

**Capacity Building Initiative
For
LSRDA Biological Water Filter Project
To Facilitate
ICCO Project 2005**

LSRDA Filter Teacher Training School

In order to meet the requirements of the ICCO project, LSRDA's Water Filter team has launched a new capacity building initiative. This is known as the LSRDA Filter Teacher Training School, which has run as a monthly training course since starting in February 2005.

Training

The objective is to inspire and to equip 2 or 3 suitable people from each village to teach and to motivate families to make their own filters. Participants complete the course held at LSRDA in one visit during a single day of training. They participate in lessons and are given materials to repeat the training in their village with other families.

This training is followed-up with a visit to each village by a member of the LSRDA School staff, who asks the graduate filter teacher to repeat the lesson about Health and Sanitation to their village. The staff member corrects and adds to the presentation where necessary.

Implementation

There is a material distribution package offered to each graduate filter teacher who is rewarded with a certificate of Merit for taking up this offer.

The agreement is that if the graduate filter teacher motivates a number of families to put forward Rs150 for each of 5 filters, then the LSRDA School will organise the purchase and delivery of the materials and will cover the cost of this plus the Rs210 for the remainder of the material costs.

Further recognition in the form of a certificate of Distinction will be awarded if an additional order is made of 5 more filters on the same basis.

Guests

Invitations have been issued to other NGOs to send their own staff for training. There is a small charge to cover their proportion of the administration of the School. This is a fee of around Rs200 per person. Participants are responsible to pay their own travelling expenses and accommodation if they require it.

Key Results

The LSRDA Filter Teacher Training School builds capacity on four levels:

- LSRDA's capacity to equip other NGOs to run filter teacher training programmes.
- LSRDA's capacity to train people selected from the villages to be filter teachers.
- The ability of teachers from the villages to teach about filters.
- The capacity of the families they teach to make filters.

Lower Sindh Rural Development Association

P.O. Box 75, Mirpurkhas – 69000 Sindh, Pakistan

Filter Teacher Training School

*This is to certify that Mr/Mrs/Ms: _____
Has achieved the following:*

Certificate of Recommendation

The above named is trained as a Bio Sand Water Filter Teacher. This teacher has made a Nadi filter and taught someone else to make a filter.

Date:

Verification stamp

* * * * *

Certificate of Merit

The above is experienced as a filter teacher. This teacher has taught at least 5 families who have successfully made their own filters under his instruction. This teacher has in this way done the community a good service worthy of Merit

Date:

Verification stamp

* * * * *

Certificate of Distinction

The above is an experienced filter teacher worthy of Distinction. This teacher has been of great benefit to the community by teaching at least 10 families who have successfully made their own filters with materials this teacher has helped them to acquire. This teacher understands that the technology is a great gift from God and has proved a willingness to freely pass on this knowledge to others. In this way this teacher is distinguished as a gifted and very helpful member of the community worthy of Distinction.

Date:

Approved by

Verification stamp

ASHRAF J.W. MALL
Director, L.S.R.D.A

Regd. Under Societies
Act XXI of 1860 No. 3316

Curriculum

Lesson 1	Learning Methods	30 mins
Lesson 2	Germs	30 mins
Lesson 3	Good Microbes	30 mins
Lesson 4	Biological Sand Filter	30 mins
Practical 1	Experiencing making a filter	40 mins
Practical 2	Instructing another to make a filter without touching materials themselves.	40 mins
Construction Materials	Delivery agreement.	10 mins

Filter Teacher Training School Programme

09:00 Start - Participants arrive. Registration begins.

10:00 Introduction

10:15 Waterborne diseases

10:45 Tea

11:00 Registration for latecomers

11:30 Lesson 1

12:00 Lesson 2

12:30 Lesson 3

13:00 Lunch

14:00 Lesson 4 pt 1 & Tea pt 1

14:30 Practical 1

15:10 Lesson 4 pt 2 & Tea pt 2

15:40 Practical 2

16:20 Business Deal & Conclusion

16:40 Participants receive certificates & depart

Lesson 1 will introduce the course and inform about the teaching process.

Lessons 2 and 3 will be a series of multiple choice questions, the answers to which will be in picture form on the exercise poster. Participants will be required to each place a stone on the picture that best fits their answer to the question being asked.

The posters will be taken back by the teachers to their villages where they will repeat the lessons with their own community. Each member of their community including children will be given a stone and asked to participate in the same way.

Lesson 4 will be how to make a filter. The text for this lesson will be an instruction manual in the form of a poster containing photos of every stage of construction in sequence. The participants will be trained how to read this poster and to use it to teach others.

