

UD TOILETS ETHEKWINI WATER AND SANITATION



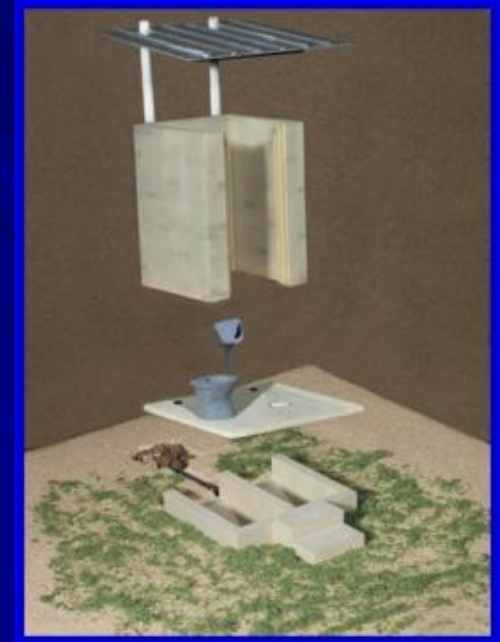
UD Toilets

- ❖ Key initiative for rural areas



How does UD toilet work?

- ❖ Two vaults are used – contents of one vault dry-out while second is in operation
- ❖ Cover material (sand) is used
- ❖ Urine is diverted to soakpit
- ❖ Vault contents are buried upon removal
- ❖ Structure provided free of charge – national funding
- ❖ Households responsible for operation and maintenance



Pedestal with urine
diverting fitting



Urine Diversion Toilet



Urinal for men

Bucket containing
sand & ash

Pedestal with urine
diversion fitting

Cover over second
vault



Vent-pipe with
fly- screen

Double vault above-
ground

Sliding cover access
to vault

Factors Influencing Choice

Financial

- ❖ Waterborne sewerage is extremely costly due to topographical conditions in unserviced rural areas
- ❖ Cost of emptying conventional VIPs unsustainable



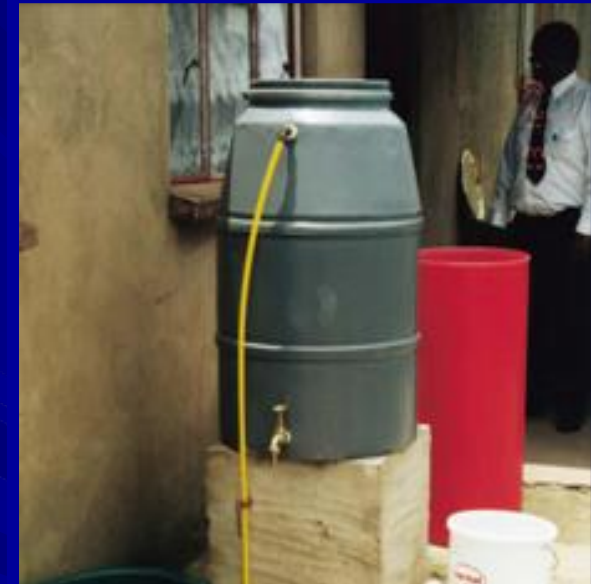
Factors Influencing Choice

Technical / Physical

- ❖ Tankers cannot reach many pits due to terrain and densities
- ❖ Desludging by tankers problematic due to solid matter in pits
- ❖ Manual emptying is also problematic due to terrain and costs

Factors Influencing Choice

- ❖ Water and Sanitation delivered as a package, cost effective education delivery
- ❖ Each household receives 300 litres of water a day – dictates use of dry sanitation
- ❖ Safe on-site disposal of human waste
- ❖ No new pits required to be excavated when full
- ❖ No need to move top structure when full



Factors Influencing Choice

Environmental / Health

- ❖ Waste decomposes before expose to surrounding soil
- ❖ Decomposed contents is safer to handle when removing
- ❖ Conventional VIP - seepage of raw sewage into surrounding soil/water table
- ❖ Manual emptying of VIP poses health risks



Project Implementation Approach

- ❖ Project Management Construction Division (EWS)
- ❖ Community Participation through elected Project Steering Committees
- ❖ Education Training and Capacity Building - ISD Consultants used to train facilitators from the communities
- ❖ Focus on women essential to success of the programme
- ❖ Labour intensive methodologies
- ❖ Employment Policy – local labour on a task basis

