Each group should list the tasks performed by women and men in a regular working day over 24 hours on a flip chart paper. Put the flipchart up on the wall and ask participants to walk around and look at each of them. Help participants to draw out common points and identify gaps from the charts on the wall in a plenary discussion.

(2)   Wrap up by presenting the hand out and having participants read the definition of gender roles, triple roles, practical needs and strategic interests. Indicate that these are a few tools that are used to carry out a gender analysis which allows the officer to understand the impact of programs on women and men.

FACILITATOR'S NOTES
The middle level professionals chosen for this activity should be distinct by sectors from each other and provide contrast.
Encourage groups to include all daily activities, even those that might not be thought of as 'work' that women do.
Despite the considerable differences in the daily lives of different groups, common points should emerge. For instance:
-women and men do different things during the day
-women work longer hours
-women have more varied tasks, sometimes doing more than one thing at a time
-work for the family is combined with productive work
-men's work is usually outside the home
-men have more leisure time
-women have less sleep
-men are more involved in decision making
-women's work tends to be more manual-labour-intensive

This activity can start discussion on how to reduce women's workload and increase men's participation, or how to address any other imbalances.

This activity begins the analysis of gender roles. Questions that can be asked in discussion are as follows:
- What do these added tasks mean for women?
- What are the women's professional constraints? (e.g. attendance in meetings, availability for capacity building courses, effective participation, and so on).
- How do we reduce women's workload and address imbalances?

In asking these questions and further probing these points may emerge:
- Lack of support mechanisms within the institution.
- Men tend to have more access institutional resources.
(Sources: This exercise was adapted from Suzanne Williams with Janet Seed and Adelina Mwau, The Oxfam Gender Training manual 1994, designed by C O N Moser).

3.   MODULE 2: COMMUNICATION SKILLS

Communication skills are a key aspect to the work of the EHO. A large part of the work of the EHO is to promote good hygiene practices in the Districts (particularly at the community level) they work with. This requires strong interpersonal communication skills, including listening and discussing issues. The EHO needs to know how to make a presentation to the DA and how to promote hygiene at the community level, and how to distinguish between the two.

As a professional officer, the EHO also needs to be able to write reports and proposals in order to present their activities and needs to the DA and other stakeholders. Enhancing these skills, along with advocacy and networking, will enhance the ability of the EHO to access much needed resources, and become a respected officer in the planning process of the DA.

This session will focus on the above mentioned skills, providing practical opportunities to try out the new skills in a safe environment and receive critical feedback from peers and instructors.

OBJECTIVES:
Communicate relevant information, both written and verbal, in a variety of settings.

TOPICS
Note Making and Note Taking
Data Management, Analysis and Presentation
Report Writing
Proposal Writing
Presentation Skills
Advocacy
Networking

TOPIC 1: NOTE-MAKING

LEARNING OBJECTIVES:
- Differentiate between note making and note taking.
- Recognize essential elements of information in lectures, seminar, reading, etc.
- Select key points to record.

TRAINING NEEDS: Handouts, flipcharts, markers, newspapers.

DURATION: 7 hours

APPROACH:
(1)   Ask participants the following question "What is the difference between Note Making and Note Taking?" Record answers on flip chart paper. Participants should recognize that one involves the sieving of important information, while the other is copying verbatim and involves little thought. (45 minutes)

(2)   Put participants in a small group of five and present them with a selected text to study (e.g. an article from a current newspaper). Encourage participants to identify important elements of information in the text provided. Ask strategic questions that will require participants to bring out relevant information in the text, and discard irrelevant information. Participants in their various groups are guided to make notes from a selected text.

(3)   As a wrap up ask the following question "Why is it important to make notes rather than take notes?" The facilitator reinforces the idea that it is important to sift through the information for relevant points. (20 minutes)

FACILITATOR'S NOTES:
<u>Definitions:</u>
Note Making: Involves sifting through information to determine the points that are relevant. One is required to process the information, think about it, and understand how it relates to the subject at hand.

Note Taking: Capturing information by recording exactly what you have heard or read. It does not involve any comprehension of the information to determine what is relevant and what is not.

This is a critical point for participants to understand, particularly at the beginning of the course as it will guide them throughout the course. In addition, it will help them in future activities in putting thought into their reading/listening.

Note making is ACTIVE, you engage with the material.

Note taking is PASSIVE, you are not using your mind.

TOPIC 2:   DATA MANAGEMENT, ANALYSIS AND PRESENTATION

LEARNING OBJECTIVES:
- State sources and methods of data collection.
- Demonstrate the ability to collect, organize and interpret data.
- Present data information in logical and clear language.

TRAINING NEEDS: Flipchart, markers, and handouts

DURATION: 6 hours

APPROACH:
(1)   Divide participants into 6 groups. Each group deliberates on one of the following topics and answers the questions: (each topic is held by 2 different groups)
   Data and Data Analysis: What is data? Why is data analysis important?
   How can the DEHU use data?
      Sources of Data: What is the difference between qualitative and quantitative data? What are the main sources of data for the DEHU?
      Methods of Data Collection: What are the different ways that the DEHU can collect data? What are important factors to consider when collecting data?
   After approximately 30 minutes have the groups record their questions and answers on flip chart paper and post on a wall. Participants do a walk about and looks at the different groups work and makes notes. As a large group ask participants if they noted any gaps, or if there was anything they disagreed with, or simply wanted to comment on. The facilitator leads the group discussion, making sure to emphasize the key points highlighted in the Facilitators Notes below.

(2)   Participants remain in the same groups. The facilitator hands out a copy of the case study (see Facilitators Notes) and questions. Each group will have the same case study, but different questions. The group is asked to review the data and analyse in such a way that they can they present it to the wider group. Give groups an hour to work on this exercise. Then each group presents their analysis to the broader group.

(3)   Wrap up by recapping the main points and asking participants why data analysis is important, and how it can help them in their work at the DEHU?

FACILITATOR'S NOTES:

CASE STUDY – DATA ANALYSIS AND PRESENTATION

To monitor progress related to hygiene behaviour change, a baseline survey was carried out in December 2004. For the survey 160 households, encompassing 500 children under ten years were selected in the Upper East Region of Ghana, specifically Bolgatanga and its surrounding villages.

The survey was part of the Total Community Participation process in that, the inter-institutional teams that initiated and implemented the water, handwashing and other hygiene activities participated in the systematic process of ongoing community level data collection. Essentially, the survey was intended to reinforce the work of DISCAP in the Upper East Region, by quantifying the changes that are associated with their efforts.

Survey Results

Sumbrungu – 10% of the children surveyed (115 children) did not wash their hands with soap before eating or after using the toilet.

Zuarungu (approx 5 km from Bolga) – 30% of children under 10 years surveyed (135) did not wash their hands with soap before eating or after using the toilet.

Winkogo – 60% of children under 10 years surveyed (120) did not wash their hands with soap before eating or after using the toilet.

Bolgatanga – With the exception of the street children, who are not large in number, 0% of children under 10 years surveyed (130) did not wash their hands with soap before eating or after using the toilet.

When data on hospital visits from the communities was examined it was determined that children from Winkogo were the highest attendance at the hospital. Furthermore, these children were seen to be less healthy and strong than children from the other areas.

Answer the following questions:
1. How many children from Bolgatanga township fell sick?
2. How many children from Winkogo fell sick?
3. How many children from Sumbrungu fell sick?
4. Present the data from this passage in a bar graph (note: be careful to present consistent information).
5. What are the health and socio-economic implications of this data?
6. What interventions can be put in place to improve upon handwashing?

TOPIC 3:   REPORT WRITING

LEARNING OBJECTIVES:
- Follow the basic steps in report writing.
- Present quality reports.
- Identify different types of reports and write them.

TRAINING NEEDS: Flipchart, Sample of reports in newspapers and from books and other sources.

DURATION: 7 hours

APPROACH:

(1)   Brainstorm with participants the different types of reports that they are expected to write within the DEHU. Discuss with participants how a report is different from other written documents, such as plans or papers. Develop a definition for report with the group that all agree to.

(2)   In small groups, participants should outline the key sections in a report and the overall process one undertakes when writing a report. As a large group share ideas to come out with a guideline and template for general reports.

(3)   Individual participants should then carry out the following exercise: As a District Environmental Health Officer, submit a report to your regional boss of the same organization, reporting cases of water borne diseases and suggesting possible solutions. Participants should be given 2-3 hours to do this. The facilitator will review them upon submission and provide feedback to individuals and more generally before the next session starts.

FACILITATOR'S NOTES:

Reports are important for two reasons:
1.   They tell people what has been happening in your organization.
2.   They make you accountable for your actions by recording them.

Reports are often done on a regular basis in a prescribed format.   Eg. Monthly Progress Report on activities, Semi-Annual Monitoring report, etc.

Reports can also be requested on a special occasion e.g. an outbreak of cholera requires a report on sanitation and hygiene practices in a particular community, the visit of an important dignitary requires briefing notes.

Reports should inform people of what is happening. They are concise, simple, and avoid jargon.

Typical sections in a report include:
- a) Title/title page
- b) Table of contents
- c) Summary
- d) Introduction
- e) Main body
- f) Conclusions
- g) Recommendations
- h) Acknowledgements
- i) References
- j) Appendices

TOPIC 4: PROPOSAL WRITING

LEARNING OBJECTIVES:
- Identify problems and develop strategies to address.
- Develop proposals based on guidelines presented.

TRAINING NEEDS: Sample of project proposal, flipchart, and hand outs.

DURATION: 6 hours

APPROACH:

(1)   Ask participants how they use proposals in their work at the DEHU? What is a proposal? Discuss with participants some of the features of a proposal (see facilitators notes).

(2)   Divide participants in groups of five to enable effective participation in the lesson. Give a sample of proposal for participants to observe.
Ask the following questions to guide participants to discover various steps in proposal writing:
- Who is the target audience of the proposal?
- What is the problem?
- How is the author planning to deal with the problem?
- Will the stated objectives solve the problem? Will the method achieve the objectives?
- Would you as a donor accept the proposal? Why or why not?

(3)   Individuals are asked to prepare a 2 page proposal to the DA to support a workshop for food vendors in the District Capital.

FACILITATOR'S NOTES:

Proposal writing is about marketing an idea or a product. The author of the proposal has identified a problem and believes she has a way to solve it, but lacks the resources. The proposal is essentially an attempt to sell the idea to someone who has the resources. You might think you have a good idea, but you must convince others. A proposal can do that.

As with reporting writing, proposals should be:
- Clear and concise;
- Brief;
- Well thought out and written; and
- Focused on the issue.

The main sections of a proposal include:
  a.   Executive Summary
  b.   Introduction
  c.   Problem Statement
  d.   Goal
  e.   Objectives
  f.   Strategy
  g.   Project Activity
  h.   Indicators
  i.   Monitoring and Evaluation
  j.   Activity Schedule
  k.   Reporting
  l.   The Logical Framework
  m.   Target Group
  n.   Budget

It is possible that the agency you are sending the proposal to has their own format. Check and see before you use this format. Depending on the amount of the grant and the scope of the problem you may or may not need all these sections. Use your discretion.

Remember: you know the problem, the reader doesn't. Give them enough information to make a decision, but not to overload them.

TOPIC 5:   PRESENTATION SKILLS

LEARNING OBJECTIVES:
- Demonstrate the ability to organize ideas in a logical way with a clear introduction, body and conclusion.
- Demonstrate the ability to speak fluently in public, presenting materials in a sound, natural manner.
- Utilize prompts such as note cards, flipcharts, overheads etc.

TRAINING NEEDS: Hand outs, Newspapers etc.

DURATION: 5 hours

APPROACH:

 (1)   Discuss with participants the steps to consider in making a presentation. For example, the preparation stage, making the presentation, delivery, the use of visual aids in presentation and others. The facilitator should also discuss the main components of a presentation including introduction, body and conclusions.

(2)   Divide participants into 6 groups. Each group selects a topic and develops a small presentation. A presenter is selected from each group. The presenter delivers the presentation to the larger group, who is asked to watch all 6 presentations and record feedback. At the end of the 6 presentations the facilitator leads a discussion to highlight the strong and weak points of presentations.   The facilitator ensures that the key issues outlined in the Facilitators Notes are mentioned.

(3)   Wrap up by reviewing the key aspects of presentations (see Facilitators Notes for details).

FACILITATOR'S NOTES:

Steps involved in making a presentation:
1.   Preparation – clarify topic, define purpose, identify target group, research subject matter
2.   Writing – organize ideas with clear introduction, body, conclusion
3.   Proof Reading – put it down and review after a day or two? Does it make the point? Do you achieve your purpose? Correct any grammatical mistakes?
4.   Practice – review the presentation several times, as well as any supporting documentation or research. Know your topic well, including the flow of the presentation. You don't need to memorize you can use visual aids for that, but you should know the direction you are going.

5.   Prepare visual aids – Depending on the nature of the presentation, and the facilities determine how best to use cue cards, power point, flip charts etc. Prepare this well in advance of the presentation.

6.   Delivery – Relax, speak clearly, make eye contact.

The key components of a presentation:

Introduction – Should provide the audience with an insight to the topic, present the goal of the presentation, and the points to be covered. The introduction is critical because this is where you will gain or lose the audience's interest.

Body – The main emphasis of the presentation, this is where you present the information, research findings, key points that you need to raise to achieve your purpose.

Conclusion – Briefly review what has been discussed, how it relates to the goal of the presentation, and possibly where to go from here. Take the opportunity to re-emphasize key points.

Differences between Speeches and Presentations:

Speeches tend to be more formal and less interactive.
Presentations develop a relationship with the listeners.
Presentations use visual aids, speeches tend to be read.

Largely it is a difference in perception, when we think of speeches we think of someone talking at us, presentations tend to involve the audience and be more educational.

TOPIC 6: ADVOCACY

LEARNING OBJECTIVES:
- Define advocacy.
- Identify priority issues in environmental health to address using advocacy.
- Develop an advocacy strategy that respects the key components.

TRAINING NEEDS: Flipchart, handouts, printed materials on advocacy etc

DURATION: 4 hours

APPROACH:

(1) Introduce the session with participants working in pairs to play the fist game. Pair participants and ask one to clench his/her fist and the other partner to try to force open the fists. Chances are that most partners will struggle in vain to open clenched fists. (refer to facilitators notes on implication of game).

(2) Give each participant a piece of paper. On the paper they are to write down a word, phrase or sentence of your understanding of advocacy. Group participants into 8 small groups. The groups discuss their individual ideas and combine them to form a definition they all agree on. In plenary session agree on one description /definition of advocacy; the process should include an identification of common themes in the definitions and understanding of advocacy. The facilitator follows this by sharing other definitions of advocacy and facilitates a plenary conversation comparing these definitions with what the group has arrived – pay special attention to similarities and strengths.

(3) Use the following role play to demonstrate the importance of showing empathy when doing advocacy.

Role Play – Swapping of duties (handout in participants manual)
Mr. Amadu has a family of three: Amadu, his wife Amina and their eight months old daughter. They live in Kukuo, a surburb of Tamale. Mr. Amadu is a civil servant working at the Metropolitan Assembly as an executive Officer whiles his wife is an illiterate house wife.
Before the birth of their baby, they were a very interesting and happy couple. This happiness began waning when the care of the baby coupled with carrying out domestic chores became too much for Amina. Amadu apparently became peeved with the wife over delays in getting his dinner ready on time, even though he offered no support to the wife on return from the office. This issue generated into a quarrel with each side accusing the other of having a lesser work load. To resolve this allegation, the couple decided to swap positions and roles. Arrangements were made for Amina to take over Amadu's schedule at the Assembly, while Amadu takes over the house and caring of the baby. Barely two days after, they had to reconsider their decisions, because things were not as they thought.

Characters for the role play:
Office- director, executive officer, Amadu (secretary)
Home - Amina and baby

> Lead a plenary discussion following the role play to highlight what participants saw and why they think it's important for advocacy to "empathize". Ask participants what they think are other important components of advocacy. (Refer to Facilitators Notes).

(4)   Guide participants to identify various tools used in advocacy, for example one on one meetings, lobbying, negotiation, project visits, social mobilization, program communication, media, interpersonal etc. As a large group discuss which tools are useful at what time, and how one can decide which tool to use.

- Put participants in groups to discuss issues in environmental health that require advocacy. Deliver a mini-presentation on the steps involved in advocacy (see Facilitators notes). Small groups should develop an advocacy strategy to address one of these issues. Present the strategy in a plenary session. Peers to give feedback.

- Wrap up by identifying the key aspects of advocacy. Discuss ethical considerations, required skills and qualities of an advocate. Have a general group discussion about ways that EHOs can incorporate advocacy into their daily work.

FACILITATOR'S NOTES

Advocacy should not be viewed as something done by those in power for those who have none. All citizens must have access to advocacy strategies and skills and have the opportunity to become advocates.

Advocacy consists of different strategies aimed at influencing decision-making at the community, district, regional, national, and international levels, specifically.

It answers questions such as:
Who decides-elections, appointments and selection of policy makers, judges, ministers, boards of advisors, managing directors, administrators etc?
What is decided- policies, laws, national priorities, services, programs, institutions, budgets
How it is decided- accessibility of citizens to information and the decision making process, accountability of decision makers to citizens and other stakeholders

Key messages/learning points about fist game
The clenched fist represents a closed system or power. It is not easy to open the system or let those who are holding onto power to give up part or all of it. For that

matter, effective strategies, imbued with tact, conviction, commitment, perseverance and self-sacrifice are required in advocacy work.

DEFINING ADVOCACY

Common Themes in the definition and understanding of advocacy may include:
Influencing action
Effecting change/transformation
Attention to the marginalized
Engaging critical actors
Awareness-creation/raising
Follow-up

"Advocacy is speaking up, drawing a community's attention to an important issue, and directing decision makers toward a solution. Advocacy is working with other people and organizations to make a difference". (CEDPA, 1995)

 "Advocacy is a set of actions undertaken by a group of individuals o r organizations working in concert to build consensus, foster a favourable climate, or seek support for introducing, changing or ending specific laws, policies or programmes"(Opia, M. K. , 2003)

"Advocacy is a set of coherent actions designed to introd uce, influence and change policies, programmes, practices, attitudes and decisions for a just and equitable world"(AA International, 1998)

Notes on Role Play

Key issues emerging from role play:
Heavy work burden for Amina and Amadu
Everybody's work is important
Amina works longer hours
Different skills levels required in role situation that could not be swapped without training and experience
The need to empathize with someone before judging

Key messages/learning points from Game/role play
As much as possible, walking in someone else's shoes makes for effective Advocacy. It is always important to find out the constraints of the target group before taking decisions for them or talking on their behalf

Key Principles of/Components in Advocacy

Legitimacy – Why and how can you speak for anyone or on behalf of somebody? It involves constituency building. Whose constituency are you representing? Where do you derive your right to advocate? The issue must be relevant. Do women want to participate in the district assemblies?

Credibility – The issue must be believable. This makes what you are saying interesting and encourages people to listen

Accountability – Those involved must be trustworthy. The human rights framework requires openness (accountable) to people one represents. There is a need also for strategic accountability as in sharing documents and information and financial accountability e.g. resource distribution and sharing

Trust – Entails responsibility. That you are responsive or responding to the interests of the target group.

Participation - Critical principle of rights based approach

Values – Advocacy is value based. What you advocate for depends on your beliefs, perspective; i.e. your values.

Steps in developing an advocacy strategy

1. Identifying and clarifying the issues: The problem that requires an action.

2. Establishing goals and objectives: A statement of the general result you want to achieve incremental steps toward achieving your goal (should be specific, measurable, realistic, time-bound)

3. Preparing for advocacy campaign:
  ¬ Selecting Target/ audience: The group you are trying to influence
  ¬ Message development: Statements tailored to different audiences that define the issue, state solutions, and describe the actions that need to be taken
  ¬ Channels of Communication: The means by which the message will be delivered
  ¬ Building support: Building alliances with other groups, organizations, or individuals who are committed to supporting the issue.
  ¬ Fundraising: identifying and attracting resources

4. Implementing the Advocacy strategy: Carryout the plan

5. Monitoring and evaluation:
Monitoring - A process of gathering information to measure progress toward your advocacy objectives
Evaluation - A process of gathering and analyzing information to determine if the advocacy goal has been achieved.

Data collection: Gathering, analyzing and using appropriate quantitative and qualitative information to support each step of your campaign

Ethical Considerations
  • Advocacy and Empowerment
Empowerment is often misunderstood as something done by those in power for those who do not have power in a particular sphere. Of course, empowerment cannot arise when those with power continue to use it as a tool to "enlighten" or "include". True empowerment comes from within an individual or group, through reflection, analysis and change. Advocate leaders should recognize that transition is a personal movement, and that all social change initiatives must be guided by

participatory strategies that invite reflection, dialogue and debate. Questions such as who is empowered or alienated by a particular structure or process should be consistently addressed.

- Speaking for /on behalf of

The views communicated should be determined and voiced from within communities, groups, or individuals who have a vested interest in change. While one person might do the speaking, it is critical that the speaker is very accurate in representing the views of those who are being represented. They should not be your views, your concerns, but the views and concerns established through consensus building and participatory dialogue.

- Using Research Data

Accuracy and informed analytic interpretation of data is extremely important. Advocates are often targeting groups who have no interest, belief or commitment to the issue at hand. It is extremely important that the statistics and conclusions drawn from statistics are accurate. If not, the advocate provides ammunition for those who want to disprove or discount the need to change. Inaccuracy de-legitimizes an entire campaign. People begin to ask if this is wrong what else might be wrong or incorrect with what they are saying?

Skills of a Good Advocate:		Qualities of an Advocate:	
Presentation	Decision making	Ethical	Resourceful
Public	Mediation	Creative	Approachable
speaking	Communication,	Organized	Objective
Lobbying	including cross-	Assertive	Tolerant
Leadership	cultural	Adaptable	Knowledgeable
Consensus	communication skills		
building	Listening		

TOPIC 7:   NETWORKING

LEARNING OBJECTIVES:
- Solicit information from stakeholders relevant to environmental health programming.
- Establish relationships with stakeholders inside and outside the district.

TRAINING NEEDS: Newspapers, and hand outs.

DURATION: 4 hours

APPROACH:

(1)   Brief discussion on networking. Encourage participants through group discussion to identify means and ways of soliciting information from stakeholders on issues of concern.

(2)   Participants' in-groups of fives discuss ways of establishing relationships with other stakeholders within and outside the district.

FACILITATOR'S NOTES:

According to the Oxford Dictionary a network is group of people who exchange information, contacts, and experience for professional or social purposes.

The emphasis in this session should be on the importance of developing networks to provide linkages and contacts to the DEHU that will help them in implementing their programmes.   The focus should be on networks at the District level.

Networking can be done in several ways:
- Meeting people at formal gatherings
- Following up with people you have met socially
- Attending specific functions where you know people who can further your work will be.

Networking should be done in a purposeful manner. There is no point networking if you don't know what you are trying to achieve.

Making contacts is a central part of networking. Contacts need maintenance. You need to stay in touch with people and provide them with incentives to stay in touch with you. It is a give and take relationship, there may be times when a person who you have met calls on you for a favour. If you can help them do so, they might return the favour in the future. If you come across something you think they might find interesting send it to them. Networking is not just about meeting people, it's about establishing and maintaining a group of contacts.

4.   MODULE 3:   WASTE MANAGEMENT

Waste is special in that it has a very high potential for infection and injury. Therefore, it has to be handled with safe and sound methods wherever generated. Inadequate handling of waste may have serious public health consequences and impact adversely on the environment. Most District Assemblies are not able to effectively and efficiently manage wastes generated in the assembly areas due to inadequate financing, poor awareness and public education, wrong technology choice, and poor planning.

OBJECTIVES:
- Interpret various policies and regulations related to waste management;
- Apply concepts and principles of waste management to real life situations;
- Incorporate gender issues in environmental health and sanitation activities; and
- Develop waste management plans.

TOPICS
The topics private sector participation and gender are crosscutting issues and will therefore be integrated in the other topics. They will however be treated as introductory texts to make participants understand the main issues involved in gender and also enable them apply them effectively in discussions on waste management.

- Policies and Regulations
- Gender and Waste Management
- Public Private Partnership
- Solid Waste Management
- Liquid Waste Management
- Waste Management Planning

TOPIC 1: POLICIES AND REGULATIONS IN WASTE MANAGEMENT

LEARNING OBJECTIVES:
- Describe the various relevant policies and regulations relating to waste management, and
- Develop strategies for implementation and monitoring and evaluation of policies and regulations.

TRAINING NEEDS: Markers, white board, transparencies, overhead projector, handouts, flipchart stand, flipchart paper.

DURATION: 2 hours

APPROACH:
1) Facilitator asks participants come up with their expectations of this module on waste management.