Lesson 1 – Learning methods

Introduction: You are now attending LSRDA's Filter teacher training School. This is the school's principal Matti and his assistant Dev Raj who helped a great deal in the development of the filter. Matti has managed LSRDA's Filter Project for the last year and together they have introduced filters into 45 different villages. These are the teacher trainers who will help you become Filter teachers.

You will all learn how to teach in a good way. We don't want you to make filters.

The most important thing we want to teach you, which we will call Rule One, is that we don't make filters for other families with our own hands.

Rule Two is: We don't fix filters with our own hands. You are filter teachers, not filter makers. **You will teach the families in your village to make filters and they will be the ones who make them and fix them, not you.**

This poster has answers to the questions that we are going to ask you in the next 3 lessons. When we ask a question please place a stone on the picture that best represents your answer to the question.

In this way everyone will have to think about each question and participate. This is a good way to learn and to teach. You will take these answer posters home with you and use them to teach the people in your village in the same way. . Include women and children in this by giving them all a stone or bean to place on the poster. **Note for trainers: The correct answers are followed by a full stop. Some questions have several correct answers.**

- 1 Who knows best how to make fire or bread?
 - 1 Someone who makes it.
 - 2 Someone who watches it made
- 2 How do you learn to make fire or bread?
 - 1 By doing.
 - 2 By watching
- 3 Is it best to learn by :
 - 1 Hearing
 - 2 Doing.
 - 3 Seeing
- 4 Who is the best teacher?
 - 1 Someone who speaks
 - 2 Someone who demonstrates
 - 3 Someone who instructs.
- 5 What is Rule 1?

We don't make filters with our own hands
- 6 Why do we have this rule?
 - 1 To make our jobs easier
 - 2 So people learn how to make their own filters.
- 7 What is Rule 2?

We don't fix filters with our own hands
- 8 Why?
 - 1 So we don't have too much work to do
 - 2 So people learn how to fix their own filters.
- 9 Why are you here?
 - 1 So you can make filters
 - 2 So we can teach people to make filters.
 - 3 So we can get a ride on a bus

Lesson 2 Germs – to be repeated in the villages with the families

- 10 What makes people sick?
1 Germs.
2 Cats
3 Rain
- 11 Where do germs come from?
1 Fruit
2 Dirty water.
3 Rain
- 12 How do they get into water?
1 From excrement.
2 From the air
- 13 Why are germs in excrement?
1 From flies
2 From the germs that we all carry in our bodies.
- 14 What makes people sick?
1 Germs.
2 Cats
3 Rain
- 15 How can we break this cycle?
1 Stop germs being passed from people to water.
2 Stop water passing germs to people.
- 16 How can we stop drinking dirty water?
1 Use Hand pumps.
2 Make filters.
- 17 How can we stop flies passing germs to people and their food?
1 Bury excrement.
2 Build latrines.

Lesson 3 Good Microbes - to be repeated in villages with the families

- 18 What are Germs?
1 Insects
2 Curses
3 Microscopic creatures.
- 19 Are they all bad and dangerous?
1 Yes
2 No.
- 20 Why are good ones good?
1 They give us strength
2 They eat the bad microbes.
- 21 Why isn't canal water safe to drink?
1 Because there are no good microbes in it
2 Because there are not enough good microbes in it to eat all the bad ones.

- 22 What do good microbes need?
- 1 A home under water.
 - 2 Something that doesn't move to hold onto.
 - 3 Oxygen.
 - 4 Dirt to eat.

A Nadi Filter is a big home for millions of good microbes to live and multiply, where they can be safe and carefully feed on dirty water, so they can eat all the bad microbes in it.

Conclusion. God made good bugs. Your communities can use good microbes to get rid of diseases.

Setting up lesson 4

Course leader.

Participants get into pairs.
Give one poster to each pair
If one person is left over give them a poster
They will teach a member of LSRDA staff.

Everyone who is not holding the poster leave the room with your helper who will take you to have tea and find your set of materials.

Wait there for your partner to return.

When your partner returns only follow the instructions you are given by him. "Don't use your mind only your hands for this exercise."

Those remaining open up your posters and sit down on the floor for lesson 4 part 1

Lesson 4 – How to use the instruction poster

This poster is not an advertisement and it is not just to be used for decoration

It is not meant to by itself teach people to make filters.

It is to help people remember how to make a filter once they have already been taught.

It is for helping you to remember the measurements and design details and the process of making a filter.

You start here in the top right-hand corner of this poster.

Course leader.

Explain each step of the poster using Power Point to show the blown up individual photos. Or if not PowerPoint, use big prints of the blown up individual photos.

You are about to go outside and find your partners and tell them to make a filter by following your instructions. You must not touch the materials. They must not do anything without your exact instructions.

Course leader.