Project Implementation Components

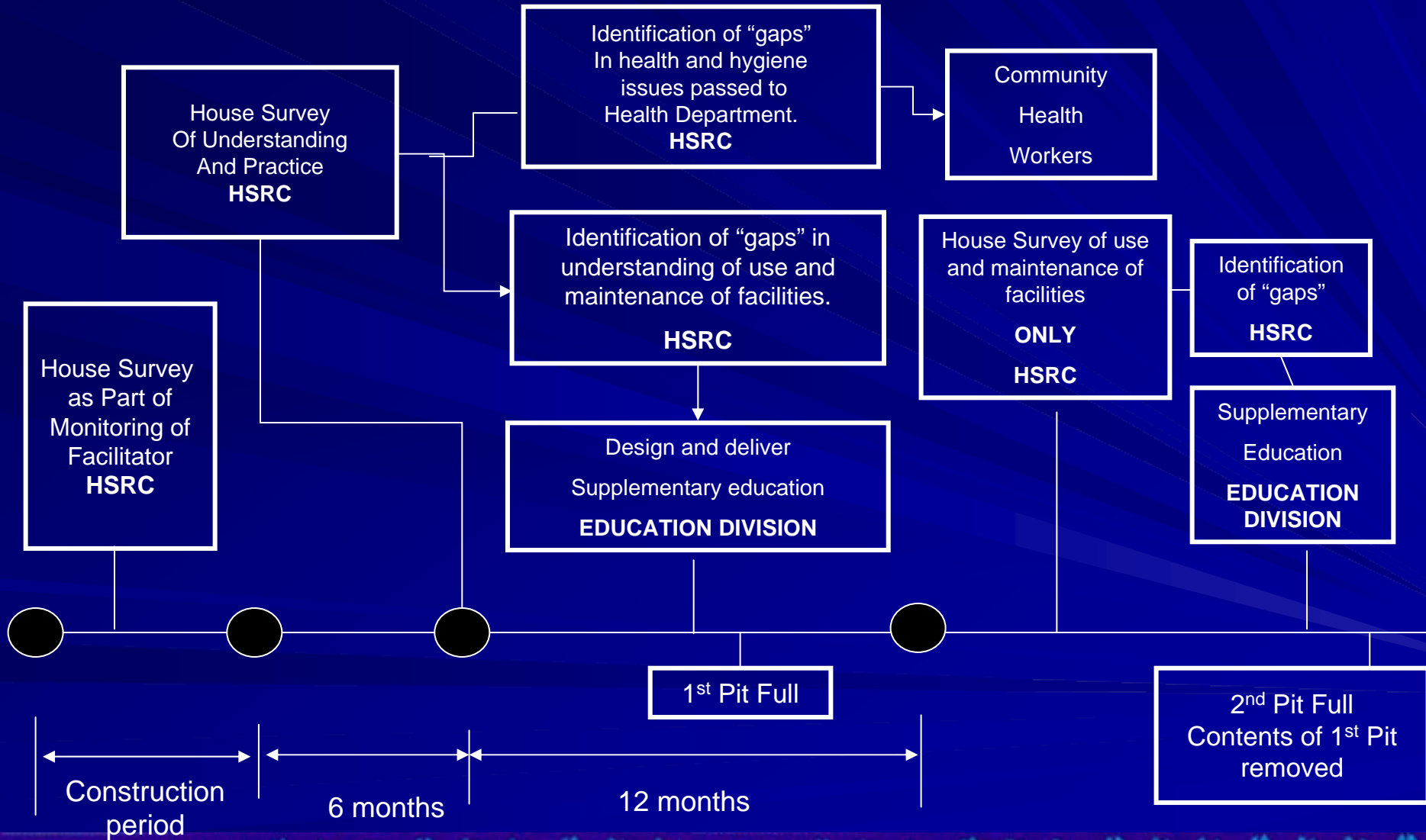
- ❖ Series of structured household visits (5 visits)
- ❖ Facilitators trained by ISD Consultant
- ❖ Education Material Development





Monitoring of Household Understanding & Practice of:

- Health and Hygiene
- Water and Sanitation System



Educational Materials

❖ Leaflet showing step by step method of emptying

WHAT TO DO WITH A FULL TOILET VAULT.

1. What must I do when the first vault is full?

You will need to move the pedestal and place it over the second vault.

Why must the toilet pedestal be moved?

The waste material in the full vault needs to dry out. You can still use the toilet if the pedestal is moved to on top of the other vault.

It is important to keep things clean. When you have finished, you need to wash:

- The toilet pedestal
- Around the toilet
- Your hands

2. How do I move the toilet pedestal?

Stand in front of the toilet and hold the toilet pedestal on each side. Gently move it and pull it out of the floor. Remove the vault cover and put in a safe place. Now you need to check the pipes.

How do I check the pipework?

The pipes for the first and second vault are joined. Pour a cup of water into the urine pipe to check that it is not blocked. If the water does not go down, the pipe needs to be unblocked.

If the pipe is blocked, how can I unblock it?

Pour water into the pipe and at the same time GENTLY push a piece of wire into the hole to try and move the blockage. If the pipe is too badly blocked, then you must call 0800-13-13-013 and ask for help.

3. You are now ready to move the toilet. This is what you do.....

Put the toilet pedestal over the empty vault so that the toilet lid opens towards the wall.