2) Facilitator brainstorms with participants to list policies and regulations on waste management in Ghana. The list should include the Environmental Sanitation Policy; the National Environmental Action Plan; the Building Regulations; Legislative Instruments of the DAs; the GPRS. Facilitator explains key words like policies, regulations, Legislative Instruments.

3) Facilitator leads participants to discuss the provisions of these policies and regulations and writes key issues on the whiteboard.

4) Facilitator leads participants to discuss the objectives & targets of the National Environmental Sanitation Policy.

5) Facilitator summarizes the session.

FACILITATOR'S NOTES

ENVIRONMENTAL SANITATION POLICY OF 1999
The policy recognizes environmental sanitation as an essential factor contributing the health, productivity and welfare of the people of Ghana.

Policy Objectives

Developing and maintaining a clean, safe and pleasant physical environment in all human settlements, to promote the social, economic and physical well-being of all sections of the population.

Waste Management Components of Policy

- Collection and sanitary disposal of wastes, including solid wastes, liquid wastes, excreta, including industrial wastes, health care and other hazardous wastes
- Cleansing of thoroughfares, markets and other public spaces

Waste Management Problems in Ghana

- Less than 40% of urban residents are served by a solid waste collection service
- Less than 30% of urban residents have access to acceptable household toilet facility
- Rural dwellers are even less well served
- In cases where wastes are removed, most are disposed of in an unsanitary manner
- At the household level, there is poor hygienic practices by individuals and communities
- There is insufficient and ineffective hygiene education

Policy Targets and Outputs

- All solid wastes generated in urban areas are regularly collected and disposed of in adequately controlled landfills or by other environmentally acceptable means
- All excreta are disposed of either in hygienic on-site disposal systems or by hygienic collection, treatment and off-site disposal systems
- All pan latrines are phased out (by 2010)
- At least 90% of the population has access to an acceptable domestic toilet and the remaining 10% has access to hygienic public toilets
- Hygienic public toilets are provided for transient population in all areas of intense public activity
- Active sanitary inspections are in place
- Environmental standards and sanitary regulations are strictly observed and enforced
- 80% of environmental sanitation services are provided by the private sector
- Regular water supply is available to all residential premises and the resultant sullage flows should be hygienically managed

NATIONAL ENVIRONMENTAL ACTION PLAN

The NEAP highlights sanitation and waste management as major issues and calls for the implementation of urban waste management and sanitation projects as top priority and the establishment of environmental health standards. To this end, the Environmental Protection Agency (EPA) has issued standards and regulations for environmental sanitation. These standards and regulations are to guide the DAs in the performance of their functions. The DAs will promulgate their own bye-laws as needed.

NATIONAL BUILDING REGULATONS (see handouts for details on each section)
PART 14 – Sanitary conveniences (Sections 135 – 144)
PART 15 – Refuse disposal (sections 145- 152)
PART 17 – Special requirements for rural buildings (section 166 – 171)

LEGISLATIVE INSTRUMENTS ESTABLISHING DISTRICT ASSEMBLIES

Prescribes the functions of the DAs including: -
- To promote and safeguard public health and assign health inspectors for the proper discharge of this duty
- To cause the District to be inspected regularly for the detection of nuisance or any condition likely to be offensive or injurious to health
- If satisfied that any nuisance or any condition likely to be offensive or injurious to health exists, to cause all proper steps to be taken to secure the abatement of the nuisance or the removal of the condition
- To establish, install, build, maintain, and control public latrines, lavatories, urinals and wash places.
- To establish, maintain, and carry out services for the removal of night-soil from any building and for the destruction and treatment of such night-soil
- To establish, maintain, and carry our services for the removal and destruction of refuse, filth and carcasses of dead animals from any public or private place

BYELAWS ON WASTE MANAGEMNT

- Sanitation Bye-laws – Disposal of refuse and removal of woods and rubbish
- Removal of night-soil bye-laws
- Removal of domestic refuse bye-laws

GHANA POVERY REDUCTION STRATEGY
Targets

- Rural population access to household latrines increased from 15% to 25%
- Urban population access to household latrines increased from 34% to 45%
- Population with unsafe method of solid waste disposal (dumping) decreased from 91% to 75%

TOPIC 2:   GENDER AND WASTE MANAGEMENT

LEARNING OBJECTIVES:
- Differentiate between a gendered and non-gendered approach to waste management; and
- Apply social marketing techniques to gender and waste management.

TRAINING NEEDS: Markers, transparencies, overhead projector, gender analysis formats, case studies, flip chart paper, flip chart stand

DURATION: 4 hours

APPROACH:
1)   Facilitator brainstorms on the definitions of gender. Key words on gender are explained (30 minutes).

2)   Facilitator leads a discussion on gender approaches. These approaches will include: *knowledge and skills; needs and demands; division of labour; decision making; control of resources; benefits and negative impacts* of programmes between men and women. Major points are listed on the whiteboard.   Activity 1 - *Identifying Waste management Related Activities of Men and Women – is carried out (60 minutes)* (see Facilitators Notes for details).

3)   Facilitator explains how gender approaches makes sanitation programmes more effective and efficient, equitable and sustainable.   *Activity 2 – Case Studies on Waste Management Planning – is carried out by participants (60 minutes)* (see Facilitators Notes for details).

4)   Facilitator leads participants to discuss how gender can be applied to social marketing to create demand and sanitation improvement (60 minutes).

5)   Facilitator leads the participants to come out with directions for the involvement of men and women in community-managed sanitation programmes (30 minutes).

6)   Facilitator summarises the session (10 minutes).

FACILITATOR'S NOTES

WHAT IS GENDER?

There are two main differences between women and men. The first type is the physical and biological differences with which each group is born. They are known as *sexual* differences. These differences do not change. The second type is socially and culturally determined differences. These are known as *gender* differences. Gender differences are *made by people*. They can, and do, change. In sanitation, for example, young girls and boys often do not differ in their personal sanitation habits.

GENDER APPROACHES IN WASTE MANAGEMENT

A gender approach recognizes the social and cultural differences and inequalities between the sexes. Application means posing *who/which* question for all aspects of waste management improvements:

- Who has which kind of *knowledge and skills* in sanitation and hygiene?
- Who has which kinds of *needs and demands* for better provisions?
- Who does which kinds of *work* and how *equally is it divided?*
- Who participates in which kind of *decisions* and do *all share* in decision-making?
- Who has which kind of *resources* for improving waste management facilities? Do they who have more resources also contribute more?
- Who exercises which kind of *control* over waste management facilities and sanitation programmes?
- Who receives which kind of *benefits* and suffers from which *negative impacts* from sanitation programmes?

ACTIVITY 1
Identifying Waste Management Related Tasks of Men and Women in the Household and Community
   a) Divide participants into 5 groups.
   b) Distribute the chart on waste management related tasks of men and women.
   c) Ask the groups to identify waste management related tasks of men and women and enter them in the chart.
   d) Each group will present their work at a plenary. Other participants given the opportunity to comment.

TASKS	MEN	WOMEN	MEN/WOMEN

Questions to facilitate discussion in plenary after group presentation

1. Who does what tasks?
2. What implications do these work loads have for men and women?
3. What changes in tasks (roles) could help improve waste management?

List answers on the white board.

ACTIVITY 2: Case Studies on Waste Management Planning

CASE STUDY 1

To rid village of indiscriminate human defecation, the chief and elders of Logi decided to provide a place of convenience for their people. At a meeting involving the Chief, and elders, it was agreed a VIP be constructed. The DEHO investigated the technical and cost issues and informed the Chief and elders. The village leadership agreed the cost was affordable and that the facility will be located at the outskirts of the village, one kilometer from the Chief's palace and on the upper part the stream that provided a watershed further downstream where hand-dug wells were sited and served as a source of water supply for domestic consumption. The siting of the facility received unanimous support from majority males because it was in accordance with their preference of having latrines a distance from their homes. In constructing the VIP, the technical person surrounded the vent pipe with a solid outhouse. This made the inside of the VIP dark and children were afraid to use it. Few men patronized the facility due to the smelly odour. Above all, women who preferred their privacy showed very little interest in a facility outside the home especially as the doors of the VIP had openings below. A year later, the village reported the highest rate of cholera outbreak in the district.

CASE STUDY 2

To rid the village of indiscriminate defecation, the chief and elders of Logi decided to provide a place of convenience for their people. At a meeting involving the Chief, elders, sectional heads, women and youth leaders, it was agreed a VIP be constructed. The social mobiliser from DEHO was involved in investigating low-cost sanitation options and the technical implications in the management of the facility. He returned to the community and explained the technical issues in operation and maintenance using wooden models. In consultation with sectional leaders, female mobilisers were selected and house visits made to inform female member about the new latrine. The village leadership and the people agreed the cost was affordable and that instead of one VIP, the village could afford two for males and females respectively on different locations because men respected the privacy of their wives, sisters and daughters. Technical issues concerning seepage and ventilation that could pollute the hand-dug wells (which served the village) and give bad odour were considered in the siting and construction. The DEHU helped in forming a Community Sanitation Committee comprising two members (male/female) per household and trained them in hygiene promotion. Two sanitary labourers were also employed and trained to maintain the latrine. Women allowed their daughters to be employed in the survey and placed three representatives on the Supervisory Committee for construction. A year later, when cholera outbreak was reported in several villages in the district, Logi was one out of 10 villages not affected.

APPROACH
1. Divide the participants into 4 groups. Two groups will take the same case study.
2. Ask each group to read their case study and analyze gender interventions by answering the following questions.

   a. Does the analysis reveal a gender sensitive planning process?
   b. What is the outcome of the scenario in each case study?
   c. What could have bee different in order to resolve the local situation?

Learning Points/Experiences That Participants Should Know

- How various technical, socio-cultural and functional demands of new facilities can come into conflict
- How both users (men & women) need to be sufficiently informed about the technology and consulted on the design and their needs
- The need to combine low construction cost with demand for a design that is appropriate for use by both men & women

GENDER IN SOCIAL MARKETING

Sanitation programmes using social marketing techniques are oriented to households and to the individuals within them. The planners first investigate if and for what reasons different types of users may want to establish and use improved sanitation. The programme then activates existing and creates new demand.

Demand creation requires messages, channels and methods adjusted to the situations and interests of women and men in the different social and economic groups. Different options are offered to meet the demands of each group. Ongoing monitoring allows adjustment of the interventions.

Central to social marketing are the **Four Ps:**
- **Product**: the specific facility, practice or idea that matches what people of different sex, classes, religious, climatic zones, ethnic groups, etc want, belief and practice;
- **Place:** the points where information and products are offered and the channels along which they may flow, which often must differ for women and men in each group;
- **Price:** not only what women and men in the different groups able and willing to pay in cash, but also in labour, time, opportunity cost, social cost (e.g. more work, lower mobility, less meeting opportunities);
- **Promotion:** the specific (and cost-effective) strategies for maximizing the adoption and use of the facility and hygienic behaviour by the members of each group.

TOPIC 3: PUBLIC PRIVATE PARTNERSHIP IN WASTE MANAGEMENT

LEARNING OBJECTIVES:
- Describe the rationale behind involving the private sector in waste management services;
- Analyse the benefits and risks PPP;
- Differentiate between the range of private sector participation options; and
- Describe elements of a typical contract agreement.

TRAINING NEEDS: Markers, transparencies, overhead projector, partnership matrix chart, sample contract agreement for public toilet construction and management.

DURATION: 6 hours

APPROACH:
1) Facilitator brainstorms on the rationale for private sector participation. (45 minutes).

2) Facilitator then leads participants to discuss the benefits and risks involved in involving the private sector in the provision of waste management services. Divide participants into small groups. Have them answer the following questions: What are some of the advantages and disadvantages of involving the private sector in service delivery in your DA? (see facilitators notes for key points). Follow this small group work with a mini-presentation of Benefits and Risks found in Facilitators Notes. (45 minutes).

3) Facilitator leads participants to discuss the range of private sector participation options with emphasis on **service and management** options. An activity is utilized to encourage participants to think of what options are relevant to their District. (see Facilitators Notes for details) (2 hours).

4) Facilitator explains a typical management contract on public toilets (2 hours 20 minutes).

5) Facilitators summarises the session (10 minutes).

FACILITATOR'S NOTES

RATIONAL FOR PUBLIC-PRIVATE PARTICIPATION

Why involve the private sector?

1. It enhances efficiency through:
   a. Management Flexibility

   b. Freedom from bureaucracy thereby making it easy:
   c. Freedom from political whims thereby making it easy to maintain professional staff.

2. The private sector easily mobilizes private investment (money) from private sources and expanding the resources available for public infrastructure and equipment and also for the renewal of existing equipment and facilities.

BENEFITS OF PUBLIC-PRIVATE PARTICIPATION

Group Activity: Preliminary Thoughts
Let the 5 groups answer the following question and present in a plenary.

What are some advantages and disadvantages of involving the private sector in service delivery in your DA?

Suggested Responses

Advantages: *The contraction workers work very had/dedicated*
- *The collection vehicles are replays and properly maintained*
- *Cost of service is low and affordable use of low tech. Vehicles*
- *Very good customer – relations.*
- *High coverage*
- *Low down hours- high vehicle efficiency*

Disadvantages:
- *There is political interferences, award of contracts and payment*
- *The salary of workers is very low - public toilets and uncertain*
- *High tariffs limits service accessibility to the poor*
- *Increased health problems as the poor turn to poor quality facilities.*
- *Franchise – poor payment of use charges*
- *Contract – irregular payment of service cost by District Assembly*

RISKS IN PUBLIC-PRIVATE PARTICIPATION

All PPPs involve risks to stakeholders

Main Types of Risks (see handouts for details)

- Political
- Implementation
- Operating
- Revenue
- Financial
- Force Majeure
- Environmental

STAKEHOLDERS IN WASTE MANAGEMENT

WHO ARE STAKEHOLDERS?

- Those whose interests are affected by the issue or those whose activities strongly affect the issue
- Those who possess information, resources and expertise needed for strategy formulation and implementation
- Those who control relevant implementation instruments

1. ASSEMBLY

Characteristics
- Motivated by legal and political concerns, and sometimes by international prestige
- Performing activities because of its mandate and obligations, or because of the power and patronage they confer on the government or its representatives
- Using public tax-generated resources and/or fees for services rendered
- Regulating or contracting with the private sector

2. REGIONAL COORDINATING COUNCIL

- Monitor, coordinate and evaluate the performance of the DAs including waste management in the region
- Monitor the use of all monies allocated to the DAs for waste management programmes
- Review and coordinate public services generally in the region including waste management
- To provide the DAs with such information and data on waste management as is necessary to assist them in the formulation of district development plans
- Matters relating to development planning in the region including spatial planning and sectoral policies.

3. COMMUNITY-BASED ORGANISATIONS

The community and its representatives have a direct interest in waste management, as residents, service users and tax payers.

4. FORMAL SECTOR

This refers to private corporations, institutions, firms and individuals, operating registered and/or incorporated businesses with official business licenses, an organized labour governed by laws, some degree of capital investment, and generally modern technology.

5. INFORMAL SECTOR

Refers to unregistered, unregulated, or casual activities carried out by individual and/or family or community enterprises, that engage in value-adding activities on a small-scale with minimum capital input, using local materials and labour-intensive techniques.

6. NON-GOVERNMENTAL ORGANISATIONS

NGO refers to such diverse organizations as churches, universities, labour organizations, environmental organizations and lobbies.

The role of NGOs as partner organizations in waste management systems ranges from serving as umbrella organization under which CBOs operate, to providing a channel fro donor financing. As partners, they can sometimes confer a degree of credibility and perspective on the informal sector in the eyes of the assembly.

PUBLIC-PRIVATE PARTICIPATION OPTIONS

Methods of Private Sector Participation

1. **Contracting:** This refers to agreements resulting from a public bidding process between the local authority and a private firm in which firm agrees to manage certain aspects of waste for pre-specified amount of money. The local authority or the waste management authority is usually responsible for setting fees and billing customers.

2. **Franchising:** This involves a specified area of the community for which the private firm is responsible. Again, these agreements usually result from a public bidding process. With a franchise, the private firm often directly bills the customer at rates set by the local authority.

3. **Concession:** In this system, the local authority awards a concession to a private firm to set up a facility that utilizes the authority-owned resources, that is, refuse, which enables the private firm to:
   - Recycle materials (paper, plastics, metals, glass) from the refuse
   - Recover resources (compost, heat, electricity) from refuse
   - Transfer or dispose of refuse

4. **Open Competition**: This is where the local authority freely allows qualified private firms to compete for refuse collection, recycling, or disposal. Individual households and establishments make private arrangements with individual firms for refuse collection and recycling. No firm holds a zonal monopoly and any number of forms can compete within the same zone.

Service Contracts – Simple, but with Limited Benefits

Service contracts are short-term agreements, which secure private sector assistance for performing specific technical tasks. They leave the responsibility for coordinating these tasks, and for investment, with the public utility manager. These are typically for short periods, from 6 months to two years.

Management contracts – a good first step

Management contracts transfer responsibility for the operation and maintenance of government – owned business to the private sector. These contracts are generally 3 to 5 years

Community Management
- Usually starts when government does not have the financial resources to provide adequate level of service, forcing residents to rely on their own means.
- Might include individuals, families or local micro-enterprises.
- Often not recognized by or integrated in formal system.
- Emerging models have CBOs and NGOs providing support to improve service and management.

Many poor residents make their living in the community-based solid waste management by acting as door-to-door collectors, street and dump side scavengers and traders and dealers in waste materials.

Why Involve Communities in the Management, Operation and Maintenance of Waste Management Infrastructure and Services?

- Building on existing local knowledge and management capacities
- All social groups fee concerned and can participate
- Addressing the true needs of community members
- Solutions are acceptable to community members
- Solutions are adapted to community capacities
- Increased community commitment to improve the situation
- Better understanding of the causes and effects of problems
- Empowering the community and reducing dependency
- Increased sense of ownership and responsibility
- Increased self-consciousness and confidence in own capacities
- Direct interest to have a system well maintained
- Possible improvement of willingness to pay
- Reduced overall and government cost
- Improved reliability and sustainability of systems

See handouts for a summary of the elements of a typical management contract of public toilets

TOPIC 4:   SOLID WASTE MANAGEMENT

LEARNING OBJECTIVES:
- Define solid waste;
- Analyse problems of solid waste management in their districts;
- Illustrate the environmental and health impacts poor solid waste management; and
- Describe the processes involved in the management of solid waste

TRAINING NEEDS: Markers, Transparencies, Overhead projector, exercises on waste generation, flipchart stand and paper

DURATION: 12 hours

APPROACH:
1)   Facilitator brainstorms on the definitions of solid wastes and solid waste management. Facilitator then leads participants to discuss the relevant disciplines involved in waste management. (30 minutes)

2)   Facilitator leads a discussion on the problems associated with poor solid waste management in their various districts. Problems such as urbanization, population growth, inadequate resources, inadequate institutional arrangement, low capacity, lack of community participation and awareness, poor intersectoral cooperation and collaboration etc. should be mentioned and discussed. Facilitator should discuss the major causes of the waste management problems with reference to National Environmental Sanitation Policy of the Ministry of Local Government and Rural Development (90 minutes)

3)   Facilitators leads participants to discuss the potential environmental, health, direct and indirect impacts associated with poor solid waste management (60 minutes)

4)   With reference to the various policy issues and the issues raised from the previous discussions, the facilitator asks the participants to come out with directions for the improvement of solid waste management in their respective districts. This is to be done in small groups and presented in plenary. (60 minutes)

5)   Facilitator through mini-lecture and group exercises, discusses the stages of solid waste management (primary storage, secondary storage, primary collection, secondary collection, waste disposal) mainstreaming gender and partnership issues in all the stages. Step 1 involves distributing pictures of the various types of storage containers and discussing the advantages and disadvantages of each. Step 2 utilizes the chart on various methods of refuse collection to discuss the advantages and disadvantages

of the method. And Step 3 utilizes handouts of the various refuse collection vehicles and their basic requirements. Participants identify the appropriate collection vehicle for their district and discuss in small groups. (See Facilitators Notes and Participant Handouts for further details). (120 minutes)

6) Each participant is encouraged to develop simple actions to undertaking when they return to their districts. (60 minutes)

7) Field visit to Tamale Landfill and Waste Stabilization Ponds (360 minutes)

8) Facilitators summarises the session (30 minutes).

FACILITATOR'S NOTES

DEFINITIONS

DEFINITION OF SOLID WASTE

"Waste" is any item, material or substance derived from human activities or human or domesticated animal bodily functions which has outlived the purposes for which it was intended and which does not appear to its owner to be useful for secondary purposes. It becomes a waste when its owner or their agent chooses to discard it by returning it to a natural medium (usually water, or soil, but sometimes also by burning and release of smoke to the air) or by releasing it to the responsibility of the community, municipality or waste collection entity.
"Point of disposal" refers to the moment and physical place at which the owner transfers his or her responsibility for the waste to an institution or to a natural medium

DEFINITION OF SOLID WASTE MANAGEMENT

Solid Waste Management may be defined as the discipline associated with the control of the generation, storage, collection, transfer and transport, processing and disposal of solid wastes in a manner that is in accord with the principles of public health, economics, engineering, conservation, aesthetics, an other environmental considerations and that is also responsive to public attitude.

PROBLEMS OF SOLID WASTE MANAGEMENT IN GHANA

1. Rapid urbanization, industrial growth and high population growth are adversely affecting effective and efficient solid waste management.

2. Inadequate Resource Mobilisation

3 Inadequate Institutional arrangements

4. Low technical sustainability of waste handling systems

5. Lack of community participation and awareness

6. Insufficient political will and responsiveness especially at the local level.

7. Lack of safe disposal facilities.

IMPACT OF POOR SOLID WASTE MANAGEMENT

a. Public Nuisance Impacts
Uncollected solid waste is a public nuisance because it: -
- Clogs sewers and open drains
- Encroaches on roadways
- Diminishes landscape aesthetics
- Causes unpleasant odours
- Causes irritating dust

b. Public Health Impacts
- Ready access to wastes by domestic animals
- Potential spread of diseases
- Chemical contaminants through the food chain
- Windblown dust may carry pathogens and hazardous materials
- Gases generated during biodegradation may include toxic and potentially carcinogenic volatile materials and typical biodegradation by-products such as methane, hydrogen sulphide and carbon dioxide.
- Smoke generated from burning is a significant respiratory irritant and can cause affected populations to have a much increased susceptibility to respiratory illness
- Breeding of flies, insects and rodents.

c. Direct Impacts
- Contamination of soil, groundwater surface water and air quality
- Worker hazards when medical wastes are not properly handled.

d. Indirect Impacts
- Decline in civic and public morale
- Loss of tourism
- Land use conflicts when solid waste facilities are not well located.

IMPROVEMENT STRATEGIES

1. Waste management should be an integral part of the broad development and environmental management of all human settlements.

2. Assemblies should develop a strategic waste management plan.

3. Efforts should be directed at establishing appropriate solid waste laws and regulations and corresponding inspection and enforcement responsibilities at the regional and local levels.

4. Introducing and expanding the private sector involvement including the informal sector.

5. Public co-operation is necessary to ensure improved solid waste services. The Assemblies should be responsible for educating the public on:

   - Services provided
   - Importance of solid waste to health and the community
   - Real cost of providing services
   - What is expected of each resident in participating in solid waste programmes
   - Existing laws and regulations on solid waste.

6. Assemblies should ensure that there are environmentally safe sites for solid waste facilities.

7. An autonomous financial arrangement is established for the departments responsible for the managing wastes in the Assemblies.

SOLID WASTE MANAGEMENT PROCESS

STORAGE
Solid waste storage may be classified as:

a. Primary or Individual
These are Temporary Storage containers (cardboard boxes, plastic carrier bags, etc), Plastic or Galvanised-iron bins with lids, Oil drums (for commercial and institutional premises), and Containers made from used car and truck tyre.

b. Secondary or Communal: **Stationary units** (such as Uncovered Masonry Enclosures, and Covered Galvanized or Masonry Bins) and Concrete Pipe Sections) and **Portable storage units.**

COLLECTION
Methods of Collection
Various methods of waste collection are practiced but all may be classified under five headings: -
Communal Collections, Block Collection, Kerbside Collection, Door-To-Door Collection and Pre-Collection

COMPARISON OF THE VARIOUS METHODS OF SOLID WASTE COLLECTION
The facilitator should use the chart below to discuss the advantages and disadvantages of the various methods of waste collection. Participants should be able to decide on the most suitable options for their Districts.