Get one instructor to stay to read out the instructions on the poster in the most relevant language. After they read out each poster instruction tell them the additional instructions listed below for the practical lesson that follows.

This will mean two trainers will take it in turn to speak which will break up the information into more manageable parts.

1 Use the big stone as a hammer and the screwdriver to make a hole for the pipe, but first measure up 20 inches from the ground using the tape measure and scratch a line with the screwdriver this is where the bottom of the hole should be. Between each activity a whistle will be blown to tell you to stop what you are doing.

If you haven't finished making the hole when the whistle blows don't worry just use the ready made hole at the back of the Nadi.

When you buy a Nadi you need to check it for leaks and repair them with cement.

First fill the Nadi half way up with water.

After a few hours you can fill it completely and check for leaks.

Note: If you fill it up completely when it has never been used before you will make tiny cracks get much worse so this is best avoided.

2 & 3 Most of the sand has already been sieved for you,
Instruct your partner to sieve the bit that has yet to be done.

4 Wash only the sand and stones that you have just sieved using the steel bowl and water.
Start with the biggest stones and work progressively smaller.

Leave these wet materials on one side and use the pre-prepared materials for the next step.

5 The hole in the side of the Nadi in the picture on the poster is not necessary. It is only there so you can see inside and understand the design.

Put a layer of big stones in the Big Nadi

The pre-prepared materials are more than you will need. You don't have to use **all** the materials. It is your job to decide how much to use.

Use just enough stones to make a thin layer of each size and so leave as much room as you can for the sand which is where the good microbes will live.

Fix the pipe in place using cement. The sand, cement and water are already measured for you to save you time.

Just instruct your pupil to mix the sand, cement and water together with their hands and use it to fix the pipe in place.

There will be a bucket near by to wash hands in.

Rinse the steel bowl with water and shake it dry.

When the whistle blows you must move on to the next task even if you have not finished so you get some experience of teaching and doing each task.

6 Add a thin layer of small stones

7 Add a thin layer of pea size stones

8 Add a thin layer of Seed size stones

Put the Nadi on the bricks before putting the sand in it.

Make a triangle with 3 bricks for each layer Use enough bricks to fit the small Nadi underneath the pipe.

9 Add the sand.

Use the measuring tape to check the level of the sand.

10 The nail has already been bent for you and is hanging around your necks.

11 Make a hole in the small clay pot with the nail a little to one side so it doesn't get blocked so often when things settle in the small clay pot.

If you haven't finished making the hole when the whistle blows don't worry just move on to the next task.

12 Use all the string to fix the small clay pot in place

Make sure you put a stone under it so you can see that the hole is not blocked and to let in oxygen.

Leave a bit of string to go around the cloth on the small Nadi.

This string is important to stop people from taking the small clay pot off and disturbing the good microbes as they won't work properly if the sand is stirred up.

Leave your posters here as there are plenty of them outside for you to refer to.

13 It takes 2 to 3 weeks for the good microbes to be at their most effective.

If the filter gets too slow for the family to use they need to know they should take out the top 2 inches of sand and wash it and replace it. After they have cleaned and replaced this sand they need to put water through their filter and then through a neighbouring filter for the first two weeks so that their filter gets a chance to recover its abilities.

Go outside and quickly find your partners

When the whistle blows start to instruct your partner to make a filter. Use only your mind and your partner's hands to make the filter not your hands and not your partner's mind. You are the filter teacher not the filter maker.

After one filter has been made the whistle will blow for you to stop

Those who have not had their tea stay down stairs and the others go up for lesson 4 part 2

Swap roles and repeat the exercise with fresh materials.

Practical Timings

1	3 minutes
2	6 ½ minutes
3	5 minutes
4	1 minute
5	1 minute
6	1 minute
7	1 minute
8	3 minutes
9	3 minutes
10	0 minute
11	5 minutes
12	3 ½ minutes
13	2 minutes

Business agreement

If the teacher motivates a number of families to put forward Rs150 for each of 5 filters then we will organise the purchase & delivery of the materials and cover the cost of delivery and the Rs210 x 5 for the remainder of the material costs.

Further recognition in the form of a certificate of Distinction will be awarded if a further order is made of 5 more filters on the same basis.

Read out the certificates to everyone and explain how they will be used.

When you return to your villages repeat these lessons using the posters. When our staff visit you will be asked to repeat lessons 2 and 3 to the people in the village and our staff member will check your teaching. At that time you can give the money for 5 filters and we will purchase and deliver the materials to you.

On the next visit after the materials have been delivered our staff member will check that the filters are made and will ask the families if they had made them themselves. If 5 have been made by the families themselves then the staff member will add a verification stamp to your certificate to upgrade it to Merit. On this occasion you can pay for 5 more filters and we will order and deliver them to you.