

Environmental and Social Management
Framework for the
Rural Sanitation Model and Strategy

FACILITATION GUIDE

For Implementation of Mitigation Actions

Acronyms

DEHO	District Environmental Health Officer
DHD	District Health Directorate
DICCS	District Interagency Coordinating Committee on Sanitation
EHD	Environmental Health Department
EHMD	Environmental Health and Management Department
ESMF	Environmental and Social Management Framework
RICCS	Regional Interagency Coordinating Committee on Sanitation
RSMS	Rural Sanitation Model and Strategy
NADMO	National Disaster Management Organisation
WATSAN	Water and Sanitation
WHO	World Health Organisation

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1.0 INTRODUCTION

The ESMF addressed 7 areas of environmental and social priorities that could facilitate sustainable, quality sanitation delivery in the country under the RSMS implementation. The areas are as follows:

- Raw material extraction
- Water resource protection (in toilet construction)
- Stakeholder involvement in latrine decisions
- Public safety
- Public health and safety
- Cumulative odour nuisance
- Sludge management

The Facilitation Guide covers relevant aspects of the 7 Environmental and Social Action Plans namely:

- Raw material resource protection and sustainability
- Protection of surface and groundwater resources
- Stakeholder education and involvement in latrine decisions
- Public and occupational safety measures
- Public health enhancement measures
- Prevention of community and household odour
- Sludge management

This guide is to equip field officers with knowledge on the potential impacts arising from the implementation of components of the RSMS, as well as the corresponding safeguards and mechanism for achieving effective and sustainable delivery in latrine construction and use and the management of faecal sludge. The following personnel and/or departments whose functions support sanitation activities in the District Assembly setup would be instrumental in the various forms of implementation of the Action Plans, and consequently required to use the Facilitation Guide in their operations:

- Environmental Health Officers;
- Community Development Officers;
- NADMO Officers;
- Officers from the Waste Management Department;
- SHEP Officers;
- DHD Officers; and
- Natural Leaders (in the communities).

2.0 EXTRACTION OF RAW MATERIALS

Nature of Potential Impacts

Examples of raw materials that are extracted for latrine construction include: clay, and wood (bamboo, teak, acacia, etc.)

Extraction of the materials could cause degradation and resource scarcity, resulting in unavailability of materials to sustain the construction of toilets in the following ways:

How extraction of materials could cause degradation and resource scarcity and depletion, resulting in unavailability of materials to sustain the construction toilets:

- Clay or sand can be taken in a manner that could scar the landscape or loosen the soil and cause erosion
- Cumulative extraction of wood could lead to a drastic reduction in the tree population considering other uses of trees; e.g. as fuel wood

Impacts of sand and clay extraction

- a) *Scarring the landscape and diminishing its visual value;*
- b) *Losing agricultural potential and values – report mined agricultural land*
- c) *Leaving dangerous pits (into which humans and animals could fall)*
- d) *Creating impoundment or ponds (mosquito breeding grounds/proliferation and malaria cases)*
- e) *Turning such pits into waste dumpsites*
- f) *Loosening the soil and causing accelerated erosion conditions (affecting water resources/hydrology)*

Impact of wood extraction

- *Unavailability of trees for future use*
- *Reduction in carbon sinks*
- *Loss of wind breaks*

Accelerated erosion conditions

2.1 Actions for Raw Material Resource Protection

Action 1: Designated areas within the district/communities should be developed (by the Works Department and EHMD) as sand/clay winning sites with a plan to reclaim or decommission after a period of time.

Field Officers from Works and EHMD are to undertake the following:

- Require of community people to extract sand or clay either from a district approved sand/clay winning site; which has been designated for that purpose, with plans of reclamation. In addition to the above the following should be observed:
 - a) Fill unauthorized/illegal pits found with pit-excavated materials
 - b) Raise awareness on the risks of illegal winning of sand and clay

Action 2: Areas within the district/communities should be allotted and developed (by the Works Department and EHMD) as woodlots.

- Establishment of woodlots should be done with the involvement of Natural Leaders and Unit Committee Members;
- Woodlot should be under the management of the Natural Leaders/Unit Committee Members representing the communities.