DESCRIPTION	COMMUNAL COLLECTION	BLOCK COLLECTION	KERBSIDE COLLECTION	DOOR-TO-DOOR COLLECTION
Householder co-operation in carrying bins	Yes	Yes	Yes	No
Householder co-operation in emptying refuse bin	Yes	Optional	No	No
Need for scheduled service	No	Optional	Yes	NO
Susceptibility to scavenging	Very high	None	High	None
Average crew size	1-2(portable) 2-4 (stationary)	1-3	1-3	3-7
Complaints regarding trespassing	No	No	No	Yes
Level of service	Poor	Fair	Good	Good
Collection cost	Low	Medium	High	Very high

REFUSE COLLECTION VEHICLES
Selection of appropriate vehicles is one of the most difficult tasks in solid waste management. Choice of vehicles depends upon its purpose. The basic requirement for refuse collection vehicles include:

- Low loading height (if manual loading}
- Refuse should be covered if vehicle moves at above 30 km/h
- Emptying should be quick and hygienic (to avoid occupying landfill space)
- There should be sufficient capacity for a cost-effective load
- Mechanical components should be durable and maintenance convenient
- Speed should be appropriate for traffic conditions and distances
- Maintenance and painting are important for efficient operation and for public image
- There should be facilities for carrying crew and tools, when necessary

The General Points to consider the selection and Specification of Collection Vehicles include: -
- Availability of mechanics with sufficient skills
- Availability of spare parts (choose chassis that that is widely used in other sectors)
- Refuse density

- Purchase price (foreign exchange)
- Operating and maintenance cost – fuel, tyres, spares
- Suitability for roads in collecting areas (width, surface conditions, weight limits gross and axle, turning circle
- Suitability for disposal site (ground clearance, strength, slopes, access roads)
- Loading arrangements (height, width of opening)
- Unloading system (height, stability on landfill, time required)
- Accommodation for crew (number, comfort, safety, ease of entry and exit
- Transmission (automatic or manual)
- Durability (chassis, body – abrasion and corrosion)
- Standardization

ACTIVITY: Group Work (30 Minutes)
1. Divide participants into 5 groups.
2. Distribute the handout of pictures of the various types of collection vehicles.
3. Distribute the handout on the Basic Requirements of Refuse Collection vehicles.
4. Ask participants to go into their groups and use the two handouts to select 3 collection vehicles which they think are appropriate for use in their districts stating their reasons for their choice.
5. Participants present their work at a plenary and discuss.

DISPOSAL

SANITARY LANDFILLING

a. DEFINITION

Sanitary Landfilling or Control Tipping is an engineered method of disposing of solid wastes on land by spreading them in thin layers, compacting them to the smallest practicable volume, and covering them with soil after each working day in a manner that protects the environment.
By this definition, no burning of solid waste occurs in a sanitary landfill.
A sanitary landfill is not only an acceptable and economic method of solid waste disposal, it is also an excellent way to make otherwise unsuitable or marginal land available (lowlands, quarries, gravel pits, valleys, marshy lands).

Methods of Landfilling
The methods used in landfilling are;
- Excavated Cell or Trench Method or "Cut and Fill" Method
- Area Method
- Depression Method

Basic Steps in Landfill Construction

The basic steps employed in the landfill construction are: -

- The deposition of solid waste in a prepared section of the site in such a way that the working face has a minimal area
- The spreading and compacting of wastes in thin layers
- The covering of the wastes with a layer of cover soil either daily or more frequently if required and then compacted. The cover is usually about 6 inches and is called *Daily Cover*
- The final covering of the entire construction with compacted earth layer of 2 to 3 feet thick. This is known as *the Final Cover*

TOPIC 5:   LIQUID WASTE MANAGEMENT

LEARNING OBJECTIVES:
- Define sanitation (WHO definition and working definition);
- Illustrate environmental and health effects of poor liquid waste management;
- Contrast the excreta related diseases, their modes of transmission, and prevention;
- Explain the requirements of a sanitary latrine;
- Differentiate between the types of latrines technologies;
- Explain the advantages and disadvantages of the types of latrines;
- Describe the components of water closets, aqua privies and VIPs; and
- Explain the operation and maintenance of water closets, aqua privies and VIPs.

TRAINING NEEDS: Markers, white board, transparencies, overhead projector, flipchart paper, flipchart stand, exercises on advantages and disadvantages of various latrines.

DURATION: 6 hours

APPROACH:
1) Brainstorm the definition of sanitation or excreta management. Explain the WHO definition of sanitation. Quote from religious books to support the need for good excreta disposal practices. (30 minutes).

2) Discuss the environmental and health effects of poor excreta management. This discussion leads to briefly discussing of the excreta related diseases, their modes of transmission and prevention by using diagrams and charts (90 minutes).

3) Explain the requirements of a sanitary latrine (30 minutes).

4) Brainstorm on the various forms of latrines. Using the requirements of a sanitary latrine facilitator leads participants to discuss the advantages and disadvantages of these larine technologies. (60 minutes).

5) With the aid of diagrams, the facilitator   discusses components of the KVIP, Aqua Privy and Water Closets (60 minutes).

6) Facilitator discusses the operation and maintenance of the KVIP, Aqua Privy, and Water Closets. This should include the roles and responsibilities of the individual, family, community and the Assembly (90 minutes).

7) In small groups participants complete the exercise on identification of problems and proposal of solutions. (See Facilitators Notes for description of problems.)

FACILITATOR'S NOTES

DEFINITIONS OF SANITATION

" The means of collecting and disposing of excreta and liquid wastes in a hygienic way so as not to endanger the health of individuals and the community as a whole". (WHO, 1984)

The Working Definition

Sanitation is a way of life
It is the quality of living that is expressed in the clean home, clean farm, the clean business and industry, the clean neighborhood, and the clean community.
Being a way of life, it must come from within the people.
It is nourished by knowledge and grows as an obligation and as ideal in human relations.

(Deutronomy 23: 12 – 14)

"**Designate** a place outside the camp where you can go to relieve yourself. As part of your equipment, have something to dig with, and when you relieve yourself, dig a hole and cover up your excrement. For the Lord your God moves about in your camp to protect you and to deliver your enemies to you. Your camp must be holy, so that He will not see among you anything indecent and turn away from you".

EFFECTS OF POOR EXCRETA MANAGEMENT

Survival of Excreted Pathogens

The following chart can be used to explain the survive times of pathogens i.e. viruses, bacteria, protozoa, and relate them to poor defecation practices by individuals and poor disposal practices by DAs.

Type of Pathogens	Survival Times in Days			
	In Faeces	**In Water**	**In Soil**	**On Crops**
Viruses				
Enterovirus	20	50	20	15
Bacteria				
Faecal coliform	50	30	20	15
Salmonella sp	30	30	20	12
Vibrio cholerae	5	10	10	2
Protozoa				
Entameoba histolica	15	15	15	2
Helmiths				
Ascaris eggs	Many months	Many months	Many months	30

PREVENTION OF EXCRETA RELATED DISEASES
   i.   Sanitary disposal of faeces
   ii.   Provision of safe water supply
   iii.   Protection of food from contamination
   iv.   Control of flies
   v.   Improvement of personal hygiene
   vi.   Avoidance of polluted surface waters
   vii.   Hygiene education
   viii. Prompt treatment of the infected persons

REQUIREMENTS OF A SANITARY LATRINE
   i.   They should be cheap so that the majority of the population can afford it.
   ii.   Excreta should not be accessible to files and animals.
   iii.   There should be no nuisance from bad smells and unsightliness.
   iv.   There should be minimum handling of excreta.
   v.   The skills required for construction and maintenance should be available locally.
   vi.   There should be minimum use of clean water.
   vii.   The system should be compatible with local habits and religion.
   viii. There should be no contamination of surface water (rivers, lakes) and groundwater.
   ix.   There should be no contamination of the soil.

VENTILATED IMPROVED PIT LATRINE

DESCRIPTION

The Ventilated Improved Pit (VIP) latrine, which to all intents and purposes is a good latrine for communal use, is being given a bad tag through the use of improper designs resulting in poor performance, especially when used as a communal facility.

The Ventilated Improved Pit (VIP) Latrines

VIP latrines have two very important features that distinguish them from traditional Pit and Trench latrines;

   (1) They have, incorporated in the design of the super-structure, a tall vertical vent pipe with a fly screen fitted at the top end of the pipe.
   (2) They are designed to be safe for the user.

Types of VIP latrine

   There are three main types of VIP latrines:

   (a)   *Single-pit or Direct-pit VIP latrines*
   (b)   *Alternating Double-pit VIP latrines*
   (c)   *Multiple-pit VIP latrines*

<u>Vent and Fly Screen</u>

Functions
These are key components in the VIP latrine design. They serve three very important functions. These are

       (a)   Odour control
       (b)   Exclusion of flies and
       (c)   Trapping of flies

THE KUMASI VENTILATED IMPROVED PIT (KVIP)

The KVIP latrine was designed in 1977 at the Department of Civil Engineering of the Kwame Nkrumah University of Science and Technology following modifications to the Reed Odourless Earth Closet (ROEC) latrine.

<u>Design Considerations</u>
 Pit Volume, Pit Lining, Vent, Aesthetic Consideration, Orientation, Siting

SEPTIC TANK

DESCRIPTION
A septic tank is an underground watertight chamber into which raw sewage is delivered through a pipe from plumbing fixtures inside a house or other building. The sewage is partially treated by separating of solids to form sludge and scum.

In the tank, the solids settle to the bottom where they are digested anaerobically and a thick layer of scum is formed at the surface, and sludge accumulates at the bottom. The sludge must be desludged at regular intervals usually once every 1 to 5 years.

A two-compartment septic tank is now generally preferred to one with a single compartment because the suspended solids concentration in its effluent is considerably lower. The size of the first compartment is usually twice the size of the second.

Septic tanks should not be located too close to buildings, source of water, or to trees whose growing roots may damage them.

OPERATIONS AND MAINTENANCE OF LATRINES
WATER CLOSET
Routine maintenance consists of inspection and supervision and user education. This is done to ensure cleanliness, to see that the system is working properly, and to ascertain what repairs, it any, are required.
-   Antiseptics (chemicals) should not be employed in systems using the biological process for disposal of excreta.
-   Leakages should be repaired promptly and worn-out parts replaced.
-   Inspection chambers should be opened periodically and cleaned out.
-   Sludge should be removed from septic tanks every 3 years.
-   Worn or faulty washers should be changed.

- Check and remove blockages in the trap connected to be closet, in the pipes, or at the inlet and the outlet of the septic tank using the proper cleaning rods. Should a blockage occur in the connecting pipes, the contents will bank-up until an overflow occurs at the lowest manhole situated above the blockage.

AQUA PRIVY

O & M Requirements

Activity	Frequency	Human Resources	Materials & Spare Parts	Tools & Equipment
Clean squatting pan or seat and shelter	Daily	Household	Water	Brush, water container
Inspect floor, squatting pan or seat	Monthly	Household	---	------
Repair squatting pan or seat, or shelter	Occasionally	Household or local artisan	Cement, sand, water, nails,	Bucket, trowel, hammer saw
Inspect if entry pipe is still submerged	Regularly	Household	Water	Stick
Control vents	Annually	Household	Rope, screen materials pipe parts	Scissors
Empty tank	Every 1-5 years	Service crew	Water, fuel, lubricants, etc.	Cesspit emptier

Actors Implied and Skills Required for O & M

Actor	Role	Skills
User	Flush, keep clean, inspect vent, keep record of emptying dates, control contents in tank and contact DA for emptying,	Understanding of hygiene, basic bookkeeping, measuring skills
Sanitation Service	Empty tank, control tank and vents, repair	Skill to work with cesspit emptier
DA	Monitor tank performance, and tank emptying, train emptying teams	Training skills, monitoring skills, organisation skills and technical knowledge

SEPTIC TANK

Any defect in the functioning of septic tanks will be noticed by the emission of offensive odour in the vicinity.

When the tank is functioning properly, the scum floating on the surface of the contents is homogenous and dark in colour. If the contents are in a turbulent state, it shows that the sewage is delayed too long because the tank is too large.

An overworked tank in which the liquid is passing too quickly will have no scum and the contents will be lighter in colour.

If the tank's scum accumulates unduly, then the design is faulty or due to the use of chemicals. Stop the use of the toilet until it is fixed.

When desludging is neglected for a long time, accumulated sludge will pass out in the effluent in the form of numerous black particles. These will in turn block the spaces between the stones in soak ways.

VIP
O & M Requirements
a. Anal cleansing materials
b. Change -over of Pit
c. Enhancement of Draught of Air
d. Odour Control
e. Control of Mosquito Breeding

SEPTIC TANK O&M REQUIREMENTS

Activity	Frequency	Human Resource	Materials and Spare Parts	Tools and Equipment
Clean drop hole, seat and superstructure	Daily	Household	Water	Brush and bucket
Inspect floor slab, vent pipe, and fly screen	Monthly	Household	---	-----
Clean fly screen and vent inside	Every 1 to 6 months	Household	Water	Long bendable brush
Repair slab, seat, vent pipe, fly screen or superstructure	Occasionally	Household or local worker	Sand, bricks, cement, nails and other building materials	Shovels, buckeyes, wheelbarrow
Switch to other pit when pit is full	Depending on size and number of users	Household or local workers		Shovels, buckets, wheelbarrow, etc
Empty pit	Depending on size and number of users	By hand: Household or local workers (not recommended) By mechanical means: specialized service	By hand: water By mechanical means: water, spare parts for machines	By hand: shovels, bucket By mechanical means: pit emptying equipment

Actors Implied and Skills Required in O & M

Actors	Role	Skills
User	Use latrine, keep clean, inspect and perform small repairs, empty full pit ad switch over	Understanding of hygiene
Local Skilled Worker (Sweeper/scavengers)	Dig pit, transfer structure, empty full pits, small repairs, solving small problems	Knowledge about the concept of (K)VIP, knowing how to solve small problems
Local Mason	Build and repair latrines	Basic masonry, latrine construction
Environmental Health Unit	Monitor latrines and hygiene behaviour of users, train users	Training skills and knowledge on sanitation

PUBLIC TOILETS

The efficient operation and management (O & M) of public toilets are crucial health in the urban and rural environment.

Badly managed toilets:

- Make users angry
- Contribute to the deterioration o the community
- Put stress on public authorities when there is disease outbreak, and when there is no funds to maintain them

Well managed toilets however:

- Produce user's satisfaction
- Improve health and environment in the community
- Reduce authority interventions

EXERCISE: PROBLEMS AND HOW TO MANAGE PUBLIC TOILETS
APPROACH

i. Divide participants into 4 groups
ii. Each group will tackle two problems
iii. Each group will
   ♣ Identify the reasons for the problems
   ♣ Suggest solutions to the problems identified
iv. The groups will make presentations at a plenary

EXERCISE 1:
The most serious problem is when dislodging does not take place when the tank is full. It normally leads to closing of the toilet. The result is that people have to walk long distances to another toilet or defaecate in inappropriate places.

EXERCISE 2;
The most common problem is lack of cleanliness. It is not only a problem of bad odour and discomfort, but also of health hazards. Users complaints should be taken seriously.

EXERCISE 3:
The most dangerous problem is the formation of gas under the layer of scum. Explosions of the buildings have been reported. The problem is caused when methane gas produced by the organic proves cannot escape due to solid surface of the scum.

EXERCISE 4:
The most difficult operational problem occurs when the toilet attendant do not hand over all the money he collects.

EXERCISE 5:
If there is no water to clean the toilet, it is a nuisance for users and the O & M team

EXERCISE 6
Users cannot pay or do not want to pay the fees to the toilet attendant

EXERCISE 7
Sometimes users throw indigestible materials like plastic bags, paper or other kinds of solid stuff into the tank

EXERCISE 8
Roof leakage, wall cracks, and broken manholes, vent pipes or cover slab

SUGGESTED SOLUTIONS TO EXERCISES

EXERCISE	SUGGESTED SOLUTION
Exercise 1: Disludging ♣ Dislodging has not been requested when necessary ♣ Advance payment has not been made ♣ No cesspit emptier is available at the EHU	Hire a more expensive cesspit emptier from another organisation. To avoid the unpleasant situation, a desludging schedule should be established and the cesspit emptier booked in advance
Exercise 2: Cleanliness • Frequent patronage • Inappropriate behaviour by user • Bad odor due to imperfect digestion • Foaming of faeces which spills over in drop holes caused by disinfectants which kill the anaerobic bacteria	• Ask the cleaner for additional rounds. The supervisor has to check that the cleaner does his job; eventually he must improve his cleaning techniques • More control of users and informed on the correct use of the toilet • Pour water into tank and liquefy sludge • Intensive flushing with untreated water. Do not pour disinfectants into the tank
Exercise 3: Security • Dangerous gas formation	• Daily plunging of faecal matter and dilution of sludge • Periodic flushing of tank with untreated water • Provision of vent pipe on septic tank and air tight tank covers to avert the entry of oxygen
Exercise 4: Money Collection	• Have a precise idea of how many users go to the toilet by comparing the revenues for each shift over a long

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EXERCISE	SUGGESTED SOLUTION
	period
	• Establish a head count sheet
	• Dismissal is the ultimate action
Exercise 5: Water Supply • Regularity of water supply	• Provide water container
Exercise 6: User Fees	• Every user has to pay in advance.
Exercise 7: User Behaviour	• All materials which disturbs the biological decomposition by anaerobic bacteria should be kept away • Educate user on proper use of the toilet, e.g. by wall painting pamphlets or during a community meeting
Exercise 8: Maintenance	• Repairs and replacement and painting

TOPIC 6:   DEVELOPING WASTE MANAGEMENT PLANS

LEARNING OBJECTIVES:
- Explain the need to develop waste management plan;
- Understand the components of the planning process; and
- Compute data required in a waste management plan.

TRAINING NEEDS: Markers, white board, transparencies, overhead projector, flipchart paper, flipchart stand

DURATION: 4 hours

APPROACH:
1)   Facilitator leads participants to brainstorm the rational for developing waste management plans. (20 minutes).

2)   The Facilitator explains the aspects of waste management that the plan should address. These aspects must include solid waste; liquid waste, environmental protection services and capacity-building for environmental sanitation (30 minutes).

3)   Facilitator discusses with participants the steps or process of developing an integrated waste management plan.
The following steps are described in detail:
- Review current planning data for waste management
- Stakeholders analysis
- Identify and evaluate waste management options
- Projections and targets for immediate, short-term, medium-term, and long-term, setting objectives
- Programme implementation plan
- Budgeting and financing (180 minutes)

4)   The facilitator summarizes the session (10 minutes).

FACILITATOR'S NOTES

THE NEED TO DEVELOP WASTE MANAGEMENT PLANS
The problem of wastes in Ghana is a direct result of a rapidly growing population, the changing patterns of production and consumption, the inherently more urbanized life-style and the consequent industrialization. The increasing amounts of wastes emanating from residential, commercial and industrial areas and the changing nature of waste over tome have become a cause for concern for most District Assemblies.
The major causes of these problems include: -
- Poor planning for waste management programmes

- Inadequate equipment and operational funds to support waste management activities
- Inadequate sites and facilities
- Inadequate skills and capacity of waste management staff
- Negative habits, uncoordinated attitudes and apathy of the general public towards the environment.

Planning for improved waste management is an important element in improving the quality of life in any human settlement.

The national Environmental Sanitation Policy makes provision for all District Assemblies to develop Strategic Environmental Sanitation Plans which should address the needs of all segments of the population. This will be done through the application of a range of service types appropriate to the different areas while recognizing resource constraints.

STEPS IN THE PLANNING PROCESS FOR WASTE MANAGEMENT

There are 10 basic steps in the planning process for waste management. This session will be dealing with 2 of these steps since the other steps will be treated in detail in the Module on Planning, Monitoring and Evaluation of Programmes.

The 2 steps that will be described in detail are:

a) Review of Current Planning Data
b) Make Projects and Set Targets

1. CONSTITUTE INTER-SECTORAL TECHNICAL TEAM

2. REVIEW CURRENT PLANNING DATA

3. CONSULT KEY STAKEHOLDERS

4. IDENTIFY AND EVALUATE WASTE MANAGEMENT OPTIONS

5. MAKE PROJECTIONS AND SET TARGETS

6. PRIORITIES WASTE MANAGEMENT OPTIONS

7. DETERMINE COMPONENTS OF THE IMPLEMENTATION PLAN

8. ESTIMATE COST OF WASTE MANAGEMENT SERVICES

9. IMPLEMENT THE WASTE MANAGEMNT PLAN

10. MONITOR AND REVIEW PROGRESS
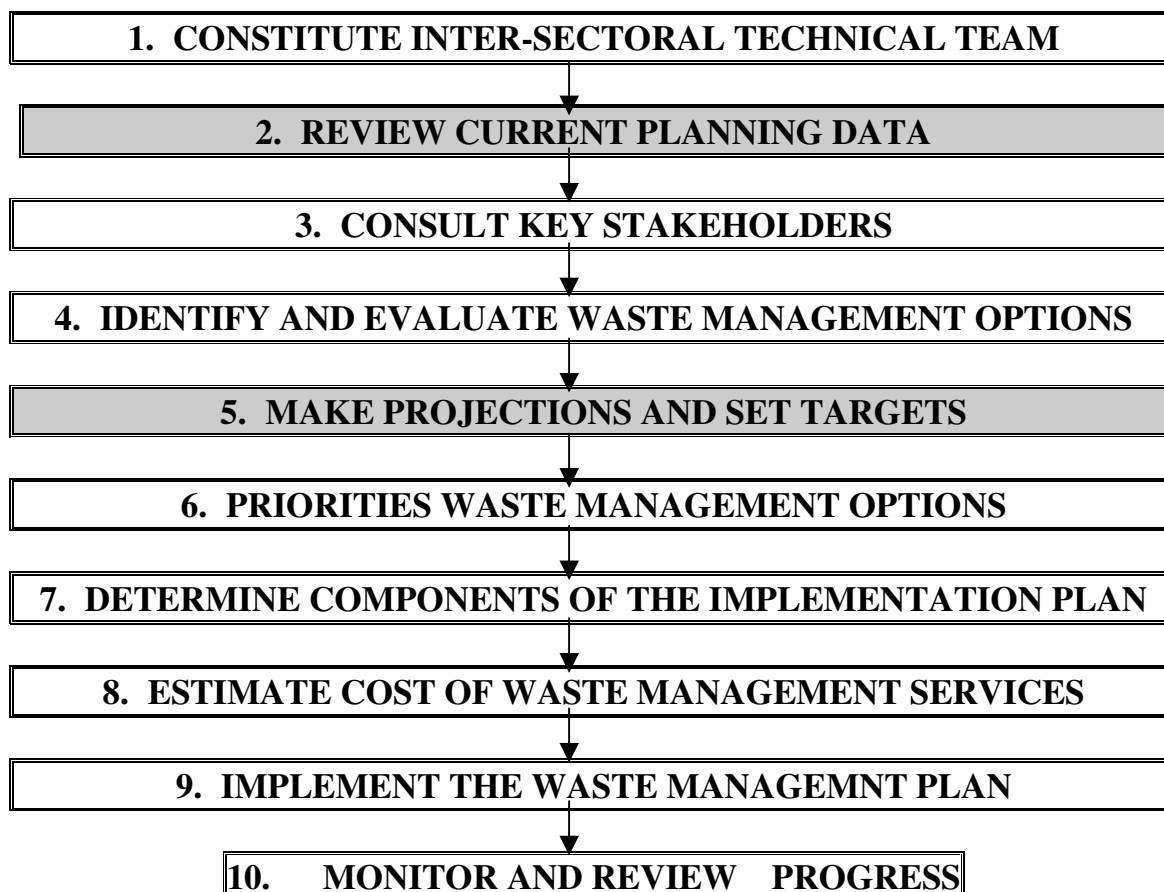
Review of Current Planning Data for Waste Management

The design of a good waste management plan should begin with a detailed understanding of the interplay of factors affecting or influencing waste and its management. It therefore important to ensure careful collection, collation, and documentation of waste and waste related data.

a)   Identify Sources of Waste Generation and Composition

Sources

- *Residential Premises*
- *Schools and Offices*
- *Health Care Institutions*
- *Markets*
- *Lorry Terminals*
- *The Hospitality Industry*
- *Industries*
- *Abattoirs/slaughterhouses*

b)   Analyse Current Waste Management Practices
      i.   Volume generated versus volume collected
     ii.   Existing methods of disposal whether legal or not (burning, disposal into drains. Open spaces, e.t.c.
   iii.   Environmental and health problems

c)   Collect data on demographic characteristics

- *Population and growth rates*
- *Household sizes*
- *Types and number of domestic toilets*
- *Location and conditions of existing sanitary infrastructure such as <u>drainage networks, public toilets and sanitary sites</u>*
- *High density, low-income residential areas*
- *Medium density*
- *Low density, high income residential*
- *Central business district*
- *Industrial*
- *Rural*

d) Institutional Frameworks

i. Legislation and Policies
- National laws
- Policies on environmental sanitation
- Existing byelaws of DAs and adequacy and obstacles to enforcement
- Existing policies of DAs and scope

ii. Financial Resources
Available financial resources (internally generated, DACF, Donor funds etc) to finance implementation of the waste management plan

iii. Logistics, Plant and Equipment
Inventory of plant, equipment, vehicles,

iv. Human Resources
Adequacy of human resources in terms of numbers and qualification

v. Private sector Participation/Stakeholder
- Extent of private sector participation (NGOs, CBOs, FBOs, etc.)
- Level of community participation
- Other partners and collaborating MDAs

Step 2: Projections and Targets
Projection of waste quantities are required to determine coverage and the number of facilities required, collection frequencies, size of equipment and size of disposal facilities.

a) Measuring Waste Quantities
A refuse generation study was conducted in Tamale In April 1992 the results of which now form the basis for refuse computation in the region.