Check that the pipe work of the toilet pedestal fits into the pipe work (that you have checked) in the floor.

Gently push downwards so that the toilet fits well over the empty vault.

Replace the vault floor cover over the full vault.

4. Check that the pipe work is properly connected – pour a cup of water into the urine pipe (the front part of the toilet) and ask someone to look at the back of the vault. You should not see any water coming out. If there is water outside, the pipe work may not be correctly joined. Then you need to join it properly.

Your toilet is now ready for use again until the second vault is full.

WHAT TO DO WHEN BOTH VAULTS ARE FULL.

A. Do I need any tools?

- You will need:
- A Cloth (clean and damp)
 - Gloves
 - A spade
 - A hoe
 - A large plastic or a Hessian bag (or sack)

B. How do I prepare?

Put on gloves to protect your hands

Dig a hole 1 spade wide by 1 spade long by 1 spade deep.

Keep the soil because you are going to use it.

C. How do I clean out the vault?

Put the Hessian bag under the opening at the back of the first vault.

Open the back cover to the vault which is to be emptied.

Use your hoe to rake the waste material out

of the vault and into the hessian bag. Drag the bag to the hole and then use your spade to shovel the waste material into the hole.

Keep on repeating until the vault is empty.

D. Do I need to do anything afterwards?

Use the soil you dug out earlier to make a mound on top of the filled hole.

Walk over the soil until it is flat and hard.

Plant grass or vegetation on top of the hole.

Tidy up around the toilet structure.

Replace the back cover to the vault.

E. Now that the vault is empty what must I do?

You need to move the pedestal and place it over the vault which you have emptied.

Take the plastic floor cover off the first vault.

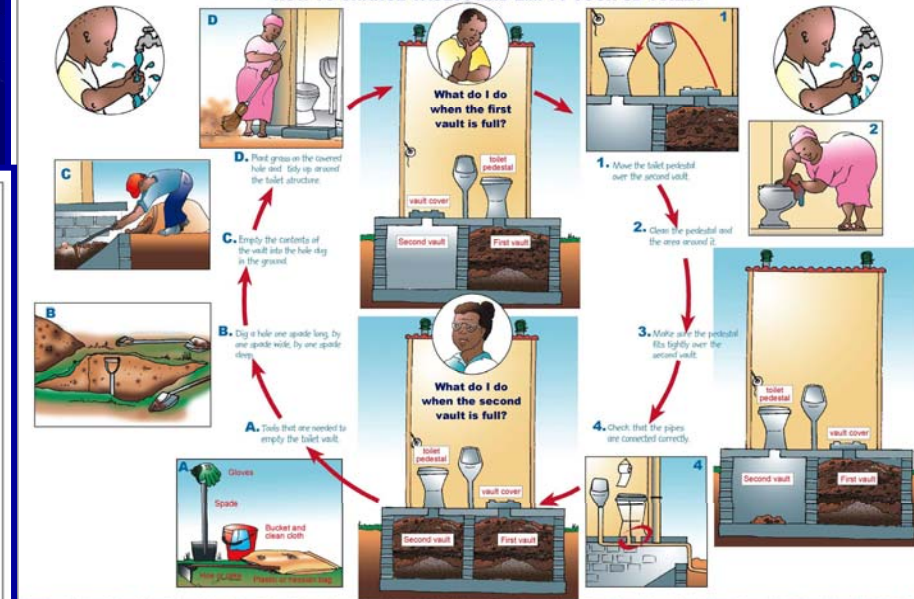
Put the plastic cover in a safe place.

Move the pedestal back over the first vault (this is described at the beginning of the pamphlet).

Put the cover over the full vault.

Clean up, wash tools and the toilet pedestal and then wash your hands.

HOW TO CHANGE VAULTS AND EMPTY YOUR UD TOILET



Street Theatre

❖ Education follow-up phase

- Street theatre focusing on the emptying procedure and health and hygiene education



Response to Operation and Maintenance

❖ Developing a caretaker approach to water and sanitation management

- One caretaker to manage 300 households
- Education of households (health, operations and maintenance)
- Promote services of SSIP
- Provide advice when emptying
- Extension of monitoring (O & M Ownership)
- Report to EWS



Development of Small Scale Independent Contractors

- ❖ To provide emptying service
- ❖ Set up general hardware supply store
- ❖ Provision of general operation and maintenance services

Lessons Learned

- ❖ Centralization of the programme has allowed for:
 - Cost savings
 - Focus on quality (sustainability)
- ❖ The implementation model must suite the needs of institution and be acceptable to community
- ❖ Ongoing independent monitoring allows for rapid response
 - Securing of back panels
 - Adequate cover for vent pipes
 - Toilet seat for children



Lessons Learned

- ❖ Many households are emptying vaults
- ❖ Surveys show 28% refuse to empty but are prepared to pay
- ❖ Visit of President and Minister of Water Affairs greatly increased acceptance



THANK YOU