Natural Leaders and Field Officers are to undertake the following:

- Require of community people to extract wood for latrine construction only from the woodlot

3.0 GROUND AND SURFACE WATER CONTAMINATION RISKS

The contents of a latrine pit could be carried by floodwater and deposited in surface water sources used for drinking and other domestic purposes. Pit latrines could contaminate groundwater when faecal matter percolates into groundwater that feeds a well or borehole. This could be due to siting of the latrine close to a water body.

3.1 Actions for Ground and Surface Water Protection

Action 1: Obtain site approval for the toilet construction

Natural Leaders, working under supervision of the EHMD will issue site approval permits to potential latrine owners (households) before latrines are constructed. The Approval, which must be signed by at least 2 Natural Leaders, should be given only when the following conditions have been met:

- Site is 30m from and downwind of any water source (the distance should be 50m if the site is determined to be made of highly porous soil or fissured rock) ;
- Prospective latrine owner has had consultation with the neighbours to agree on the site;
- Materials for constructing the latrine have all been provided by the prospective owner.

All signed Approvals would be submitted monthly to the EHMD office of the Assemblies and would provide a basis for monitoring of water protection measures. A sample of the Approval Form is given in Appendix 1.

Action 2: Review results of the water quality monitoring

The WATSAN Committee members will facilitate the collection of water samples for testing annually, or when there are reported cases of gastrointestinal infections. This will be done in collaboration with the CSWA.

Action 3: Review and ascertain health records

The DHD Officers will review reported OPD cases and report incidence of dysentery/diarrheal diseases and worm infestations.

Action 4: Verify status of any contaminated water supply source closed

Officers from the Works Department and WATSAN Committee members will close down contaminated water supply sources. They will further ensure that the closed down water sources are not used by community members.

Action 5: Verify adequacy and quality of alternative water supply source

Officers from the Works Department and WATSAN Committee members should monitor the source of alternative water provided and the quantities delivered.

4.0 SOCIO-CULTURAL RISKS

The communities' buy-in of the RSMS/CLTS could be hindered by some beliefs held such as women and men not sharing a place of convenience. Also, there could be conflicts among neighbours when one is not in agreement with another, for instance, because a latrine is sited too close to one's window or is situated such that it blocks a hitherto free access path., etc.

4.1 Actions for Promoting Stakeholder Education and Involvement in Latrine-related Decisions

Action 1: This action, to be undertaken by the EHMD in collaboration with the DHD would involve community based workshops in the local languages to facilitate discussion on age-old practice of open defaecation and to highlight the negative effects of such practices. These workshops will also serve as opportunities to assuage participants of beliefs such as:

- Excreta of persons from different families are not supposed to mix; and
- Children and adults do not have to use the same toilet facility.

Participants should also be educated on personal and environmental hygiene practices such as:

- Washing of hands after visiting the toilet;
- Dumping of refuse in approved areas; and
- Pest control activities.

Action 2: Need for consultation

Emphasize the necessity to consult immediate neighbours when siting of toilet to ensure acceptance and avoid conflict.

5.0 PUBLIC SAFETY RISKS

Uncovered dug latrine pits (6ft to 18ft deep) during construction could pose serious safety risk to workers, the public and livestock. The risks posed by uncovered pits include:

- People or animals could get hurt if they fall into pits accidentally
- Drowning of humans and livestock (that fall into pits filled with water)
- The superstructure of the latrines could collapse if poorly constructed and are not resilient enough especially in the rainy season; which could lead to injury if a latrine is occupied at the time of collapse.
- Weedy and dirty latrine surroundings attract vermin, cockroach and other organisms which in turn attract snakes and could lead to snake bites which could prove fatal.

5.1 Actions to Enhance Public Safety

Action 1: Ensure that all raw materials are assembled before pits for latrines are dug.

Natural Leaders are to undertake the following for any community member constructing a latrine:

- Inspect all raw materials before pits are dug
- Halt the digging of pits in the event where the raw materials are not available

Action 2: Ensure that latrine pits are properly covered after digging, while awaiting construction of superstructure.

Household members/head are to undertake the following:

- Cover the entire diameter of the pit with a sturdy object to prevent people and animals falling into the pit when construction delays.

Action 3: In areas with loose soil or that are water-logged, lay two levels of solid cement blocks at the base to stabilize the superstructure.

Household members/head are to undertake the following:

- Ensure cement blocks are constructed at the base of the superstructure

Action 4: Install a reinforced roof (thatch or zinc roofing sheet), not permeable to water and allow a 30cm overlap at the edge of the structure to protect the superstructure from water;

Household members/head are to undertake the following:

- Install a reinforced roof (thatch or zinc roofing sheet) not permeable to water
- Ensure a minimum of 30cm-roof overlap to protect superstructure from rain.