Per capita Daily Domestic Refuse Generation

RESIDENTIAL CLASS	MASS (kg)	VOLUME (l)	DENSITY (kg/l)
High	0.5	1.4	0.36
Medium	0.4	0.8	0.5
Low	0.2	0.5	0.4
Average	**0.4**	**0.9**	**0.4**

Refuse Characteristics (% by weight)

RESIDENTIAL CLASS	ORGANIC		INERT	PLASTIC	PAPER	METAL	GLASS	TEXTILE
	Putre-cibles	Non-Put						
High	63.5	7.7	17.9	3.8	4.4	1.2	0.7	0.8
Medium	33.0	6.0	49.9	3.0	1.9	3.6	1.3	1.3
Low	33.3	6.2	48.0	4.1	2.7	1.9	0.8	3.0
Average	**43.3**	**6.6**	**38.8**	**3.6**	**3**	**2.2**	**0.9**	**1.7**

b)   Projecting population and Growth Rates

Computing population projections

$$P_n = P_o + G/100)^n$$

Where: P_n = population in "n" years (or year n)
             P_o = Base year population
             G = Growth rate in percent

c)   Estimating Current Solid Waste Quantities

Formula:
Quantity Generated = Population of area x per capita generation rate/day

A. Quantity collected

In the absence of a weighbridge in the current waste collection system, volume (m^3), based on the capacity of the collection vehicle or container, should be used.

B. Major waste Generators
   i.   Market
   ii.   Hospital
   iii. Industry
   iv.   Lorry park
   v.   School

d)   Projecting Solid Waste Quantities

To find the expected population or waste production after say, 1, 3, 5 or 15 years, the figure for the current year should be multiplied by $(1 + G/100)$, $(1 + G/100)^3$, $(1 + G/100)^5$ or $(1 + G/100)^{15}$ respectively. The table below is used:

Neighbourhood or Point Source	Pop. In Year n	% Growth Rate	Population in Year:				Solid Waste (m3) in Year			
			n+1	n+3	n+5	n+15	n+1	n+3	n+5	n+15

e)   Projecting Liquid Waste Quantities

Neighbourhood or Point Source	# of houses in Year n	CURRENT NUMBER OF:					# of houses in Year n	TARGET FOR YEAR (n+15)				
		WC	Pan Latrine	VIP	No Toilet	# of Public Toilets		WC	Pan Latrine	VIP	No Toilet	# of Public Toilets

5.   MODULE 4: WATER SUPPLY SYSTEMS

INTRODUCTION
Water has a profound influence on human health. At a very basic level, a minimum amount of water is required for consumption on daily basis for survival and therefore access to some form of water is essential for life. However, water has broader influences on health and wellbeing and issues such as the quantity and the quality of the water supplied are important in determining the health of individuals and whole communities.

The quality of water has a greater influence on public health; in particular the microbiological quality of water is important in preventing ill health. Poor microbiological quality is likely to lead to outbreaks of infectious water-related diseases and may cause epidemics to occur.

The benefits to improved access to water supply include; the reduction of disease; convenience; time saved; energy saved; money saved; prevention of injury: agriculture use, and as an 'entry point'.

OBJECTIVES:

- Identify water sources, uses of water and water related diseases
- Monitor the quality of the various water sources/systems

TOPICS
- Hydrological cycle
- Water Supply
- Classification of Water Related Diseases
- Sanitation of Water Sources

TIME: 19 HOURS

TOPIC 1: HYDROLOGICAL CYCLE

LEARNING OBJECTIVES
- Define the hydrological cycle;
- Explain the terminologies under the hydrological cycle; and
- Describe the hydrological cycle.

TRAINING NEEDS: Flip chart, markers, Flip chart with diagram of cycle

DURATION: 2 HOURS

APPROACH
(1)   The facilitator asks questions to solicit answers in order to ascertain participants' definition of the hydrological cycle. Answers are listed on the board. Facilitator then gives the definition of the hydrological cycle.

(2)   Facilitator should list some terminologies under the hydrological cycle and explains them to participants.

(3)   With the aid of a diagram, the facilitator discusses the hydrological cycle with participants.

(4)   The facilitator summarizes the session.

FACILITATOR'S NOTES

DEFINITION OF HYGROLOGICAL CYCLE

The continuous and complex transfer of water through its gaseous, liquid and solid states among its reservoirs (ocean, atmosphere, terrestrial). The earth's water reservoirs are groundwater, streams and rivers, lakes, glaciers, oceans

TERMINOLOGIES

A. **Precipitation:** In the tropics the main source of all water is rainfall. In other climatic zones however, such as the temperate zones apart from rainfall, we have hail and snow. The falling of the condensed clouds in the form of rain, hail, and snow is what is termed as precipitation. It is therefore the liquid or solid forms of water falling to earth from clouds as rain, hail, sleet, sown, frost and dew.
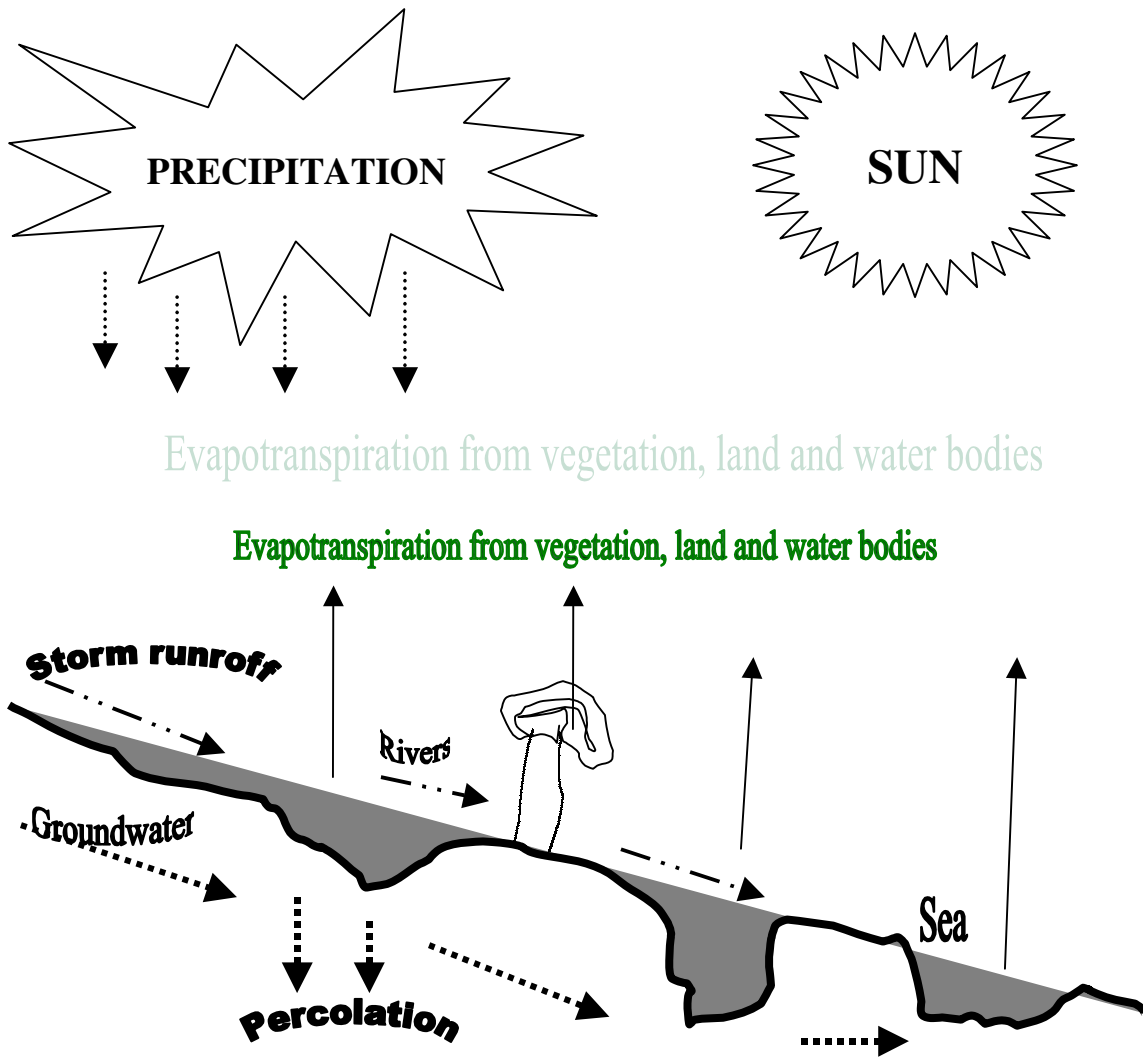
B.   **Rain:** This is fast falling droplets of water from the sky.

C. **Hail:** This is frozen droplets of water falling from the sky in rapid succession

D. **Snow:** This is frozen vapour from the sky in the form of flakes.

E. **Hydrology**: The study of the characteristics, occurrence movement and utilization of water on and below the earth's surface and within its atmosphere.

F. **Hydrosphere:** The total mass of free water in solid or liquid state on the earth's surface.

G. **Atmosphere:** A 500 km thick composite layer of colourless, odourless gases, known as air, which surrounds the earth and which is kept in place by gravitational at forces.

H. **Evaporation:** The process whereby liquid is transformed into a vapour state

I. **Condensation:** The process whereby water molecules move from the vapour state to the liquid state, for example, in dew formation

J. **Evapotranspiration:** The total loss of water as a result of transpiration from plants and the evaporation of water from soil rock and surface water bodies

K. **Transpiration:** The loss of water vapour from plants through the leaves

L. **Run-off:** The water that moves across the surface of the land into streams rather than being absorbed by the soil. It is a product of rainfall or melting snow.

M. **Groundwater:** The water body which occupies the earth's mantle and which forms the sub-surface section of the hydrological cycle. Groundwater may return to the surface by seepage or through springs.

THE HYDROLOGICAL CYCLE

The hydrologic cycle is a cycle of processes which goes on to ensure there is water all the time for human consumption as far as the planet earth is concerned. Water in nature thus continues to recycle. All water comes to man from moisture condensed in the form of rain. After rainfall, water does not go to waste but it is stored naturally in rivers, streams, lakes, ponds and dams as surface water. Also some of the water sinks into the ground and is stored naturally as underground water. Nature now makes use of the water it has stored as underground and surface water absorbing some of it into the atmosphere through the process of evaporation to form clouds. Also nature absorbs moisture from plants into the atmosphere through the process of transpiration to form clouds. These clouds condense in the atmosphere and come back to us as rain, snow or hail depending on the temperature.

DIAGRAM OF THE HYDROLOGICAL CYCLE

PRECIPITATION

SUN

Evapotranspiration from vegetation, land and water bodies

Evapotranspiration from vegetation, land and water bodies

Storm runroff

Rivers

Groundwater

Percolation

Sea

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TOPIC 2:   WATER SUPPLY

LEARNING OBJECTIVES
- Enumerate the general and physiological used of water;
- Identify the main sources of water;
- List at least 3 facilities under each source;
- Explain water quality; and
- Describe the 3 main characteristics of water quality

TRAINING NEEDS: Flip chart, markers

DURATION: 6 HOURS

APPROACH
(1)   Facilitator brainstorms with participants to list the general and physiological uses of water. The facilitator then adds to the list more information as in the facilitator's notes.

(2)   Participants now go into small groups to identify the main sources of water and their facilities. Each group presents their work to the plenary for comments.

(3)   The facilitator, through questions and answers, discusses the meaning of water quality. The WHO definition of water quality, the WHO members' goal, water palatability and water wholesomeness are presented.

(4)   The Facilitator explains the bacteriological, physical, and chemical characteristics of water quality, and then helps participants, through questions, to link this to the sources of water.

(5)   Participants go into 3 small groups to discuss the methods by which surface water, ground water, and rainwater could become degraded. Each group is assigned one of the following topics: surface, ground or rainwater and is asked to discuss ways the water quality of these sources could be degraded. Groups report back to the plenary.

(6)   The Facilitator summarizes the session by asking participants simple questions.

FACILITATOR' NOTES

USES OF WATER

Generally, water is used for domestic, agricultural, industrial/ commercial and recreational purposes in health by helping in the proper functions of the body.

MAIN SOURCES OF WATER

There are basically three (3) categories of naturally occurring water resources: groundwater, rainwater and surface water

Sources of Water Supply Simplified

SOURCE	ADVANTAGES	DISADVANTAGES
RAIN Eg. Rain Water	- No pumping required - Good quality	- Available during restricted periods - Expensive storage facility required.
SURFACE WATER Eg. Seas, Lakes, Rivers etc	- Water availability easily determined	**Requires**: - Expensive treatment - Pumping - Skilled personnel for operation and maintenance
GROUNDWATER e.g Boreholes, Springs etc.	- Generally good water quality - Bacteriologically safe - Available all year round	- Sufficient quantities not always certain - Deep wells need pumping - Unacceptable minerals may be present

WATER FACILITIES

Water facilities are water points at which potable water can be obtained/drawn for immediate use.

Water facilities include:

i. Boreholes with handpump

ii. Hand-dug wells with Hand pumps, Windlass, Rope pumps, Rope and bucket, etc

iii. Mechanized systems with diesel generators, electric generator, solar energy and gravity

iv. Spring protection/development

v. Rain water harvesting

vi. Surface facilities: River/Stream, Lake, Seas etc.

WATER QUALITY

The International Standards for Drinking Water (WHO, 1971) states that,

"Water intended for human consumption must be free from organisms and from concentrations of chemicals that may be hazard to health. In addition, supplies of drinking water should be as pleasant to drink as circumstances permit"

WHAT IS WHOLESOME WATER?

Water that is: -

1. **Free from disease organisms**
2. **Free from poisonous substances**
3. **Free from excessive amounts of minerals**
4. **Free from organic matter.**

WHAT IS PALATABLE WATER?

Water that is significantly: --
1. **Free from colour,**
2. **Free from taste,**
3. **Free from turbidity**
4. **Free from odour and**
5. **Well aerated**

In this context, "safe" refers to water supply which is of a quality which does not represent a significant health risk, is of a sufficient quantity to meet domestic needs, is available continuously, is available to all the population and is affordable.

These conditions can be summarized in five key words: quality; quantity; continuity; coverage; and cost.

Drinking water should therefore meet the following basic water quality requirements:

- ♣ It should not contain any pathogenic organism (germs)
- ♣ It should be free of substances of acute toxicity (e.g. excessive fluorides) which affect human health in the short or long term.
- ♣ It should offer a pleasant appearance (i.e. low turbidity), taste (i.e. not saline) and odour-free
- ♣ It should not stain textiles or other materials
- ♣ It should not cause corrosion or encrustation of the water supply conduits, structures, or installations

Water Quality Degradation

1. Surface Water
The degradation of rivers and reservoir water are caused by:

a. **Agricultural activities:** Farming on riverbanks, livestock, the use of explosives and chemicals
b. **Waste Management:** Human excreta disposal, Garbage, Liquid waste and Cemeteries:

2. Groundwater

Its quality depends on the geology of the area. Generally, it contains more dissolved salts and minerals than surface water but is pure in terms of bacteriological quality.

Other sources of groundwater contamination include:

When sited close to (less than 100 m) of: -
- Refuse dumps
- Cattle Kraals
- Farms that use chemicals
- Cemeteries.
- Latrines

3. Rainwater

In terms of quality, it is pure but may be contaminated by the method of collection and storage.

Sources of rainwater contamination include
- Dirt or plants on the roof catchment area
- Dirty eave gutters
- Uncovered storage containers
- Using dirty containers to fetch water
- Dust in the atmosphere

TOPIC 3: WATER RELATED DISEASES

LEARNING OBJECTIVES
- Describe the classification of water related diseases
- Explain the possible causes and modes of transmission of each class/category
- Enumerate the control/preventive measures of each class/category

TRAINING NEEDS: Flipchart, markers, Hand out with table of classification of water related diseases

DURATION: 6 hours

APPROACH
(1) The facilitator leads the whole class to list water related diseases on the white board.

(2) The facilitator leads the class to classify these diseases into diarrhoeal, viral, worm and insect borne diseases.

(3) Participants go into 4 groups to list the possible causes and modes of transmission of each class/category of disease. Each group is assigned a class of disease and lists the possible causes and modes of transmission for the class of diseases. Each group presents their work to the larger group in a tabular framework. Feedback and questions are encouraged.

(4) In the same small groups participants enumerate the control measures for each class/category of disease.

(5) With the aid of the handout, the facilitator summarizes the session

FACILITATOR'S NOTES

All information required is in the table on the next page.

Classification of Water Excreta Relation Diseases

DISEASE	POSSIBLE CAUSE AND TRANSMISSION	CONTROL/PREVENTION
1. **DIARRHOEAL DISEASES** E.g Cholera, Dysentries, Typhoid Fever, etc.	• When faeces of infected person gets into drinking water supply • Drinking contaminated water • Eating food contaminated by flies or fingers • Hand shaking with contaminated hand • Lack of hand washing at critical periods (after toilet, before eating, etc) • Infected animals are also possible routes.	• Prevision of improved excreta disposal facilities (VIP latrine) • Practice of improved personal Hygiene, i.e washing hands after toilet, before eating, after handling animals, etc
2. **VIRAL DISEASES** E.g Poliomylitis, Hepatitis A, etc	Faeces of infected person is passed onto the susceptible person through : Faeco-Oral route. - Ingesting contaminated soil. - Taking in contaminated food or water	♣ Practice improved personal and domestic hygiene ♣ Improved excreta disposal ♣ Proper food hygiene ♣ Use safe drinking water
3. **WORM INFECTIONS**: Eg. Round and Hook Worms	Eggs or larvae are passed in faeces of infected persons onto the warm soil where the worm develops - Children playing with soil. - Crawling children ingesting soil - Pregnant women eating dried clay/salt mix - Larvae penetrating the unbroken skin usually through the sole of the feet of people who walk bare footed on excreta contaminated soils	• Prevent open defecation • Discourage dumping of faeces on open field places. • Encourage use of available latrines • Encourage use of footwear.
4. **INSECT – BORNE DISEASES** Eg. Malaria, Onchocerciasis, Elephantiasis	- Culex mosquito transmits the filarial worm which causes elephantiasis - Female enopheles mosquito transmits the plastomodium which causes malaria - Black fly transmits onchcerca vovolus which causes the oncho disease. - Mosquito or fly (black) transfer the plasmodium or worm from an infected person to a susceptible person by biting and sucking blood	• Safe excreta disposal can prevent breeding of culex. • Proper waste water disposal • Proper protection of water containers in homes.
5.**WORM INFECTIONS WITH INTERMEDIATE HOST E.g** - Guinea-worm - Bilharzia	- Guinea-worm larvae are eaten by a water flea called cyclop which acts as an intermediate host. Then the cyclop is ingested by somebody drinking water from the infected source. - For Bilharzia, urine and excreta containing eggs deposited in water by an infected person. The eggs hatch and produce larvae. The larvae enter certain snails and develop. The larvae come out of the snail and enter the skin during swimming, wading, etc	• Use of safe drinking water. • Safe excreta disposal • Practice personal and domestic hygiene

TOPIC 4:   SANITATION OF WATER SOURCES

LEARNING OBJECTIVES
- Inspect water sources and systems for contamination; and
- Propose strategies to address sources of contamination.

TRAINING NEEDS: Flipchart, markers

DURATION: 6 Hours

APPROACH:

(1)   Facilitator leads participants to discuss the purpose of conducting sanitary inspections of water sources.

(2)   Facilitator leads participants to list all the water sources where sanitary inspections are conducted.

(3)   The facilitator discusses with participants the parameters in sanitary inspections of the various water sources using the diagrams in the handouts to facilitate the discussions.

(4)   Participants go into small groups to outline strategies to prevent the contamination of water sources (see facilitator's notes).

(5)   Facilitator summarizes the session.

FACILITATOR'S NOTES

Purpose of conducting Sanitary Inspections
- As a means of promoting improvements in water supply

Conducting Sanitary Inspections

Sanitary inspection should be conducted using forms for the various sources and facilities.

Non-piped supplies: open dug well; dug well with windlass and partial cover; covered dug well with hand-pump; rainwater collection and storage; tubewell with hand-pump; tanker trucks, filling stations, and household tanks.

Piped supplies: deep borehole with mechanical pump; protected spring source; surface sources and abstraction; piped distribution; water-treatment plant.

Strategies to Prevent Contamination of Water Sources

i. Source selection and siting of intakes
- ♣ Locating high yielding sites
- ♣ Avoiding sites with high potential for contamination
- ♣ Risk assessment of current and projected activities within the catchment area.

ii. Catchment protection
- ♣ Appraisal of catchment areas
- ♣ Identify environmental factors related to land use
- ♣ Commitment to observe protection measures by population

iii. Sanitary surveying
- ♣ Risk assessment of surrounding environmental hygiene conditions
- ♣ Identify remedial measures

iv. Improvement in sanitation
- ♣ Use of latrines and other sanitary systems of sanitation
- ♣ Reduction of risk of faecal pollution

v. Physical protection of wells and intakes
- ♣ Site protection against pollution – well aprons, drains, soakaway, covers

vi. Soil and Water Conservation Techniques
- ♣ To decrease turbidity by preventing sediment transport, increasing groundwater recharge

vii. Wastewater treatment
- ♣ Both industrial effluent and domestic sewage should be treated to minimize pollution risks.
- ♣ Preventive measures against contamination from industrial and agricultural activities are therefore crucial.

viii. Wastewater recycling
- ♣ Wastewater treatment is complementary to wastewater recycling.

ix. Artificial recharge
- ♣ Ground-water resources can be managed in order to decrease water table recession and saltwater intrusion, by artificial recharge.

x. Reforestation
- ♣ Tree planting

xi. Community motivation and awareness
- ♣ Increase awareness of the causes of health problems among communities and the link between water, hygiene and illness

xii. Partnership between communities and government agencies

♣ Support community efforts to manage and protect their drinking-water sources.

xii. Legislation and enforcement

6. MODULE 5: HYGIENE PROMOTION

INTRODUCTION
When we are talking about health promotion, we are in effect talking about so many things which relate and lead to health in the individual and at large the community.
That is exactly why it is stated that ***"Health is a state of complete mental, physical and social wellbeing of the individual and not merely the absence of disease or infirmity"*** (W.H.O).
As health workers, thoughts of health should extend to the whole community.

This guide will help the facilitators to use appropriate methodology and contents for teaching participants. The guide is to help participants grasp the basic principles and skills in health promotion programmes to effect community hygiene behaviour change and general environmental cleanliness. It serves as a reminder to facilitate each session and activity.

At the end of the module, participants will spend 3 days conducting a field practicum to utilize the skills and knowledge they have developed. The participants will be divided into 4 groups and each group will be assigned a community in the vicinity of the school. The facilitator will visit the selected communities and ask them if they will participate in the exercise. The students will go through the steps in community based health promotion including: community entry, needs assessment, community mobilization, and hygiene promotion. The goal will be to enter the community, discuss their health related problems using a participatory methodology, analyze and present the findings back to the community, discuss some potential solutions and actions, and facilitate a health promotion session using one of the tools provided. Care must be taken to provide the community with some outputs such as the analysis of the problems, some potential solutions, and the health promotion exercises, while not making promises of future interventions.

OBJECTIVE:
- Apply the basic principles and skills in the formulation and delivery of health/hygiene promotion programmes in order to effect community hygiene behaviour change.

TOPICS:
- Overview of Hygiene Promotion
- Community Participation
- Facilitation
- Community Entry
- Needs Assessment
- Community Mobilization
- Hygiene Promotion Techniques
- Communication Skills – Interpersonal and Group Dynamics
- Gender and Hygiene Promotion

TOPIC 1:   OVERVIEW OF HYGIENE PROMOTION: DEFINITIONS AND DISTINCTIONS

LEARNING OBJECTIVES:
- Define health promotion and health education;
- Differentiate between health promotion and health education;
- Analyze germ theory and other hygiene related theories/beliefs; and
- Discuss norms/customs and traditions that affect health.

TRAINING NEEDS: Markers, Transparencies, Flip chart, Overhead Projector, White Board, Prepared Flip Charts

DURATION: 4 hours

APPROACH:

(1)   Begin the session by asking participants (as individuals) to answer the following questions:

What is Health Promotion?
What is Health Education?
What are the differences between the two?

The facilitator then leads a group discussion to incorporate participants' views into a definition that the class will use for the rest of this module. The facilitator spends some time doing a short presentation on the difference between the two and why the emphasis is now on health promotion, including the advantages and principles of health promotion (see Facilitators Notes for details).

(2)   The facilitator gives a mini-presentation on the theories of disease (see Facilitators Notes). Participants are given the opportunity to comment on how they understand disease to be spread, how their communities understand disease to be spread, and how that affects their role as health promoters.

(3)   The facilitator introduces the role that customs and traditions play in health promotion, i.e. how community members perceive disease to be spread will affect how health promotion is done because it provides the starting point for the intervention. Explain how different communities may have different beliefs. Participants go into groups of 4-6 and discuss/share experiences from their localities point of view on customs/beliefs and how they can affect hygiene promotion behaviour change (20 minutes). Each group presents their main discussion points to the larger group.   The facilitator summarizes the topic by raising any of the key points that have not been covered.

(4)   The facilitator summarizes the session by reviewing the definitions and the difference between health promotion and health education.

FACILITATOR'S NOTES

DEFINITIONS

1. Health
"Health is a state of complete mental, physical and social wellbeing of the individual and not merely the absence of disease or infirmity" (W.H.O).

2. Health Education
Health education is a process that bridges the gap between health information and health practice. Several authors advanced different definition however Lawrence Greene postulated one as the "*combination of learning experiences designed to facilitate voluntary adoption of behaviour conducive to health*".

According to the W.H.O manual, Health education *"is that part of health care that is concerned with promoting healthy behaviour"*

The main foundations of Health education are:
   i.   Education
  ii.   Behavioural science
 iii.   General knowledge- public health and support from the social sciences.

3. Health Promotion
This is the process of enabling people to increase control over, improve their health. It covers the process of individuals demanding, effecting and sustaining a hygienic and healthy environment thereby making the environment favorable to affect behavioural change.

Promotion is to raise or advance a cause, raise the profile and status of the cause, further the growth and expansion of the cause and to further its popularity. In the public health sense of the word, it also involves providing the enabling mechanisms to others so that they may take up the cause armed with effective tools.

> **Hygiene Promotion includes strategies that encourage or facilitate a process whereby people assess, make considered choices, demand, and effect and sustain hygiene and health behaviours. This would encompass personal, domestic and environmental hygiene practices and any action or initiative taken to erect barriers to disease.**

Advantages of Health Promotion
   i.   Approach-Holistic (fully participatory)
  ii.   Focus on interruption off transmission routes and risk factors with hygiene and sanitation actions.
 iii.   High impact, sustainable
  iv.   Easy to mobilize resources (material and human).
   v.   Easily accessible
  vi.   Approachable

vii.   Many people benefit (capacity building).
viii.   Replicable-community are empowered to take own initiative in managing health problems.
  ix.   Partnership-developed – formal and informal relationships developed.
   x.   Responsive-flexible and adaptive to community perspective.

Principles of Health Promotion
The principles of health promotion include: -

  i.   Building health public policy
 ii.   Creating supportive environments
iii.   Re-orienting health and related services
 iv.   Developing personal skills
  v.   Strengthening community action.

  i.   Building Health Public Policy
   • Tailor policies towards promoting health.
   • Assess policies to ensure that those found to be inimical to health are repealed.
   • Scrutinise and review laws, byelaws and resolutions to encourage the promotion of healthy actions by individuals, groups and communities.

 ii.   Creating Supportive Environment
   • Factors in the environment – social, cultural, economic and physical, should be worked upon to supportive of health.
   • Every human activity has a health implication.
   • Encourage stakeholders to bring into focus the health implication of all human centred activities.
   • Activities to ensure and maintain optimum health.

iii.   Re-Orienting Health Related Services.
     Adjusting health related service to meet the changing demand off the clienteles and the environment.
   • Service organisation to monitor and make proactive changes to improve access to environment, health facilities and institutions to meet the needs of the people they serve.
   • Service provision must take into account the background of the people who are enjoying the service.

 iv.   Developing Personal Skills.
   • Ensure proper understanding of the correct use for facilities (community).
   • Develop skills of implementing agencies and partners to deliver satisfactory service.
   • Community must be willing / able to take major decisions to improve their health conditions.
   • Decision making skills at community level to make rational decisions on issues that affect the environment, health and total development.
   • Training in management, monitoring, decision-making skills etc.

v. **Strengthen Community Action**
- Involve community in project from conceptual stages through evaluation.
- Prepare community to identify and express their needs; set objectives; mobilize resources; participate in implementation and evaluate the outcome of the action taken to meet their needs.

THEORIES

Theories underpin people's perception of why disease is created and how it is spread. Theories evolve over time and have been influenced by scientific research. Theories are also affected by cultural beliefs and may differ from society to society, even ethnic group to ethnic group. There are 3 main groups of theories: natural causes, supernatural causes, and scientific theories. It is likely that a community will have beliefs that have roots in all three of these theories.

It is important for the health promoter to understand people's beliefs before they start their interventions because the beliefs will provide the starting point. If people believe in supernatural causes the goal is not to convince them otherwise but develop solutions that can address these beliefs, as well as providing new information based on scientific research.

a. NATURAL CAUSES
The cause and effect e.g. taking food or fruit eating it feeling stomach pains

b. SUPER NATURAL CAUSES
The main trend is to seek for treatment from something which occurred to you and you never recognized it which later resulted into a disease. This brings to birth the super natural theories, such as:

Evil spirits: People think some diseases are caused by evil spirits. This duels more on symptoms: bareness, leprosy etc.

Witch craft: Other people think that diseases are caused by witch craft e.g. impotency, cancer, etc

Faithalism: This is the hand of God. People think and feel that some diseases are caused by God or God has hand in it.

c. SCIENTIFIC THEORIES
These theories are based on modern science and recognize the complex nature of disease and the various causes.

Disease Contagion: Some or certain diseases are contagious that is, they are transmitted from person to person e.g. this was proved during the cholera outbreak in the nineteenth century in London.

Germ Theory: Knowledge that the germ that causes disease can help cure the disease. Pioneers of the germ theory like Luis Pasteur, Kosch, Hooke etc.

Multiple Causation Theory: Disease is complex. It is impossible to use one single factor to explain it. This is termed as web causation. Environment, agent and host play great role.

NORMS AND CUSTOMS

Closely tied to theory, norms and customs influence people's behaviour. Often people do something a particular way because they always have. In health promotion we need to understand how and why people do things and then promote a new, healthier way of doing them.

When groups are presenting their norms/beliefs the facilitator should be leading the larger group to think about why things might be done this way and how they as a health promoter can affect behavioural change around beliefs that may cause negative behaviour.

TOPIC 2:   COMMUNITY PARTICIPATION

LEARNING OBJECTIVES:
- Explain why a participatory approach should be used in hygiene promotion; and
- List the benefits of community participation.

TRAINING NEEDS: Flip chart, markers, prepared flip chart paper, photoparade materials

DURATION: 2 hours

APPROACH:
(1)   The facilitator begins the session with the Photoparade exercise. This exercise is used to demonstrate that we ourselves prefer the participatory approach to development. It can be used to get participants to buy in to the participatory approach concept.

Photoparade – This is a conceptual and investigative tool which is used to help participants to distinguish between didactic and learner centered communication styles by encouraging them to explore their likes and dislikes regarding learning situations.

METHOD
Materials:
Copies of a set of pictures (photos or posters) representing a wide range of communication situations, ranging from highly directive to highly participative.

Activity:
a. Groups of 5-9 participants given identical set of photographs.
b. Each group looks carefully at the photos and select 2 photos they like best and 2 they like least. After this (15min) groups meet to report and discuss why they selected the photos they did.
c. Summarize the activity by explaining that this exercise has demonstrated that people and therefore our work as health promoters are affected by the approach used to facilitate learning and influence behaviour change. The groups likely selected the photos where the facilitators looked friendly and approachable, and where there was participatory learning going on. If they themselves prefer this mode of approach so will community members.

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(2)   The facilitator distributes the hand out on development approaches. Participants are given 15 minutes to read the handout and answer the following questions:
   What approach do you think is best?
   Why?
   Give one example of how this approach can be applied to hygiene promotion.

The facilitator highlights that the table is meant to demonstrate an evolution in development thinking and that these approaches have influenced the way our jobs are done. The empowerment approach is in line with a participatory approach.

(3)   Divide participants into 4 small groups. Write the following questions on separate pieces of flip chart paper and post them around the room.

⇒ What is participation?
⇒ What are the benefits of a participatory approach?
⇒ Give an example of how a participatory approach can be utilized in hygiene promotion.
⇒ What qualities does a facilitator need in order to utilize a participatory approach?

Group 1 starts with question 1, group 2 with question 2 etc. The group moves to their question, they have 5 minutes to brainstorm responses to the question. After 5 minutes the facilitators tells them to move to the next question and add new points, different from the other groups. Continue this rotation until all groups have answered each question. Participants then have 15 minutes to review what other groups have written. Facilitate a plenary session where participants are given the opportunity to give feedback. The facilitator adds any additional information or clarifies misconceptions. To summarize the facilitator gives a mini-presentation on participation guided by the points in the Facilitators Notes.

FACILITATOR'S NOTES:

Photoparade Key Points:
- Most people will identify a participatory approach as their preferred style of learning;
- People respond to facilitators who treat them respect and who clearly value and want to listen to what they have to say;
- If we as facilitators prefer that approach then so will communities.

Utilize the table in the "Development Approaches" handout to facilitate the discussion in Step 2.

Participation
Involving target beneficiaries of development interventions in all stages of the activity – from analysis, to planning and design, through implementation and monitoring and evaluation.

Why use a participatory approach in hygiene promotion?
- Participatory methods have succeeded where others failed because participatory approaches utilize the community's strengths and understanding of a problem and potential solutions as the basis for development.
- Participatory methods build self-esteem and create a sense of responsibility for one's decisions.

- Participants learn from each other and develop respect for each other's knowledge and skills.
- They make the process of decision making easy and fun.
- They encourage the participation of all community members.
- In hygiene promotion, feelings of empowerment and physical growth are as important as the physical changes (e.g. latrines) because it is those feelings that will change behaviour and hygiene promotion is all about behaviour change.

(source: Wood S, Sawyer R, Simpson-Hebert M. *PHAST: Step-by-step Guide: Participatory approach for the control of diarrhoeal disease*. Geneva, World Health Organization. 1998.)

To be effective in utilizing participatory approaches in hygiene promotion we must:
- Genuinely respect the views and experience of community members;
- Allow communities to make their own plans;
- Respect different cultures, religions, and social classes;
- Ensure that gender issues are considered throughout; take special steps to ensure that women are participating as decision makers and that the different needs of women and men are taken into account;
- Utilize visual aids and creative methodologies to encourage participation of diverse groups;
- Truly listen to what community members are saying; and
- Don't judge people based on your preconceived notions.

TOPIC 3:   THE ART OF FACILITATION

LEARNING OBJECTIVES:
- Describe the qualities of a good facilitator; and
- Utilization good facilitation practices in community meetings.

TRAINING NEEDS: Flip chart, markers

DURATION: 4 Hours

APPROACH:

(1)   Ask participants to think of a course or a meeting they have attended where they liked the teacher/facilitator. Have the participants brainstorm the qualities they liked in that person and why they liked that particular learning environment. Once the participants have exhausted all their responses add any additional points raised in the Facilitators Notes.

(2)   The facilitator presents the concept of facilitation and differentiates it from teaching. Then continue with the does and don'ts of facilitation (see Facilitators Notes for details).

(3)   Divide participants into 4 groups. Each group is given one of the themes below:
        Community meeting to promote hand washing
        First community meeting to identify hygiene problems
        Workshop with artisans to construct pit latrines
        Household visit to promote proper waste management practices.
One participant offers to be the first facilitator. He/she starts the role play by facilitating for 5 minutes. After 5 minutes the next person takes over. And so on until all participants have a chance to facilitate. As a large group ask participants what was difficult and what was easy about the exercise. What things did the participants respond to from other facilitators.

(4)   The facilitator should summarize the session by indicating that facilitation skills are an important part of community work because they enable hygiene promoters to establish good relationships and communicate well with community members.

FACILITATOR'S NOTES

Facilitating Discussions

As a facilitator, you can influence group discussions by how you present your information, what kind of atmosphere you set within the group, and your attitude towards the people you are working with.

Facilitation works best when certain values are accepted and practiced not only by the facilitator, but also by the entire group – values such as:

- *Democracy* (each person has the responsibility to participate without prejudice)
- *Responsibility* (each person is responsible for his/her experience and behaviour)
- *Cooperation* (facilitator and participants work together to achieve the same collective goal)

Communication is the essential ingredient of any group. Your effectiveness as a facilitator depends on your ability to communicate well with the group and help the group members to communicate effectively with each other. Some factors will enable you to communicate better, such as

- **Your Language** – making sure the terms you use are easily understood by the group
- **Your style** – the way you dress and interact with others. Establish rapport with members of the group by being informal, friendly and relaxed

- **The way you listen** – when someone is talking, you are often not really listening but thinking about what you are going to say in answer, therefore when you listen to some one, try not to immediately evaluate what is being said is terms of how it affects you; instead try to understand what it means from the other person's perspective.
  One of the ways listening can serve you is by enhancing you're your listening skills. Four kinds of listening
    - θ *Appreciative listening:* - listening for pleasure or enjoyment as when we listen to music, to a comedy routine, or to an entertainment speech
    - θ *Empathic listening:* - listening to provide emotional support s when a doctor listens to a patient, or when we lend a sympathetic ear to a friend in distress
    - θ *Comprehensive listening*: - listening to understand the message of the speaker, as when attend a classroom lecture or listen to directions for finding a friend's house
    - θ *Critical listening:* - listening to evaluate a for purposes of accepting or rejecting it, as when we listen to the campaign speech of a political candidate

- **Being aware of what is happening in the group** – (restlessness, silence, attention and postures. Encourage everyone in the group to say something

- **Giving feed back** – after a discussion it helps the group to be made aware of the progress made.

- **Every one should known exactly what the discussion is about**, and what is the reason for having it

- **Use questions** – to stimulate discussions. The following provocative 'open' questions enable the facilitator to encourage the group to find ideas in a creative way:
  "What is similar? What can be changed? Why? How? Who? When? By which means?
  Avoid 'closed' questions requiring "yes" or "no" ans wers, which are unsuitable for group discussions.
  Do not condemn responses but accept them and build on them or redirect responses.

- **Prepare questions in advance**

- **Relate the discussion to the participants experience**. It is difficult for people to feel involved in a discussion which is highly abstract or beyond their own experience; give examples from field experiences

- **List ideas on a board** - as they are proposed and regroup or summaries them

- **Clarify and Interpret**. You may sometimes rephrase what has been said to make it clearer.

- **Keep the discussion focused on the subject**. Your role may include reminding the group when the discussion strays off the subject or goes into matters not in the agenda that was agreed on at the beginning

- **Keep track of time**. It may be your role to make the group aware of how the discussion is proceeding and when it may be time to move on.

- **Use of humour** to break tension and boredom.

TOPIC 4:   COMMUNITY ENTRY

LEARNING OBJECTIVES:
- Develop ways to appropriately enter communities and meet community members; and
- Adopt the right channels of meeting community leaders/elders.

TRAINING NEEDS: Participants guide, markers, transparencies, flipchart, projector

DURATION: 5 hours

APPROACH:
(1)   Group participants into 5-8 members groups. Have each group develop a guide to entering communities taking into consideration:
   1. Leadership
   2. Working plans
   3. Courtesies (protocol) etc.
   Have each group post their flip chart on a wall around the room. Participants do a walk about to read each others work, noting issues. Once everyone has had a chance to review the flipcharts facilitate a plenary by having people identify issues they saw as they went around.

(2)   Discuss women as a special resource in Community Entry, particularly:
   a) Role of women as caretakers of the family
   b) How to identify women leaders and groups
   c) Enlisting their support in the programme
   d) Encouraging their participation in meetings

(3)   The facilitator distributes the hand out on "Community Entry". Individuals are selected to read the handout out loud to ensure that participants understand th process and the benefits.

(4)   A role play on community entry will now be carried out to demonstrate the proper way to enter a community. Divide the participants into groups of 7-9 people. These small groups identify roles for each person to be done in a role play. The facilitator advises participants to include: community members, women, traditional leaders, and the DEHU worker who is entering the community. Give each group 5 minutes to discuss. Each group then performs a role play for the remaining participants on how they would enter the community to carry out a health promotion exercise. The observing participants are invited to provide each group with feedback.

(5)   The facilitator summarises the session by reviewing the key things to think about in community entry.

FACILITATOR'S NOTES

DEFINITION OF COMMUNITY ENTRY

It is the process of laying the foundation to establish a positive relationship with a community. It is the first step in any community development programme and if it is not done properly can affect the rest of the programme.
It involves recognizing the community, its leadership and people and adopting the most appropriate process in meeting, interacting and working with community.
It also involves learning about the community, recognizing and practicing protocol and building relationships.

How to Enter a Community
Entering a community involves the following steps:

1. Go to the community to set up a time that would be convenient to meet with the leaders. Be flexible.
2. Meet the community leadership – Let them know your mission and how you would like them to be involved. Ask them for permission to meet the community at large and their support in doing so.
3. Meet the community at large – Schedule a meeting that is at a convenient time and in a convenient place. Tell the broader community who you are, what your mission is, and what your expectations of the community are. Give the community a chance to ask questions. Always let the community have the opportunity to say whether they do or do not welcome the intervention. If they do not, thank them for their time and leave. If they do, continue the discussion.

i. Meeting with community leadership
*   Communities have their own plans and schedules for carrying out development activities.
*   There is need to recognize the position and roles of community leaders so that the suitable ways could be developed in seeking the co-operation and support of community members.
*   Schedule meeting times to suit the convenience of traditional leaders
*   Observe courtesies(protocols)
*   Introduce yourself
*   Explain the purpose of meeting
*   Ask permission and advice seek ideas on contact persons/groups whose support would facilitate your work.

ii . Identifying contact persons
*   Involves interaction with people in the community e.g. Teachers, leaders of cultural/youth/women's groups, traditional leaders, spiritual leaders-pastors, Imams, Priest, Assembly members, Unit committee leaders etc.

iii. Critical Actions:
- Know the community involved
- identify community leaders
- identify contact persons
- conduct meetings with community leaders
- let community leaders of the purpose of your programmes
- study and be conversant with the customs and traditions of the people.

iv. Women As Special Resources in Community Entry
- Caretakers of the family
- Play key role in promotion of health
- Meet women leaders and identifiable women's groups
- Encourage them to participate in the programme
- Use all possible channels to ensure that they are represented at meetings.

The things that need to be taken into account as you enter a community include:
- Show respect
- Use proper protocol
- Discuss rather than impose ideas
- Clearly explain and periodically repeat objectives
- Be honest. (Do not make promises you cannot keep)
- Be flexible
- Be humble (Do not set yourself apart as being superior)
- Be sensitive to the needs/schedules of the community members
- Inform community when are coming or if you con not come as planned

TOPIC 5:   NEEDS ASSESSMENT

LEARNING OBJECTIVES:
- Assess community health needs; and
- Prioritize health problems.

TRAINING NEEDS: Pocket chart pictures, empty boxes, scrap paper, prepared flip chart, flip chart paper, markers, tape

DURATION: 8 hours

APPROACH:

(1)   With participants brainstorm the different aspects of community needs assessment. Come up with a definition. Present the definition in the Facilitator's Notes and discuss any major differences.

(2)   A mini-presentation on the importance of needs assessment and the two different ways of collecting information i.e. primary and secondary is delivered by the facilitator. Indicate that in this course the emphasis will be on participatory methods of collection because as was discussion under Topic 2, it is felt that a participatory approach to hygiene promotion is most effective in changing behaviour. A brief explanation of the methods can be provided. The facilitator indicates that two of the methods will be explained in detail: community mapping and transect walks.

(3)   The facilitator distributes the hand out on community mapping. Select different participants to read paragraphs of the hand out aloud. Ensure participants understand the method by having them brainstorm the steps. Divide participants into 3 small groups. If there are enough have a group of women, or have all the women go into one group to demonstrate gender differences. Each group is to draw a map of the TSH community, ie the campus and surrounding environs (30 minutes). Post all 3 maps on the wall beside each other. Participants stand back and note the differences. As a plenary discuss the similarities and differences between the maps. As a group identify the water and sanitation challenges and issues in their community utilizing the maps. Summarize the exercise, by asking participants what they learned about the process.

(4)   The facilitator presents the methodology of the walkabout using the hand out. Divide participants into 4 groups. Each group will visit a different community and do a walkabout. Participants should take their note pads and handouts to utilize as a check list throughout the walk. When participants return each group takes 20 minutes to discuss and summarize their individual findings. They then present this information to the class. Ask participants how they can use the information gathered to improve hygiene in the community.

(5)   Participants brainstorm ideas of how they can use the information to bring the community into hygiene promotion in a more active way. Challenge participants to think about how communities can identify the issues related to hygiene promotion and how they can prioritize them. Write ideas down on flip charts and summarize at the end.

(1)   The facilitator tells participants that one of the ways to increase communities participation is to have them prioritize the hygiene issues they are facing. The following exercise can be used to demonstrate one method.

POCKET CHART (1 hour) - Participants are divided into 2 groups. The selected health/sanitation posters are given to the groups. These pictures reflect problems in the community.
- Water
- Electricity
- Toilets
- Health facilities (clinics) and so on.

Boxes are placed around the room, with the different photo placed on the front of the box. As individuals, the participants select 3 areas that they feel are the most important at the community level. They then indicate their priorities by placing a blank scrap of paper in the box with the corresponding picture. At the end, the votes are counted and the box that carries the majority of votes indicates the priority needs in the area.

The Facilitator summarizes the discussion by indicating this is one way that needs can be prioritized in communities. An emphasis should be made to let participants know that it is the communities that need to prioritize the issues, not the EH worker.

(7)   The facilitator summarizes this topic by highlighting that there are different ways to determine needs and priorities for hygiene promotion in communities. The key is to understand the community, its lay out, facilities, and current practices, as well as involve community members in the assessment to ensure that the issues addressed are their concerns. The facilitator lets participants know that the next topic will focus on community mobilization, i.e. how to get communities to act on the issues.

FACILITATOR'S NOTES

Definition of Community Needs Assessment

The process of finding out and prioritizing the local problems of community, identifying the resources available in the community to solve the problems. In community needs assessments, it is necessary to specify the needs and avoid any needs that are vague, ill defined and abstract.

Importance of Needs Assessment

Assessment of community needs is important for several reasons.
  i.   Gather and disseminate information on health and well being of the community
  ii.   Promote the collection of appropriate information for effective programme planning.
  iii.   Help to raise awareness of the key issue confronting the community.

Methods of Needs Assessment

There are two conventional methods - primary and secondary.

i. Primary Method

Involves the collection of information from stakeholders directly. Collection of primary information is most often done by using participatory learning action (PLA) tools:
  • Household census
  • Community mapping
  • Sample surveys
  • Focus group discussions(FGD)
  • Observation
  • Interview with community leaders and people.

ii. Secondary Method

This is by review of available literature/reports.
  • Annual reports from DHMT and other related organizations
  • Health facility records
  • Newspapers and health journals
  • Records from EHSU and Birth and Death Registry

Information areas

Areas to consider for information gathering are

i. Background information

ii. Political Structure

iii. Disease Pattern

iv. Sickness and Health Behaviour

Refer to the handouts on Community Mapping and Walk Abouts to facilitate Steps 3 and 4.

TOPIC 6: COMMUNITY MOBILIZATION

LEARNING OBJECTIVES:
- Mobilize communities for health promotion activities; and
- Help communities to mobilize themselves.

TRAINING NEEDS: Flip charts, markers, case study hand outs

DURATION: 7 hours

APPROACH:
(1) Brainstorm on what community mobilization is all about. List down relevant points.

(2) Participants are divided into five groups. Each group works on one of the following areas:
1. Types of communities
2. Ways of mobilizing a community
3. Benefits of community mobilization.

At the end, participants now go back into the full group. Each group presents its findings for discussion (15 minutes each).

(3) Facilitator summarizes all relevant points on board. Then add all the other salient points on the 3 topics.