Action 5: Keep the surroundings of the latrine free of weeds at all times.

Household members/head are to undertake the following:

- Clean and weed latrine surroundings (minimum 1m safety buffer).

6.0 CUMULATIVE PUBLIC HEALTH RISKS

Impacts include:

- Increased pest breeding in and around latrine likely to transfer diseases onto food and contaminate utensils in nearby houses.

6.1 Actions to Enhance Public Health

Action 1: Each latrine owner should ensure that latrine pits are completely covered when not in use to prevent access to cockroaches and flies to enhance public health.

Household members with supervision of Natural Leaders are to undertake the following:

- Inspect the compliance of covered latrine pits when not in use

Action 2: Educate the community on good hygiene practices such as washing of hands after use of toilets, eating warm food, and keeping food and water covered.

Natural leaders and household heads are to undertake the following:

- Require household members to provide hand-washing facility close to latrine
- Inspect latrine environment and ensure they are cleaned

7.0 CUMULATIVE ODOUR NUISANCE

Odour from pit latrines is a common concern. Impacts associated include:

- Recurring odour discomfort in cooking and eating areas of households downwind of latrine; and
- Cumulative odour generation from poorly managed pit latrines in a community which could result in a generally smelly community.

Houses may not be organized in a well-planned manner, and the latrines are to be planned and situated belatedly near the houses that already exist. Latrines may be constructed close to rooms and/or the cooking or eating areas in the household compound, exposing the household to the effects of odour nuisance.

7.1 Actions for Odour Reduction

Action 1: Latrines should be sited at least 6m from neighbouring house (to allow for any odour to be fairly diffused before it reaches homes).

Natural Leaders are to undertake the following:

- Ensure separation distance of 6m is observed for each latrine constructed

Action 2: Ash (from charcoal and fuel wood) should be sprinkled into pits after every use to reduce smell.

Natural leaders and household heads are to undertake the following:

- Require household members to have ash available at entrance of latrines at all times
- Emphasise on importance of sprinkling ash after every use

Action 3: Latrines should be cleaned daily by household members to minimize odour.

Natural Leaders/EHS Officers are to undertake the following:

- Emphasize on the importance of daily cleaning of latrine to reduce health risks

Action 4: Pits should be covered after every use to prevent

Natural Leaders/EHS Officers are to undertake the following:

- Highlight on importance of covered pits

8.0 SLUDGE HANDLING AND DISPOSAL RISKS

Faecal sludge is often disposed of in pits, depressions and other open spaces in rather bizarre and unhygienic circumstances, degrading and polluting the environment. This could readily release pathogens into surrounding environmental media - air, water and soil.

The Impacts of sludge handling and disposal risks include:

1. Exposure of workers and households to pathogens;
2. Environmental degradation caused by open dumping of sludge; and
3. Incomplete covering of pits.

8.1 Actions for Sludge Management

Action 1: Create awareness in the communities on the need for proper sludge management

- The EHMD of District Assemblies are to educate the communities on proper sludge management. This would include knowing the implication of incomplete covering of pits.

Action 2: Supervise the decommissioning of full-toilet pits

- Natural leaders would be required to ensure proper covering of pits with clay materials and also to cordon off decommissioned pit.

Action 3: Requirement for District Assemblies to develop sewage treatment facilities

- The EHMD is required to initiate processes to set up sewage treatment plants in their Districts.

Action 4: Impress upon District Assemblies to develop sewage treatment facilities

- The EHMD is to initiate processes to set up sewage treatment plants in the district

Action 5: Enforce by-laws to promote proper sludge handling and disposal

- The EHMD is required to enforce sanitation by-laws to promote proper sludge handling and disposal

APPENDICES

APPENDIX 1

Latrine Siting Approval Form

Community

Approval Number

Name of Prospective Latrine Owner

Conditions Satisfied

1.	Neighbours have been consulted on and have agreed on selected site	Yes	No
2.	Minimum separation distance from a water source (30-50m) have been observed	Yes	No

Approval Granted	Yes	No
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Name of Natural Leader (1).....

Signature.....

Date.....

Name of Natural Leader (2).....

Signature.....

Date.....