(4) Distribute the Case Study Handout, "Forming a Health Group". Have one participant read "John forms a h ealth group". Have participants brainstorm answers the following questions:
> What do you think went wrong with the health group?
> How would you form a better health group?

Have a different participant read "Adwoa forms a health group". Have participa nts answer the following questions:
> What did Adwoa do differently?
> Why was this successful?
> What other things could be done to mobilize the community?

FACILITATOR'S NOTES

Community Mobilization is
  i. A process through which a community is motivated to take action to improve its state of development.
 ii. Guiding communities to identify health problems, priorities, strategise, plan and take action to solve them.
iii. Identifying a health need and bringing together its human, material and financial resources to address it through the involvement of all stakeholders.

Community mobilization therefore involves

    i. Developing and promoting discussion of health issues among community members and health workers.

    ii. Creating and strengthening community organizations, e.g. health committees for improved health services

    iii. Creating an environment in which individuals empower themselves to take action to address their own and community health needs.

    iv. Promoting community members participation in the solution of their health problems.

Benefits of Community Mobilization

The benefits of community mobilization include: -

    i. Material and human resources are brought together from all sectors of the community

    ii. Stimulation of formal and informal community structures

    iii. Build social support systems especially for disadvantaged families and groups

    iv. Create ownership and involvement through share decision – making and communal action

    v. Generate empowerment

    vi. Encourages sustainability

**TOPIC 6:   HEALTH PROMOTION TECHNIQUES**

LEARNING OBJECTIVES:
- Use basic health promotion techniques; and
- Develop user messages on key health promotion topics.

**TRAINING NEEDS:**   Flip chart, markers, Story with a Gap boards, Footsteps Games.

DURATION: 8 hours

APPROACH:

(1)   Begin with a general class activity. This activity is a conceptual/attitudinal tool which encourages creativity. The tool will help participants to realize that issue can be approached from many different angles. It demonstrates the importance of creativity and willingness to break away from traditional habits in the field of hygiene promotion.

   a) Mark 9 dots on the chart/paper, arranged in 3 rows of 3 dots inside a box
   b) Participants do same on pieces of paper
   c) Ask participants to join all 9 dots using four straight lines without lifting the pen.
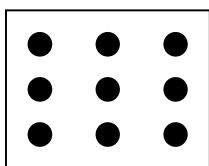
Solution
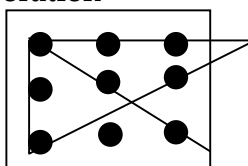
DISCUSSION POINTS
- Was it easy to join the dots?
- What have you learned from it?
- What does this apply to our everyday life?

(2)   A mini presentation on the different categories of partners in hygiene promotion is delivered by the facilitator who outlines the roles and responsibilities of each. The facilitator emphasizes that it is important to involve different partners in any hygiene promotion programme as it will increase ownership of the programme and possibly improve effectiveness and efficiency.

(3)   The facilitator tells participants that there are many different strategies that can be used in health promotion and leads participants to brainstorm as many of these as possible. The facilitator wraps up this point by adding any points from the Facilitators Notes that weren't made and sharing a brief description of each of the strategies.

(4)   There are many different tools that can be used for hygiene promotion. The facilitator explains that this topic will focus on two such tools that are available to DEHUs in Northern Ghana, "Story with a Gap" and "The Footsteps Game". The *"Happy, Healthy and Hygienic"* booklets should be distributed at this point. It should be explained that this is a series of books that outlines a new way of promoting safe hygiene. These booklets incorporate some of the topics we have talked about in previous discussions as well as additional information. They are easy to read and should be read thoroughly by all participants.

(5)   Story with a Gap – Utilizing the sample boards that the school has the facilitator explains that each set of 2 posters has a negative and a positive hygiene practice. The facilitator explains that the hygiene promoter uses these posters to generate discussion in communities, or even within households with respect to negative and positive practices. The goal is to identify the negative and positive, explain why it is so, and promote the positive practice building on what people see as the reasons why it is positive. Divide the group into 4 small groups. Each group takes 2 sets of posters. Participants take turns facilitating the Story with a Gap discussion within their group. Allow participants at least 30 minutes to do this. After participants have had significant practice come back to the large group and discuss how the participants found the exercise and how they were able to promote proper hygiene using the tool.

(6)   The Footsteps Game – The facilitator reads the instructions to the game using the instructions card. Divide the group into 3 smaller groups. Each group is given a copy of the game to play. Let participants play the game for 30 minutes. Return to the larger group and discuss the process. Participants should brainstorm ideas of how they can use the game to promote hygiene.

(7)   To close the session the facilitator invites participants to share other hygiene promotion tools. Finally the facilitator summarizes the session by reviewing the different strategies and re emphasizing the need to focus on promotion, why people might want to do something, and not education.

FACILITATOR'S NOTES

> **Notes on the Dot Game**
> - 9 dots represent individuals or individual communities.
> - 4 straight lines represent limited resources and line of communication.
> - Getting out of the "box" or extending the lines for alignments represen t creativity, innovations and consultation with other stake holders to benefit that community or individual.
> - The umbrella shape which comes out represents unity of purpose for development
> Conclusion: Hygiene promotion is a new way of looking at old problems. As discussed in Topic 1, hygiene promotion involves looking at problems through stakeholders eyes and coming up with creative solutions to address them. However, it involves thinking out of the "box" as this exercise does. It means changing the way we typically do things.

Key Partners in Health Promotion

The key partners that should be considered in health promotion activities or programmes include

I   **Players:**
   a) Individuals
   b) Groups of individuals whose activities have direct implications on health of community members.

II   **Stakeholders:**
   a) Individuals
   b) Groups
   c) Institutions with interest in health promotion and who can affect the outcome of such interventions.
   d) Head of departments, MDAs, NGOs, CBOs, chiefs, queen mothers, market queens local associations, media personel, interest/pressure groups etc.

III   **Collaborators:**
   a) Individuals and agencies MDAs who co-operate to increase the relative strengths of the unit in health promotion programme and implementation.
   b) Ministries of Health, Education, Food and Agriculture, Department of Community Development, Judicial Service etc.

Strategies for Health Promotion

The four major interventions/strategies in health promotion are: -

i.   **Communication:**
Providing information and education for specific audiences, through:
   a) Mass media: TV, radio, Posters, Newspapers and Magazines, Mobile vans.
   b) Folk songs, puppet show, draught competitions, cards playing, poetry recitals in local languages.
   c) Little media: Video, film show.
   d) Interpersonal: One-on-one education during home visits, community meetings. Has the opportunity to immediate feed back.

ii.   **Service Delivery and Quality Issues:**
   a) Arrangements should be put in place to ensure that services rendered are responsive to the needs of the intended beneficiary.
   b) Data processing and information management.
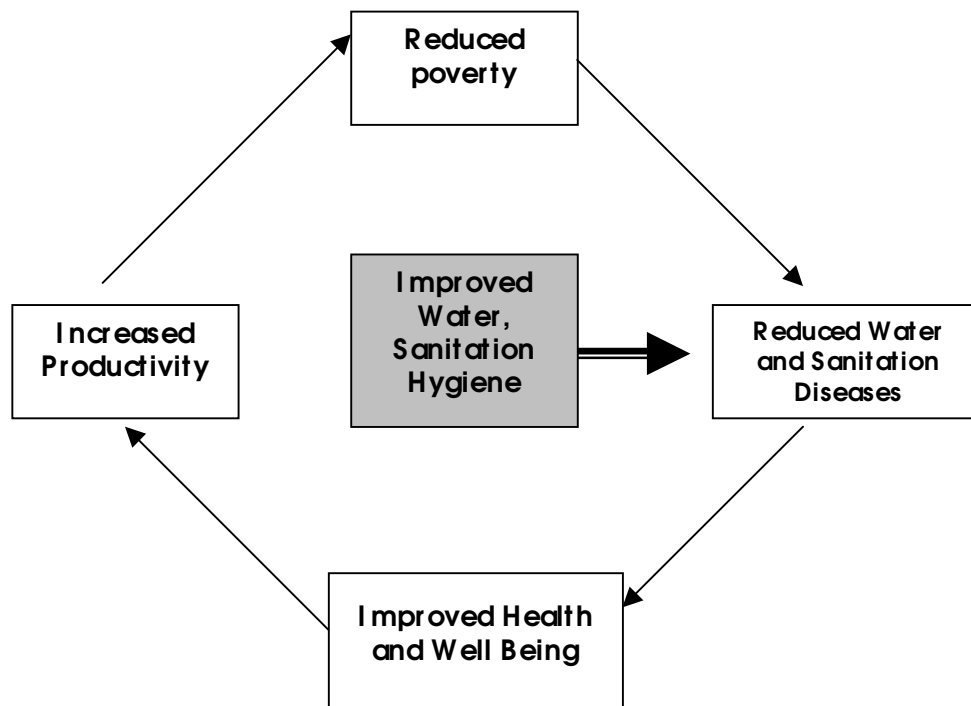
iii.   **Creation of an Enabling Environment**:
   a) Process of manipulating factors to enable a person transform acquired knowledge, beliefs, attitudes and values into desirable health action (positive behaviours).
   b) Advocacy.
   c) Removal of physical, gender, legal, social and cultural barriers that limit or deny access to environmental health services.

Training and Skills Acquisition:
   a) Train selected officials of the Assembly for special skills to support environmental health programs.
   b) Transfer skills to community leaders and functionaries.

Benefits: health, social, economic.

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│ Productivity │   │  Sanitation  │==>│ and Sanitation│
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                │ Improved Health  │
                │  and Well Being  │
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Promotion Techniques
The following methods could be used in combination to promote hygiene/health
- Demonstration of health benefits
- Persuasion: leading through reasoning or convincing
- Health promoters living exemplary lives
- Inducements e.g. Prices for best kept latrine, or cleanest community, or cleanest water point
- Compulsion: Compulsion and reinforcement by the power of peer-group or pressure groups.

Message Development
Your goal of communicating is to have your *intended* message to be the message that is *actually* communicated. Achieving this depends both on what you say (the verbal message) and how you say it (non-verbal message – personal appearance, voice, bodily actions, gestures, eye contact, facial expressions). The non-verbal message must therefore not distract from the verbal message.

The Message should be such that the target audience will
Be made aware of the existence of the problem
Understand the problem and solution
Be capable of carrying out what is recommended
Know what the benefits of the recommended behaviour will be

The message must be expressed in words that are accurate, clear, vivid, and appropriate.
People are egocentric. The pay closest attention to messages that effect their own values,
beliefs, well being

TOPIC 7:   COMMUNICATION

LEARNING OBJECTIVES:
- Use effective methods for communication;
- List and explain the channels of communication; and
- Utilize group facilitation skills at the community level.

TRAINING NEEDS: Flip chart, markers

DURATION: 6 hours

APPROACH:
(1)   Facilitator brainstorms the definition of communication with participants and then explains why we communicate.

(2)   Facilitator delivers a mini presentation on the different aspects of communication including the community, the message, the listener/audience, feedback and channels of communication (see Facilitators Notes for details).

(3)   Participants are divided into 5 groups. Introduce the role play as described in the Facilitators Notes.

(4)   The facilitator summarizes the session by indicating that good communication is key to hygiene promotion.

FACILITATOR'S NOTES

Definition of Communication

WHAT IS COMMUNICATION?
It is a "two way process of sharing with/discussing, informing each other and reaching a common goal, exchanging ideas and informing satisfactory between the sender and the receiver.

Why do we communicate?

The purpose of communication is to get people to understand the message thoroughly and act accordingly. In our case the health promoter is the sender and the recipient is the individual, household or community whose health behaviour we intend to promote for the better.

Communication Skills
To be effective, the communicator should:
- Smile
- Be modest, no blowing of horns

- Take interest in others
- Avoid arguments, 'nobody wins'
- Begin on a positive note
- Ask questions only when you want an answer
- Know what you want to say
- Speak in terms they understand
- Be 'AWARE"
- Assembly your message in mind
- Watch your listeners if you are getting through
- Adapt your delivery to the situation
- Relate your message in the order you arranged it
- Evaluate how well you have communicated

Communication Techniques (review the handout for more detail on each of these points)

1. The Communicator/Promoter
Your success as a communicator depends on you – on your credibility, your knowledge of the subject, your sensitivity to the listeners/users/consumers and the occasion. It also requires enthusiasm.

i. Speaking To Persuade
ii. Methods of persuasion
iii. Language
iv. Supporting Your Ideas

2. The Message
Your goal of communicating is to have your _intended_ message to be the message that is _actually_ communicated. Achieving this depends both on what you say (the verbal message) and how you say it (non-verbal message – personal appearance, voice, bodily actions, gestures, eye contact, facial expressions). The non-verbal message must therefore not distract from the verbal message.

3. The User/Listener/Consumer

The customer is the person who receives the communicated message. Without a listener, there is no communication.

The communicated message is filtered through the listener's frame of reference – the total of his or her knowledge, experience, goals values and attitude.

Because a communicator and a listener are different people, they can never have exactly the same frame of reference. And because a listener's frame of reference can never be exactly the same as a speaker's, the meaning of a message will never be exactly the same to a listener as to a communicator

4. Feed back

Most situations involve two-way communication. Your audience (listeners) do not simply absorb your message like human sponges. They send back messages of their own. These messages are called feedback.

Like any kind of communication, feedback is affected by one's frame of reference - needs, interests, expectation, knowledge and interest. The feedback must be understood to be able to deal with it.

5. Channels of Communication

The channels we can use to communicate our messages are: -
  i.   Home visiting
  ii.   Community meetings
  iii. Schools
  iv.   Market places.
  v.   Radio
 vi.   Television
  vii. Print media

ROLE PLAY

By the use of Chain, Circle, Wheel, "Y" and all channel method of commu nication.

PROCEDURE FOR EXERCISE
Time 30 minutes for exercise and discussion.

1) Groups of five persons each will be formed. Each group will be placed into a different kind of communication network. Communication within each net will be restricted according to the structure of each net.

In all nets, however, no more than two persons will be permitted to talk together at a time. For example, in the all-channel net described below it is possible for everyone to interact with everyone else in the net. However, these interactions can only take place two at a time. Thus, two dyadic interactions can be occurring simultaneously with one individual not participating. These pairs can shift continuously, but three people talking at the same time is not permitted. Five different nets are described below.

Chain

Circle

Wheel

"Y"

All-Channel
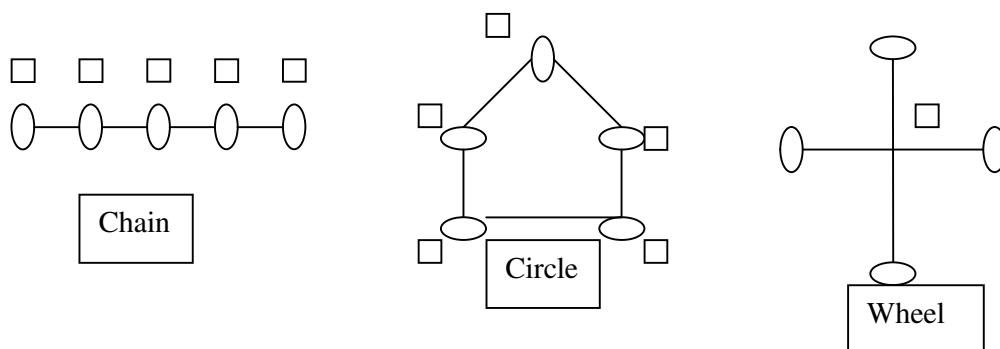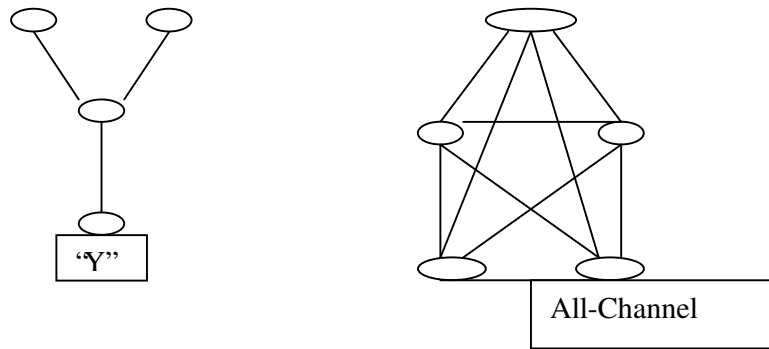
Chairs will be placed according to the structure of the particular network. Thus, the nodes in the networks above represent chairs.

Group members will sit in the chairs. Beside each network chair will be an empty chair, which is the "office" of each of the member in the network(represented by squares the above diagrams). If one person wants to speak to another in the net, interaction will, be made by sitting in that person's office.

3) Each group will be given a series of problems to solve. All groups will be given the same problem and the next problem will be given simultaneously to all groups when all have solved the previous problem. The amount of time it takes each group to solve each problem will be noted by the instructors. Groups will stay in the same communication network for the entire series of problems.

QUESTIONS FOR DISCUSSION/ANALYSIS

1) Was there any relationship between type of communication network and length of time required to solve the problem?
2) Was there any relationship between type of communication network and length of time required to solve simple versus complex problems?
3) Did an identifiable leader emerge in any of the networks? If so, who were they, and can leadership emergence be predicted from the structure of the communication network?
4) How did the various members of each network feel about their participation in the network? How satisfied, in general, were the groups with their networks? Who felt highly involved, and who felt left out?

TOPIC 8:   GENDER AND HYGIENE PROMOTION

LEARNING OBJECTIVES:
- Explain the role of gender in hygiene promotion; and
- Integrate gender issues into hygiene promotion activities.

TRAINING NEEDS: Flip chart, markers

DURATION: 6 hours

APPROACH:
(1)   Review what participants have learned in gender by having them define gender, triple roles, gender division of labour and gender relations.

(2)   Ask participants why they think gender issues are important to hygiene promotion. Brainstorm a list on the flip chart. Facilitator emphasizes the 2 points raised in the facilitator's notes. The facilitator also returns to the concept of Triple Roles and how the traditional gender division of labour influences hygiene promotion. Participants can be reminded of the "24 Hour Day" activity they participated in, in Module 1.

(3)   Distribute the case studies on Gender and Hygiene Promotion, each person gets a copy of both case studies (see Facilitators Notes). Individuals read the case studies and answer the question "Which hygiene promotion intervention was more successful? Why?" Give participants 20 minutes to do this. Participants then form small groups of 5. Each group answers the following questions:

How were gender issues considered in the 2 case studies?
At what point in the programme were gender issues considered?
How did the consideration of gender issues affect the programme?

As a large group, the facilitator gives each small group an opportunity to share one answer to the 1st question. Rotate amongst the 5 groups until no new points are raised. Repeat for questions 2 and 3. The facilitator should summarize the activity by indicating that by ignoring women in Case Study 1, the community was unable to develop an appropriate intervention. In Case Study 2, the community involved women and was able to have a substantial impact on their community's health.

(4)   Divide participants into groups of 6. Each group should develop a strategy to involve women in a hygiene promotion activity. The following activities should be shared amongst the groups to stimulate discussion:

A Parent Teacher Association decides to start a School Health Club and asks the DEHU to provide input on how to begin.
A community decides to build a latrine and invites the DEHO to help them do this.
The DA assigns the DEHU the task of approaching community A to engage them in a handwashing campaign. Discuss how the DEHU would enter and mobilize the community.

The groups write down their key strategies for incorporating women on flip charts and present to the wider group. Questions and feedback are welcomed.

(5)   Facilitator summarizes the session by emphasizing the importance of including both men and women in any hygiene promotion activities. Performing a gender analysis of the activity plan before entering the community is an important step. By incorporating gender issues any hygiene promotion activity is likely to have a greater impact.

FACILITATOR'S NOTES

Why are gender issues important to hygiene promotion?
• As women are largely responsible for the reproductive tasks related to hygiene promotion if they are not involved in the hygiene promotion programme from development to implementation the strategies utilized will likely not meet the community's needs. Women need to be involved in decision making roles.
• We need to understand the different roles that men, women, boys and girls undertake with respect to hygiene practices in order to devise strategies to address negative behaviours. If we only look at what either women or men do we will not see the whole picture and negative behaviours could be perpetuated.

Triple Roles of Women
The contribution of women's paid and unpaid work to all aspect and sectors of development balanced in three roles of productive, reproductive and community management. Men's roles tend to be concentrated in 2 areas, whereas women have responsibilities in all 3.

Reproductive
Reproductive work involves the care and maintenance of the household and its members.

Productive
Productive work involves commodity production for consumption or trade in the formal and informal sectors, employment and self-employment.

Community Management
Community management involves activities performed for the well-being of the community without remuneration.

Integrating Gender
Gender should be integrated into hygiene promotion programmes through:

An *equitable representation* of women and men from the different groups in the managing organization;

A *plan sanctioned by women and men heads of households* to implement and finance priority improvements;

Choices that are not imposed but *democratically made* by women and men based on their own reviews of the various options;

An *equitable division* of responsibilities. Payments, rights, and benefits women and men in poor and better off households;

Accounting (including financially) for progress and results to women and men.

CASE STUDY 1 - SANITATION & HYGIENE PROMOTION

To rid the village of indiscriminate human defecation, the chief and elders of Logi decided to provide a place of convenience for their people. At a meeting involving the Chief, and elders, it was agreed a VIP be constructed. The DEHO investigated the technical and cost issues and informed the Chief and elders. The village leadership agreed the cost was affordable and that the facility will be located at the outskirts of the village, one kilometre from the Chief's palace and on the upper part the stream that provided a watershed further downstream where hand-dug wells were sited and served as a source of water supply for domestic consumption. The siting of the facility received unanimous support from majority males because it was in accordance with their preference of having latrines a distance from their homes. In constructing the VIP, the technical person surrounded the vent pipe with a solid outhouse. This made the inside of the VIP dark and Children were afraid to use it. Few men patronised the facility due to the smelly odour. Above all, women who preferred their privacy showed very little interest in a facility outside the home especially as the doors of the VIP had openings below. A year later, the village reported the highest rate of cholera outbreak in the district.

CASE STUDY 2 - SANITATION & HYGIENE PROMOTION

To rid the village of indiscriminate defecation, the chief and elders of Logi decided to provide a place of convenience for their people. At a meeting involving the Chief, elders, sectional heads, women and youth leaders, it was agreed a VIP be constructed. The social mobiliser from DEHO was involved in investigating low-cost sanitation options and the technical implications in the management of the facility. He returned to the community and explained the technical issues in operation and maintenance using wooden models. In consultation with sectional leaders, female mobilisers were selected and house visits made to inform female members about the new latrine. The village leadership and the people agreed the cost was affordable and that instead of one VIP, the village could afford two for males and females respectively on different locations because men respected the privacy of their wives, sisters and daughters. Technical issues concerning seepage and ventilation that could pollute the hand-dug wells (which served the village) and give bad odour were considered in the siting and construction. The DEHU helped in forming a Community Sanitation Committee comprising two members (male/female) per household and trained them in hygiene promotion. Two sanitary labourers were also employed and trained to maintain the latrine. Women allowed their daughters to be employed in the survey and placed three representatives on the Supervisory Committee for construction. A year later, when cholera outbreak was reported in several villages in the district, Logi was one out of 10 villages not affected.

7.   MODULE 6: ENVIRONMENTAL POLLUTION

The issue of air pollution has a direct impact on health, yet there is no one human being who can say they have the sole responsibility for protecting the air. It is a collective responsibility. We all enjoy the air, and those who pollute the air cause problems for those who don't. Those who don't pollute the air suffer the same consequences as those who do. Pollution, whether air, water or land, is certainly not new a problem. Poisonous substances have been released into the environment for many years in areas of human habitation; smoke-filled air, dirty rivers and contaminated land have become familiar features of the landscape. What is changing, however, is the attitude of the public.

OBJECTIVES:
- Relate Pollution to Environmental Health
- Reduce indoor pollution.

TOPICS:
- Pollution
- Indoor Air Pollution

TOPIC 1:   POLLUTION

LEARNING OBJECTIVES:
- Define air pollution;
- Identify the different types of environmental pollution; and
- Describe the effects of the different types of pollution on the environment and health.

TRAINING NEEDS: Samples of case studies, participant's notes, facilitator's guide, flip chart and markers.

DURATION: 4 hours

APPROACH:

(1)   Present an overview of Environmental Pollution to enable participants to share knowledge and experience and use same in a whole class discussion to generate definitions of environmental pollution.

(2)   The facilitator delivers mini-presentation on the different types of pollution, their effects on humans and the environment and how to mitigate the effects.

(3)   Provide participants with the case studies. Give them adequate time to read the case studies and make notes. In a large group discussion have participants recap the points they have made for the larger group. To close, discuss why environmental pollution control is an important aspect of their job. What are the main factors they need to be concerned with?

FACILITATORS NOTES:

DEFINITION AIR POLLUTION

Air Pollution, in its broadest sense, refers to the effect on the quality of the environment brought about by chemical, physical or biological change.

TYPES OF POLLUTION
The various types of pollution are: -

i.   **Air pollution:** Smoke, vehicle emissions, nitrogen oxides, carbon monoxide, carbon dioxide, suspended particulates, chlorofluorocarbons, asbestos, and lead

ii.   **Noise:** Noise from loudspeakers in the streets and homes, road traffic noise, construction sites

iii. **Water pollution:** Through uncontrolled disposal of sewage and other liquid wastes from domestic, industrial and agricultural origin

iv. **Waste:** Unsanitary collection and disposal of waste contributing to the deterioration of the environment, increasing water, air and soil pollution

v. **Land pollution:** Through solid wastes, industrial activity, agricultural activity, atmospheric fallouts also reach the food chain

EFFECTS OF POLLUTION

The following table summarises the major air pollutants, the sources and health effects.

POLLUTANT	MAJOR ANTHROPOGENIC SOURCES	EFFECTS
Carbon monoxide	Emissions from Vehicles and industry	Acute exposure; headache, dizziness, decrease physical performance, death. Chronic exposure; stress on cardiovascular system, decreased tolerance to exercise, heart attack.
Sulphur oxides	Stationary combustion sources, industry	Acute exposure: inflammation of respiratory tract, aggravation of asthma. Chronic exposure; Eraphysema bronchitis.
Nitrogen oxides	Transportation, stationary combustion sources	Acute exposure; lung irritation Chronic exposure; bronchitis. Reduced visibility, formation of acid rain, global warming
Particulates	Stationary combustion sources, industry	Respiratory illnesses and cancer. Reduced visibility
Hydrocarbons	Transportation	Minor irritation of the mucosa and narcotic effect
Photochemical oxidants	Transportation, stationary combustion sources	Acute exposure; respiratory irritation, eye irritation. Chronic exposure; Emphysema.

The following table summarizes the damage caused by some air pollutants to materials:

Material	Damage	Principal Pollutants
Metals	Corrosion or tarnishing of surfaces; loss of strength	Sulphur dioxide, hydrogen sulphide, particulates.
Stone and concrete	Discolouration, erosion of surfaces, leaching	Sulphur dioxide, particulates
Paint	Discolouration, reduced gloss, pitting	Sulphur dioxide, hydrogen sulphide, particulates, ozone
Rubber	Weakening, cracking	Ozone, other photochemical oxidants.
Leather	Weakening, deterioration of surface	Sulphur dioxide
Paper	Embrittlement	Sulphur dioxide
Textiles	Soiling, fading, deterioration of fabric	Sulphur dioxide, ozone, particulates, nitrogen dioxide.
Ceramics	Altered surface appearance	Hydrogen fluoride, particulates.

OPTIONS FOR MITIGATING AIR POLLUTION

1. Reducing stationary source emissions

2. Switching to natural gas

3. Using higher-quality, clean fuel

4. Enhancing conservation of waste heat for reuse

5. Tapping alternative energy sources: hydro, wind, solar, geothermal, LPG, nuclear and hydrogen power

6. End-of pipe controls and standards: use of catalytic converters and emission standards

7. Improving road infrastructure

8. Traffic management

9. Mass transit

CASE STUDY 1: *WATCH THESE THINGS*

Occupation places an individual in society at a level she/he demands respect and dignity. However some occupations though it gives security to the employee to hazards that are deleterious to his/her health.

At Suronasu in the Brong Ahafo region near Kimtampo, young girls and boys collect tolls from vehicles that use the highways. At Buipe in the Northern region of Ghana, similar activities are being performed by the same gender values. It is not different from what is happening in Nasia and Kalugu toll points.

The police and other Ghana Highways Authority officials are equally engaged in this business.
The key issues in this particular case study is vehicular movements taking into consideration numbers and time that these workers are exposed to the emission from the exhaust of the vehicles.

QUESTIONS
1. From your opinion, what is the relationship between the workers as they interact with the environment around where they operate?
2. Discuss the key issues involved in the case study

CASE STUDY 2: *THE TRAFFIC POLICE*

A dark zone of black smoke hangs above the ground, a common sight in Jalpur during the late evening and early morning hours. The smoke has been attributed to the increasing rate of vehicular pollution. A random check of the air quality of Jalpur revealed that the amounts of carbon monoxide, sulphur dioxide and suspended particulates over 24-hour period were above the limits considered acceptable by the World Health Organisation.

In order to assess the impact of the motor vehicle emission on humans, a study was conducted using one hundred traffic police constables. The constables are exposed continuously for periods of 6 hours or more to emissions from vehicles idling at intersections.

The study revealed that 94% of the constables suffered from some sort of physical disorder. Eye irritation, itching skin, nasal congestion, fatigue, coughs, loss of appetite, "burning" sensations and "tenderness" in the abdomen were common complaints. Respiratory difficulties and digestive problems were also numerous. The most startling revelation was the high incidence of tuberculosis among constables between 20 and 30 years old.

What makes the findings like these particularly disturbing is that the majority of the country's poor live by the roadside, and traffic intersection are the play grounds of poor children sales points of many hawkers and beggars.

QUESTIONS
1. From your opinion, what is the relationship between the workers as they interact with the environment around where they operate?
2. Discuss the key issues involved in the case study
3. Discuss the mitigation measures

TOPIC 2:   INDOOR AIR POLLUTION

LEARNING OBJECTIVES:
- Discuss indoor pollution;
- Discuss the sources of indoor pollution;
- Describe the effects of indoor pollution on health; and
- Develop measures to control indoor air pollution.

TRAINING NEEDS: Flip charts, markers, case study, handouts

DURATION: 8 hours

APPROACH:

(1)   Use the case studies (see below) and flip charts on indoor pollution to foster understanding and generate ideas for discussion. Ask participants to design steps in managing indoor pollution.

CASE STUDY 1

In developing countries like Ghana, indoor pollution poses a significant threat to public health particularly in rural communities where DEHUs operate. It is estimated that about 90% of our rural households use unprocessed biomass fuels (animal dung, wood, and crop residues like guinea cornstalks, corn cobs). These fuels are used indoors to brew pito, some open fires that are inadequately ventilated resulting impartial combustion and a source of harmful pollutants, irritant gases including carbon monoxide, particulate matter, sulphur dioxide, nitrogen dioxide and methane).

The health effect that one can sustain the unprocessed or treated biomass emissions can be determined not solely by the pollution levels but also a function of the TIME individuals spend inhaling the polluted air that is exposure levels.

Most of the cooking in our rural setting is being done by female (women and girls) and the quality of life that is at their disposal i.e. smoky, sooty home eye discomfort, inadequate lighting and ventilation, time spent in gathering fuel, injuries sustained when collecting fuel etc.

QUESTIONS

1. Explain the risk involved in over depending on biomass as a source of domestic fuel/energy
2. Who are the most affected individuals in terms of exposure to air pollutants?
3. State three factors that lead to health effects when exposed to air pollution

Case Study 2

Mrs. Sithole has been cooking in an eating bar for five years. She has been regular and prepares her dishes very well and there have not been complaints from the proprietor. Eight months ago Mrs. Sithole had developed prolonged irritation of the bronchial mucosa and chronic productive cough and shortness of breath on exertion. During the last two years she has been irregular at work and complains to be on excuse duty and sometimes absents herself from duty.

You ask Mrs. Sithole to come and see you to discuss the problem and you find that she has pulminary emphysema.

1.   What should Mrs. Sithole have done?
2.   Suggest causes of the condition.
3.   Suggest she cloud have done to prevent problem from occurring.

FACILITATOR'S NOTES

INDOOR AIR POLLUTION
At the individual level, indoor air pollutants are perhaps the most important for those people living in developing countries. WHO estimates that about 1.9 million people die annually due to exposure to high concentrations of suspended particulate matter in the indoor air environment.

SOURCES OF INDOOR POLLUTION

i. Tobacco smoke
ii. Asbestos
iii. Fuel Source

The Energy Ladder: The types of fuel used for cooking, heating, and lighting become cleaner and more convenient, efficient and costly as people move up the energy ladder hence the degree of indoor pollution
- Electricity
- Gas
- Kerosene
- Charcoal
- Wood
- Crop residue
- Animal dung

iv. Smoke from nearby houses
v. Mosquito coils and other plants burnt in rooms to control mosquitoes

EFFECTS OF INDOOR POLLUTION

- Respiratory illness including asthma
- Lung cancer
- Pulmonary tuberculosis
- Low birth weight and infant mortality
- Cataract

CONTROL MEASURES

A range of potential interventions to indoor air pollution which households and communities and decision-makers can easily adopt should be seen cheap, available, accessible and acceptable

1. Introducing improved stoves that emit fewer pollutants than traditional stoves in order to reduce smoke production

2. Utilize chimneys, flues and hoods to maximize smoke removal

3. Household living environment: Improve household ventilation, modify kitchen design to increase ventilation, encourage the incorporation of separate kitchen space into housing design, and improving cooking practices e.g. lids on pots.

4. Behaviour Modification: Promoting awareness of long term health effects of indoor air pollution and altering child care practices to keep children away from kitchen during cooking times.

5. Fuel-switching (e.g. from wood to charcoal or kerosene or LPG)

6. Promoting the use of LPG and electricity

7. Appropriate fuel prising to encourage the use of cleaner fuels and subsidies for the purchase of clean-burning appliances and clean fuels

8. It is necessary to keep in mind the close relationship between poverty and the dependence of polluting fuels and consequently the importance of socioeconomic development, which should be at the core of efforts to achieve healthier household environments

8.   MODULE 7:   FOOD HYGIENE

OBJECTIVES:
- Identify causes of the contamination and methods for control of Food Borne Infections;
- Describe methods of inspecting food and meat products; and
- Design sanitary requirements of food establishment apply legislation on food.

TOPICS:
- Definitions and Concepts
- Identification of Food Micro-Organisms Responsible for Food Contamination
- Control of Sale of Unwholesome Food
- Legal Framework
- Consumer Awareness

TOPIC 1:   DEFINITIONS AND CONCEPTS

LEARNING OBJECTIVE:
- Explain key terms related to Food Hygiene.

TRAINING NEEDS: Flip Charts and markers

DURATION: 1 hour

APPROACH:
(1)   Lead a group discussion structured around the following questions:
1.   What is food?
2.   What is contamination?
3.   What is food hygiene?
4.   What is meat hygiene?

FACILITATORS NOTES:

i)   *Food* is any substance including drink which is consumed for digestion and assimilation in order to meet the requirement for growth, maintenance and reproduction and the supply of energy required to maintain the correct bodily temperature for basic functions and the performance of work.

ii)   *Contamination*- the introduction or the occurrence of a contaminant in a food or food environment.

iii)   *Food Hygiene*-the science and actions which prevent contamination and ensure adequate retention of food values during production, transportation, storage, handling, preparation and manufacturing before consumption of food.

iv)   *Meat Hygiene*- Expert supervision of all meat products with the objective of providing wholesome meat for consumption and preventing danger to public health (W.H.O)

TOPIC 2: IDENTIFICATION OF FOOD MICRO-ORGANISMS RESPONSIBLE FOR FOOD CONTAMINATION

LEARNING OBJECTIVES:
- Identify micro-organisms responsible for food contamination;
- Recognize sources of transmission of food contaminants; and
- Describe methods for the prevention of contamination.

TRAINING NEEDS: Flipcharts, markers, handouts, chart on contamination and infection cycle, blocking the routes and transmission routes drawings.

DURATION: 4 hours

APPROACH:

(1) Brainstorming to enable participants to identify micro-organisms utilizing the following questions:
- ¬ What is micro-biology?
- ¬ What are micro-organisms?
- ¬ What are the groups/types of micro-organisms responsible for food infections?

Participants are divided into groups of 4 – 6 and asked to define the above terms. Group presentations are made and finally facilitation is done to sum up the discussions.

(2) Ask participants to form group of 4 – 6 people. Give each group a set of the following drawings:
- ϖ A person defecating openly.
- ϖ A person's opened mouth.
- ϖ Hands.
- ϖ Food left uncovered.

Participants create diagrams demonstrating different ways in which food can be contaminated.

When the groups have made their diagrams, ask each group to show and explain its diagram to the other group. Let the group respond to any questions raised by the other groups.

Discuss the similarities and differences between the various diagrams.

Facilitate a discussion to help the group use this new knowledge to examine its situation (what situation?)

Discuss and identify:
- ϖ   The transmission routes.
- ϖ   The problem areas and hygiene behaviours that are putting people at risk of infection.

To close, facilitate a discussion with the group to highlight what it has learned during this activity.

(3)   Participants are to continue working in groups 4-6. Now that participants know the ways in which food is contaminated, they need to think about what can be done to stop contamination from happening.

Give each group a chart of the cycle of infection and contamination. Task groups to put barriers/blocks on the chart where they can prevent contamination. After 30 minutes each group will present its diagram which now includes the barriers/blocks. Each group would respond to any questions asked by other participants.

(4)   Facilitator leads participants to discuss what has been learnt during this activity. (See Facilitators Notes for summary of key points).

FACILITATORS NOTES:
⌉   Micro-biology-the study of all forms of plant animal life too small to be seen by the naked eye.
⌉   Micro-organisms are minute living things that are too small to be seen by the naked eye.
   ⌉   Bacteria, Eg. Salmonella, Clostridium botulinum, Escherichia coli, Bacillus cerens, Moulds, Yeasts, Viruses

Source: PHAST-

CYCLE OF INFECTION AND CONTAMINATION*

WATER

SOIL

FAECES

FLIES

FOOD

MOUTH

HANDS

HUMAN

ANIMAL

FOOD

HUMAN

FOOD

ANIMAL

Dust, soil, flies, sources in kitchen, handlers, living things etc
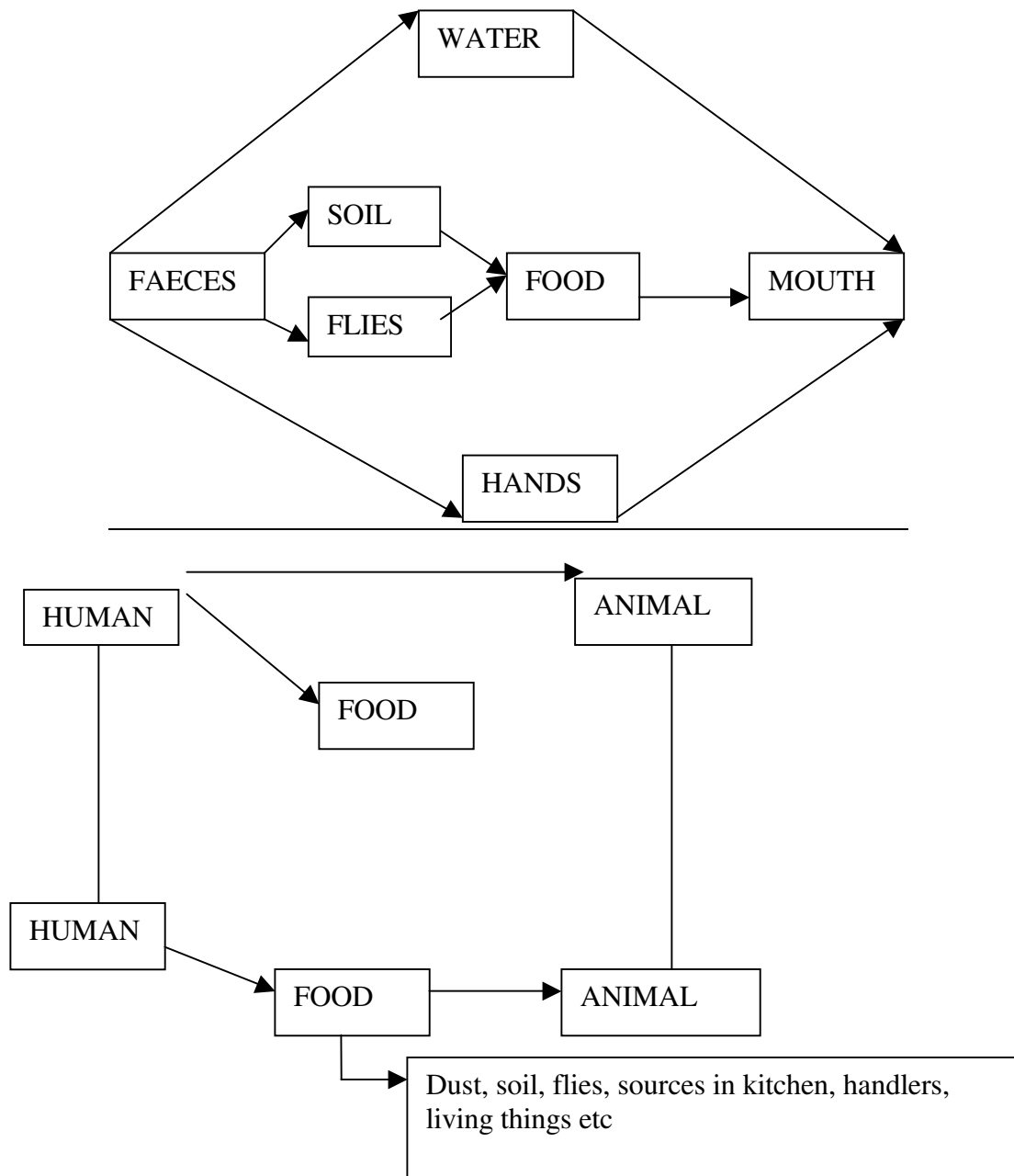
PREVENTION OF FOOD CONTAMINATION CHART

```
                                    HANDS
                                                        Hand cleansing

                                                        MOUTH

    FEACES          FLIE
                                    FOOD
                    SOIL

    Traditional pit
    toilet

            VIP/Flash          WATER
```
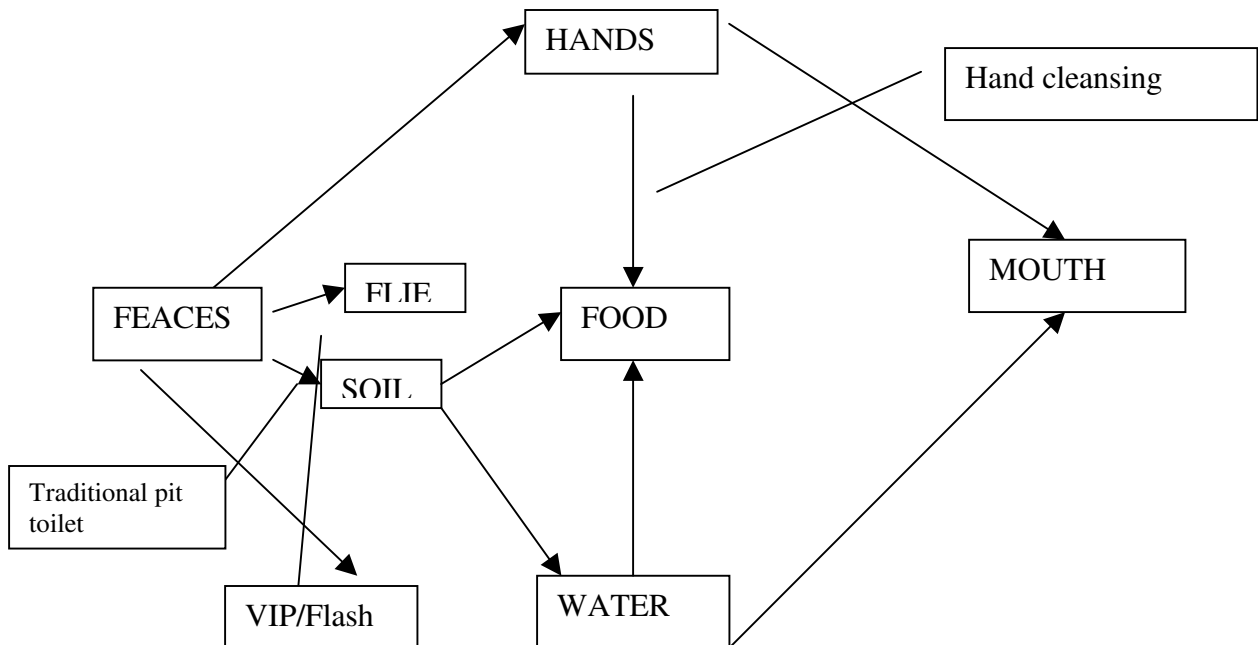
Source: Winblad. U & Dudley E 1997

FIVE KEYS TO SAFER LIFE

KEEP CLEAN
- ♣ Wash your hands before handling food and often during food preparation.
- ♣ Wash your hands after going to toilet.
- ♣ Wash and sanitize all surfaces and equipment used for food preparation.
- ♣ Protect kitchen areas and food from insects, pets and other animals.

WHY?
 While most micro-organisms do not cause disease, dangerous micro-organisms are found in soil, water, animals and people. These organisms are
carried on hands, wiping cloths and utensils, especially cutting boards and the slightest contact can transfer them into food and cause food borne diseases.

TOPIC 3: CONTROL OF SALE OF UNWHOLESOME FOOD.

LEARNING OBJECTIVES:
- Describe methods of inspecting meat;
- State common diseases and abnormalities in food animals;
- Identify signs of spoilage in food;
- Identify signs of wholesomeness in vegetables, fruits, game and fish; and
- Describe common defects in canned food.

TRAINING NEEDS: Marker, flip chart, Fuel, Transport, Samples of sound and unsound canned foods

DURATION: 12 hours

APPROACH:
(1)   Visit to slaughter-house with participants. Participants are divided into Groups of 4 – 6 people. Participants to observe how ante-mortem inspection is conducted. Participants to also observe how post-mortem inspection is carried out. Upon return to classroom groups should present reports. Questions are allowed from other groups after each presentation. Facilitator finally leads participants to discuss methods or procedure for the inspection of meat (refer to Facilitators Notes below for key points). Handouts are shared among the participants.

(2)   Participants still in groups of 4 – 6. People are made to list common diseases and abnormalities found in this recent visit to the slaughter-house. Each group is tasked to write its findings on flipcharts and post it on the wall. Participants go around and read the other group's work. In a plenary session, participants are invited to provide feedback on other presentations. The facilitator will mention any diseases that were not raised by participants and discuss the modes of transmission of some of the diseases.

(3)   Visit to Tamale Central market to section were foodstuffs are displayed for sale. Participants are divided into groups of 4 – 6 people and are allowed one hour to move around and observe the food items. Presentations are made by each of the groups and the main points are written on the flip chart. Questions are asked by other members.

(4)   Participants are divided into groups of 4 – 6 people and sent to Tamale Aboabo Market to move about in the vegetables, fruits and fish sections. Participants move back to the classroom to present their group work for general discussions by the whole group.

(5)   Participants will be divided into groups of 4-6 and presented with the samples. Group members will be tasked to compare the two different

samples and write them on the flip chart. Groups will after 30 minutes time be asked to present their findings, and members will ask questions.

FACILITATOR'S NOTES:
ϖ Ante-mortem inspection- the inspection of live animal prior to slaughter.
ϖ Procedure/methods of ante-mortem inspection:
> Observation of the following:
> - Movement of animal
> - Resting position of animal
> - Nutrition
> - Orifices for abnormal signs such as discharges, inflammation, lesions etc.
> - Colour of urine, feaces
> - Skin
> - External organs etc.

ϖ Procedure for post-mortem inspection.
> Examination of the following organs first:
> - Heart
> - Lungs
> - Liver
> - Spleen

ϖ Examination of the following comes next
> - Carcass
> - Head
> - Intestines etc.

ϖ **TERMS USED IN EXAMINATION**
> - Observation
> - Palpation
> - Incision

COMMON DISEASE IN THREE NORTHERN REGIONS ARE:
- Anthrax
- Contagious Bouvine-Pieuro-Pneumonia
- Foot and mouth diseases
- Taeniasis
- Tuberculosis
- Actinomycosis
- Liver flukes
- Rinder pest

SIGNS OF FOOD SPOILAGE
- Offensive smell/odour
- Mouldy surface
- Change of colour of food item
- Slimy surface of food
- Gas development or bulging if food is canned food.

CONTRIBUTORY FACTORS:
- Time
- Moisture
- Temperature
- Oxygen
- PH

SIGNS OF UNWHOLESOMENESS IN SPECIFIC FOOD ITEMS
- Green vegetables- Unwholesomeness, lose their freshness, leaves becoming withered and lank, not firm and bristle, decay, objectionable odour especially cabbage due to alteration in vily compounds in which they contain.
- Fruits – becomes soft, loses its bright luster, taking on a dull faded colour. Oranges, lemons and the like affected with green mould. Soft and watery and objectionable smell and bitter taste.
- Fish :
  - Dull looking flesh
  - Soapy to touch
  - Reddish colour
  - Offensive odour
  - Maggots seen creeping from crevices if decomposition is due to flies.

EXAMINING CANNED FOODS
Physical Examination Methods
> Superficial
> Palpation
> Percussion
> Shaking.

Defects of unsound canned foods.
> Blown/Swells
> Bulging
> Rusting
> Leaking
> Expired dates of manufacturing.
> Defaced labels

TOPIC 4:   LEGAL FRAMEWORK PERTAINING TO FOODHYGIENE

LEARNING OBJECTIVES:
- Design and apply bye-laws on food hygiene; and
- Interpret and apply Food and Drugs law PDNC law 305B of 1992.

TRAINING NEEDS: Handout, Flip chart, Marker

DURATION: 2 hours

APPROACH:
(1)   Participants are asked to define the following words individually:
   a)   Bye- Laws ------------------------------------
   b)   Legislation Instrument --------------------
   c)   Executive Instrument ----------------------
   d)   Act ---

   Participants compare the definitions of those of their colleagues sitting beside them.   Participants are divided into groups of 4 – 6.They are then asked to define the terms again. The group definitions are presented to the entire group who agrees on a final definition.

   Participants are asked to describe how bye-laws are made in their respective District Assemblies. The facilitator ensures that all steps involved in establishing bye-laws are discussed.

(2)   Handouts are distributed to participants to study. Facilitator reads through the Food and Drugs law with the participants to guide them.

FACILITATORS NOTES:
Bye-laws - a law passed by a district assembly or Government body under powers given by the Government. Bye-laws are limited to having jurisdiction in the particular district assembly/area of operation.

Legislation instrument - legal directive issued by a Government ministry or department, district assembly or parliament.

Executive instrument - a periodical order made for the purpose of solving a specific problem in a given area at a given time. This document is normally passed by a cabinet or group of people having executive power.

Act - a law passed by a republican government or any self governing or independent government. Drafting of legislation is generally the responsibility of an Attorney, however the Ministry or department and the staff must be responsible for advice in regard to the content of proposed legislation, etc.

TOPIC 5:   CONSUMER AWARENESS

LEARNING OBJECTIVES:
- Formulate means of sensitizing the public on food hygiene issues.

TRAINING NEEDS: Flip chart, Markers, Handout

DURATION: 3 hours

APPROACH:
(5) Participants are divided into groups of 4 – 6. People are asked to write down why consumer awareness is important in the food industry. Group presentation will be made and written on the flip chart.

(6) Distribute the case studies to the same groups (each group receives one). Participants read the case study (see Facilitators Notes) and answer the questions. Groups present their report to the plenary and receive feedback.

(7) Facilitator summarizes the discussion by discussing the importance of consumer behaviour and how the DEHU can utilize social marketing principles to address the consumer behaviour with respect to food hygiene.

FACILITATORS NOTES:
Prompt students to remember the principles of social marketing discussed in the waste management module.

When discussing consumer awareness we are talking about messages that can be sent to the consumer to change their behaviour, instead of focusing on penalizing the food vendor. Consumer messages can be very effective and low cost measures to address food hygiene practices because if they change their eating habits then the food vendors will also change.

For example, if people become aware that purchasing exposed meat from the butcher in the market is causing them to be sick, they can stop buying from that butcher and choose to go to another one. That original butcher loses business and income. When he realizes he is losing income because the meat is always exposed he has to change his behaviour to win customers back.

Consumer awareness can be promoted by developing short, catchy messages or other public education materials like posters, role plays etc. Although there is a lot of fancy, expensive messages out there e.g. the Handwashing campaign, it is possible to develop local messages within the means and resources of the DEHU.

School health promotion clubs – utilizing students to develop these consumer messages and tools is an effective strategy for two reasons: 1) you get the product at low cost; 2) you are promoting good food hygiene practices with the students as they are doing the work. The DEHU could approach a local school and tell the Head Teacher they want to work with the students to develop a role play on food hygiene to be performed in the market on a series of market days. The DEHO presents information on this issue to the students and works with the students to develop the role play. When it is ready they go to the market on the specified day and perform the role play. They can do it several times in different places to reach a wide audience.

Ethical considerations – When doing consumer awareness it is important that the message address the issue, not a particular vendor/butcher. If it addresses a particular individual the consumers may understand that they should not frequent that particular place, but go to a similar place that has the same issues. In addition, you do not want to personalize the issue and hurt someone.

CASE STUDY 1
A wayside food vendor exposes her food items like soup, stew etc for sale to the public. Customers buy the food and sit in an open place for consumption. A common cup is used by customers for drinking. This particular eating stand attracts a lot of people. Flies are landing on the used plates, etc. The women serving the food do so with their bare hands. There is an unsanitary drain near the food vendor.
1. What are the public health implications of this food stand?
2. Develop consumer awareness strategies and message to address one or two of these issues.

CASE STUDY 2
A butcher is selling exposed meat to the public. The table is dirty and it is suspected that the meat sold is not from the slaughter house. Old carcasses are under the table. Flies are all around. Some of the meat appears to be rotting.
1. What are the public health implications of this butcher?
2. Develop consumer awareness strategies and message to address one or two of these issues.

9. MODULE 8: PLANNING, MONITORING AND EVALUATION OF PROGRAMMES

OBJECTIVES:
- Apply National planning policy guidelines in environmental health; and
- Design integrated environmental health and sanitation programmes/projects.

TOPICS:
- Ghana Poverty Reduction Strategy and Medium Term Development Plans
- Programme Cycle
- Action Planning
- M&E Concepts and Uses

TOPIC 1:   GHANA POVERTY REDUCTION STRATEGY AND MEDIUM TERM DEVELOPMENT PLANS

LEARNING OBJECTIVES:
- Describe the components of the GPRS; and
- Explain the MTDP framework.

TRAINING NEEDS: Flip chart, markers, blank AAP format, example AAP (see handouts)

DURATION: 4 hours

APPROACH:

1)   The facilitator delivers a mini-presentation on the Ghana Poverty Reduction Strategy (GPRS) focusing on the goals, the themes and the policy implications, indicating that the GPRS is the major policy document guiding Ghana's development.   Ask participants if they require any clarification.

2)   The facilitator continues the presentation by moving to the Medium Term Development Plan (MTDP). This is the plan that is the most relevant for the DEHU as it encompasses the plans for development at a District level. Guidelines for the development of this plan are drafted by NDPC and circulated to all Districts. The MTDP framework is based on the GPRS themes.

3)   Participants are asked if they have seen the MTDP for their District. What types of goals and objectives have been laid out for the District as a whole? Has the DEHU been involved in the development of the plan that relates to the environmental health sector? The facilitator emphasizes that it is important for the DEHU to be involved in the planning process to ensure that a) environmental health is considered and budgets are allocated to the sector and b) that the plans reflect the environmental situation on the ground.

4)   The discussion then moves to the Annual Action Plan (AAP). The facilitator explains that the AAP is generally extracted from the MTDP, while accounting for situations that may have arrived after the MTDP was drafting (eg. food shortages). The AAP is very activity oriented and will be more specific than the MTDP.

5)   The facilitator hands out the example format and reads through it with participants. He/she notes how the 3 activities combine to achieve the

objective. This example relates to the one objective related to water and sanitation. Note how the objective and the activities are quantifiable.

6) The facilitator hands out copies of the blank format that is used for the AAP. The group is divided into small groups and the facilitator leads the participants through the format by describing each term (i.e. goal, objective etc) and then giving participants time to develop a sample of their own. Their objective should relate specifically to their environmental health sector and they should think of the different activities that will combine to achieve this results. The facilitator should lead participants through the process step by step as it will be easier for participants to understand the terms if it is done this way ie. Define objective and then the groups make one, discuss activities, let groups work, etc. (guidelines for the terms are presented in the Facilitator's Notes). At this point the groups should not establish indicators as that will be covered in the next topic. Each group presents their LFA at the end of the session. Note: The idea is not meant to come up with an entire LFA, but just to attempt to formulate activities in that framework.

7) The facilitator summarizes by indicating that the 3 different types of plans are linked and therefore, they should all flow out of the other. The idea is that with all 138 Districts implementing AAPs and MTDPs based on the GPRS then significant progress will be made on the overall goals.

FACILITATOR'S NOTES

Ghana Poverty Reduction Strategy
The overall goal of the GPRS is wealth creation and poverty reduction. The current GPRS covers the duration 2002-2005. This year the GPRS II is being developed. The 5 themes of the GPRS are:

(a) Micro Economy
(b) Human Development and Social Services (education, health, watsan)
(c) Production and Gainful Employment
(d) Special Programmes for the vulnerable and Excluded
(e) Good Governance.

Medium Term Development Plans (MTDP)

The Medium Term Development Plan (MTDP) is a three-year development plan out-lining the development goals and objectives of the District for the period and the means of achieving them. The MTDP is therefore an elaboration of the various thematic areas outlined in the GPRS.

Annual Action Plan (AAP)
Should be:
- Extracted from the MTDP
- Easy to monitor
- Systematic way of implementing priorities from MTDP
- Encompass crucial emerging priorities

Process of developing an AAP:
1. *Mid Year Review* – Meeting to monitor progress in the current year. Will provide information regarding what will and will not be achieved. Provides a basis for the next AAP.
2. *Flows from MTDP* – DPCUs should base the AAP on the MTDP to ensure that annual activities are in line with medium term goals.
3. *Incorporates emerging issues* – Any issues that are emerging that were not captured in the MTDP can be incorporated into the AAP. These should be highlighted so that the Assembly knows they were not captured in the MTDP.
4. *Development of the AAP* – Although the DPCU is ultimately responsible for the plan, all decentralised departments and urban/town/area councils should be involved in the development of the plan for their areas of responsibility. The DPCU is to harmonise the plans from the different departments. Constant communication with the DPCU is important, as well as providing them with written documentation regarding priorities and planned activities, as well as budgets.
5. *Approval of the AAP* – Once the plan and budget are completed the DPCU presents the document to the Executive Committee of the Assembly. Their comments/feedback are incorporated into the final draft. All departments should get a copy of the final plan.

AAP Format Terminology

Goal: The overall vision for the particular theme. Tends to be affected by several different objectives and no one department is held accountable for its achievement. Relates to the GPRS theme and is likely developed by the DPCU not the department.

Objective: Can be more specific to the sector in question and should be measurable. Usually achievable over the medium term. Several objectives combine to achieve the goal.

Strategy/Activity: What is to be done to achieve the objective.

Expected Output: What will happen as a direct result of the activity.

TOPIC 2: MONITORING AND EVALUATION CONCEPTS AND USE

LEARNING OBJECTIVES:
- Differentiate between monitoring and evaluation (M&E);
- Explain key M&E concepts; and
- Develop an M&E plan.

TRAINING NEEDS: Flip chart, markers, blank M&E plan.

DURATION: 2 hours

APPROACH:

1)   The facilitator begins by asking participants what they understand monitoring and evaluation (M&E) to be. The facilitator then presents the definitions of monitoring and evaluation as detailed in the Facilitator's Notes. Continue the discussion by asking participants why M&E is important. List on the flipchart. Add any concepts from the Facilitator's Notes not mentioned.

2)   The next part of the session will focus on the M&E process, highlighting the basic concepts. The facilitator begins by establishing the relationship between planning and M&E. M&E is critical to the planning function because it provides information on progress being made to the planner who can then use it to improve plans.   An M&E plan should be developed when the MTDP and AAPs are developed in order to ensure that the M&E is done.   The facilitator leads the participants through the following steps in M&E:

> Development of M&E plan
>> Review stated results
>> Establish indicators
>> Determine how data will be collected
>> Timeline – who and when
>> Budget
> Data Collection
> Data Analysis and Reporting

The facilitator provides information and discusses the process undertaken in each step with participants thoroughly.   Questions and clarifications are welcome.

3)   Using the AAP format that was developed in the previous session and using the same small groups the participants develop and present an M&E plan. Their M&E plan should be something that is within their capacity and mandate to carry out.   The result from the previous exercise should be transferred into this table and then they will complete the table based on

those results. The groups present their plans in a plenary session for discussion.

4)   The facilitator summarises the discussion by indicating that M&E is an important part of the development programming cycle and should not be excluded.

FACILITATOR'S NOTES:

Monitoring and Evaluation (M&E) are terms that both mean judging the value or worth of 'something'. In poverty reduction programs monitoring and evaluation assess over time the extent of change in key indicators of poverty, for example, of child malnutrition, educational prevalence attainment, extent of disease and general societal wellbeing.

Monitoring - continuously assessing short-term change.

Evaluation - involves periodically conducting assessment of long-term change. This is usually done at the end of a programme phase or of a project.

Why is M&E Important?
- Enhance learning by using the data collected to understand the impact of the intervention.
- Determine whether or not the intervention is having the desired impact.
- Incorporate the data into new plans ensuring that they are meeting the needs of the target population.

Monitoring and evaluation is concerned with:
- Relevance: Are results relevant to the context (stakeholders needs, cultural and other constraints)?
- Effectiveness: the extent to which expected results have been achieved; and
- Efficiency: the extent to which results have been achieved at a reasonable cost.

STEPS IN THE M&E PROCESS

1.   Development of the M&E Plan

Review stated results – Before the M&E plan is developed we must know what it is we are trying to achieve.   This will provide the framework for the plan by guiding the establishment of indicators and guide the selection of data collection methods.

Establish indicators - Sign posts that allow us to measure whether or not we have achieved our stated results.

Process indicators: What will happen along the way to indicate that we are **achieving** our results.

Outcome indicators: What will happen to indicate we have **achieved** the results.

Indicators should be SMART – Specific, Measurable, Achievable, Realistic, and Targeted. They relate directly to the result.

Indicators can be quantitative (numerical) or qualitative (not numerical, generally measure attitudes, behaviours, beliefs, etc). Usually a mix of the two is used.

Determine how data will be collected – This will depend on the type of data you want to collect as well as the resources available. The table below is a tool that can be used to organize the data collection process.

Data Collection Matrix

| Objectives | Data Sources /Collection Methods | | | | | |
| | Primary Data Collection | | | | Secondary Data Collection | |
	Individual Interviews	Group Interviews Focus groups	Site Visits	Consultative Workshops and other Participatory Methods	Documents produced by partner organizations	External Literature

Sex Disaggregated Data
- Allows for analysis to determine how the effects of an intervention are different for men and women.
- Leads to further analysis and planning to correct any inequitable results or to design solutions that may be more appropriate to the context or for specific stakeholder groups.
- There are projects which may appear to be gender sensitive, but have undesired results on men and women. Your monitoring efforts might help identify unexpected positive and negative results and design appropriate corrective actions. Sex disaggregated data can help uncover those results.
- When collecting data, both qualitative and quantitative it should be sex disaggregated. Formulate your indicators in this way right from the outset in your M&E Plan and it will be easy to collect.

Timeline – When are you going to carry out the exercise? An annual schedule is advised. Who is going to be responsible for what?

Budget - Some resources will be required to support the data collection, analysis and reporting writing process.   How much is needed?   Work this into your annual budget.

Data Collection – Go out and do the data collection.

Data Analysis and Reporting – Compare the data to your results. What does it mean? Are results being achieved? If not, why not. What can be done in the next period to improve?

10. MODULE 9: FINANCIAL MANAGEMENT AND ADMINISTRATION

OBJECTIVES:
- Manage financial resources in a transparent and accountable manner; and
- Organize and control the EHU in an effective and efficient manner.

TOPICS:
- Budgeting
- Financial Reporting
- Time Management

TOPIC 1: BUDGETING AND BUDGETARY CONTROL

LEARNING OBJECTIVES:
- Define a budget;
- Understand the budgeting process in the District Assembly;
- Describe the component of a budget; and
- Prepare a simple budget.

TRAINING NEEDS: Flip chart, markers, case study handouts

DURATION: 8 hours

APPROACH:
1. The facilitator should ask trainees to give their understanding and view as to what they think a Budget is. The facilitator using the flip chart will take participants through the views expressed and noted and help trainees to define a Budget.

2. The facilitator then defines Budgeting on a flip chart and introduces trainees to the District Budget and the mandate of the District Assembly. Take trainees through the contents of a District Budget. Explanation should be made of the logical sequence of the various components.

   Ask participants to give their views and experiences with regard to Budget preparation in the Districts. Find out from them whether they are familiar with the Budgeting process. Explain to them the steps in preparing District Budgets and the relevance of each step. Highlight the role of the Decentralised department especially DEHU in the District Budget preparation processes. Allow participants to ask questions for clarifications.

3) The facilitator leads participants through the steps in the budgeting process as follows:
   > **Set budget categories** based on activities planned, equipment and administration expenses.
   > **Estimate the cost** of each line item. This should be as close an estimate as possible. Not a guess. It might help to break the line down to smaller items in order to set a budget for the line as a whole.
   > **Format the budget**. This may involve both funds expected (particularly if the Unit is receiving support from service fees etc) and expenditures. It should also involve indicating where the monies for the expenditures will be sourced from i.e. DACF, IGF, donor support, etc.

4)   Divide participants into Regional groups. Hand out the case study (see Facilitator's Notes). Ask each group to prepare a budget of DEHU for harmonisation based on the case study. Identify the projects and programmes that they want to undertake, the time frame and financial estimate for each programme or project.

FACILITATOR'S NOTES:

The important lesson here is to point out to participants, the devotion of adequate Budget from the DACF depends on the important links they establish (through Sector Budget impute to the D/A budget) between the District Assembly and their Communities.

Definition of Budget.
The financial expression of a plan. In budgeting, planned activities are quantified and operationalised fiscally.

It must be emphasised that all agencies prepare their budgets in relation to their development programmes (ie Hygiene and Sanitation programmes) and submit to the District Budget Officer (DBO) for harmonisation. Harmonisation relates to the bringing together of all budgets of the Assembly, Sub-Districts (UTAs) and Sector Departments.

CASE STUDY
The DEHU from District X in Northern Ghana is in the process of completing their submission to the DPCU for the AAP. They have extracted the following activities from the MTDP to carry out this year:

Build 50 household latrines.
Carry out hygiene promotion campaigns in 8 communities.
Implement consumer awareness of proper food hygiene campaign in 3 urban centres.
Form and support School Health Clubs in 15 schools.

In addition, the DEHU needs to budget for regular operating costs such as T&T, tools and equipment and regular maintenance of sanitation sources.
The DEHU is anticipating that they will receive some support from 2 NGOs for the hygiene promotion activities, but they will need to determine sources of support for the other activities.

Develop a budget for the DEHU that captures these different activities and plans, including the anticipated support from the NGOs. Make sure you indicate a reasonable estimate for the activity, as well as where the funds will come from.

TOPIC 2:   FINANCIAL REPORTING

LEARNING OBJECTIVES:
- Outline the steps involved in preparing a financial report; and
- Prepare a financial report.

TRAINING NEEDS: Flip Chart, Markers, Handouts

DURATION: 8 hours

APPROACH:

2)   Let participants list the main financial documents that they use in their respective District Assemblies and the financial evidence that it shows. Prepare a flip chart in advance and compare it with list made by trainees.

3)   The facilitator should explain to participants that most of the financial reporting they do will be to the DA or in some cases to a donor direct. This will involve reporting on the expenditure of an amount given to the DEHU to carry out an activity. Introduce participants to the nature and form of the Accounting Books especially the Cash Book. Record, using a simple example, Cash Receipts for a programme (such as from District Assembly, a development partner and Community Mobilisation) and a record of Cash payments made in the Cash Book.

4)   Prepare a financial report by using the recordings made in the Cash Book to match Revenue receipts against Cash payments and the surplus or Deficits.

FACILITATOR'S NOTES:

The first step gives the facilitator information about the participants understanding of financial documents. It also highlights the extent to which participants are involved in the financial activities of the District Assembly.

This activity is part of the process of making DEHU staff understand the issues of transparency and accountability especially on funds for community projects and programmes on sanitation that they lead.

Some of the documents are:
1.   Receipts
2.   Sales Invoices of stores receipt
3.   Purchase invoice
4.   Vouchers
5.   Pay-In-Slips
6.   Stores receipt vouchers
7.   Cheques etc.

Financial reports are prepared at the end of an activity/programme or on monthly or quarterly basis. Such reports are to be presented to:
(a)   Community Members
(b)   District Assembly
(c)   Donors

Possible cash revenue and cash expenditure categorisation in a financial report are:

REVENUE
(a)   Donations
(b)   District Assembly support.
(c)   Community mobilisation
(d)   Fees/Levy

EXPENDITURE
(a)   Materials
(b)   Casual Labour
(c)   Refreshments
(d)   T & T
(e)   Allowances
(f)   Fuel

SURPLUS/DEFICIT (A surplus means there the expenses do not exceed the revenues and there is a balance remaining. A deficit means the expenses exceed the revenue and the funds were not enough.)

TOPIC 3:   TIME MANAGEMENT

LEARNING OBJECTIVES:
- Identify uses for idle time; and
- Prepare work schedules.

TRAINING NEEDS: Flip chart, Handouts

DURATION: 3 Hours

APPROACH:

(1)   Ask trainees to mention examples of time wasting activities and habits.
Act out a role play in which a tradesman (a carpenter) is unable to deliver on time to three customers who made orders for:

> 1st Customer a Reading table and chair
> 2nd Customer a Dining table
> 3rd Customer a Cupboard.

The Carpenter is unable to deliver on time because of time wasting activities he has indulged in. This resulted in quarrels between him and the customers resulting in the first and second customers refusing to accept the item nor making payments. The third customer made payment but was reluctant to send a bigger order to the same carpenter.

What happened in the play?
Discuss the consequences of time wasting activities.

> Put up flip chart 1 on time wasting activities. Use flip chart 2 to discuss signs of poor time management. Discuss with participants the advantages of planning (preparing work schedule) and keeping time, and increase appreciation of trainees on time management.

ii.   The facilitator explains the different ways of managing time effectively. Participants are given an opportunity to share other strategies of time management that work for them.

iii.   The facilitator discusses workplanning as a potential tool for time management. As an individual exercise have participants develop a work plan for the month they return for the course using the questions on the hand out to guide them.

FACILITATORS NOTES:

TIME WASTING ACTIVITIES AND SIGNS OF POOR TIME MANAGEMENT

In order for a time management process to work it is important to know what aspects of our personal management need to be improved. Below you will find some of the most frequent reasons for reducing effectiveness in the workplace. Tick the ones that are causing to be the major obstacles to your own time management. These we refer to as your *"Time Stealers"*.

Identifying your time stealers:

Interruptions - personal visitors
Meetings
Tasks you should have delegated
Procrastination and indecision
Acting with incomplete information
Dealing with team members
Crisis management (fire fighting)
Unclear communication
Inadequate technical knowledge
Unclear objectives and priorities
Lack of planning
Stress and fatigue
Inability to say "No"
Desk management and personal disorganization

SIGNS OF POOR TIME MANAGEMENT

- Rushing to complete assignments
- Disorder at work places
- When people can make you change your mind to do other things without good reason
- When you have too much free time

A. HOW TO PLAN YOUR TIME

To ensure efficient utilization of time, one will always have to plan how they will use their time. Planning enables one to know the period over which any particular activity can be efficiently undertaken. Below is how one can plan his time.

1) Write down all the activities you will perform for the day, week or month
2) Arrange the activities in order of importance, the most important activities which can not be postponed on top of the list.
3) Find out how much time is needed for each activity and write it down
4) Try as much as possible to perform each activity within the estimated time.

B.   ADVANTAGES OF PLANNING AND KEEPING TIME

Some of the benefits to be derived for planning and keeping time include

1)   many things get done on time
2)   one gets enough time to undertake assignments properly
3)   one does not usually feel pressed for time
4)   time which is planned can not be wasted
5)   sufficient rest time enables the body to regain its energy for work the next day.

C.   TIME MANAGEMENT TECHNIQUES

Time management is similar to having good work habits. Making the best use of time simply means achieving the maximum out put in the time available. There are several ways in which this can be done.

IDENTIFY SPECIFIC GOALS
SELF MOTIVATION
ESTABLISH DEADLINES
TAKE NOTES
DELEGATE
WORK IN BLOCKS OF TIME
ASK QUESTIONS BEFORE BEGINNING WORK
BE ACTION ORIENTED
BE REFLECTIVE
PLAN A DETAILED SCHEDULE FOR TOMORROW
LEARN FROM YOUR EXPERIENCE

Importance of work planning:
- Allows officer to sequence activities in a way that optimizes resources.
- Helps monitor progress on work.
- Allows officer focus on priority goals and activities.
- Gives an impression to outsiders that the team is well organized.
- Helps the DA W&S subcommittee monitor and support DEHU.

How to do work planning
Ask yourself:
WHAT is to be done?
HOW will it be done?
WHO is responsible?
WHEN should it be done?
WHAT RESOURCES are needed to do the task?